

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

October 10, 2006



**STATE REGISTRATION NUMBER**  
B5853

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>9/1/2006</b>	
DATE PERMIT TO INSTALL APPROVED: <b>10/10/2006</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
AQD	Air Quality Division	Btu	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H <sub>2</sub> S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	ng	Nanogram
MDEQ	Michigan Department of Environmental Quality	NO <sub>x</sub>	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM-10	Particulate Matter less than 10 microns diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO <sub>2</sub>	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **[R336.1201(1)]**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(4)]**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R336.1201(6)(b)]**
4. **The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act.** **[R336.1201(8), Section 5510 of Act 451, PA 1994]**
5. The AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R336.1219. The notification shall include all of the information required by R336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **[R336.1219]**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **[R336.1901]**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **[R336.1912]**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **[R336.1301]**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this permit to install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R336.1370(2). **[R336.1370]**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

**SPECIAL CONDITIONS**

**Emission Unit Identification**

<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Stack Identification</b>
EU-GEOMANPRESS01	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
EU-GEOMANPRESS02	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
EU-GEOMANPRESS03	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
EU-GEOMANPRESS04	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
EU-GEOMANPRESS05	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
EU-GEOMANPRESS06	A non-heatset web fed offset lithography printing press. Each press has nine towers and each tower has four blanket wash systems. The blanket wash system is an automatic system, but some manual wash will still be utilized.	NA
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

**Flexible Group Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FG-GEOMANPRESSES	EU-GEOMANPRESS01, EU-GEOMANPRESS02, EU-GEOMANPRESS03, EU-GEOMANPRESS04, EU-GEOMANPRESS05, EU-GEOMANPRESS06	NA
FGFACILITY	All process equipment at the stationary source including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

**The following conditions apply to: FG-GEOMANPRESSES**

**Emissions Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirements</b>
1.1a	VOC Content of Fountain Solution	Each emission unit (printing press) within FG- GEOMANPRESSES	5% by Weight as applied, shall not contain any Propyl alcohol, Ethanol and/or IPA	Instantaneous	GC 13 SC 1.7	R336.1702(a)
1.1b	VOC	Blanket and Manual wash portions of FG- GEOMANPRESSES	60.0 tpy	12-month rolling time period as determined at the end of each calendar month	SC 1.7	<b>R336.1205, R336.1225, R336.1702(a)</b>
1.1c	VOC	Non-blanket/manual wash (i.e. ink, etc.) emissions from FG- GEOMANPRESSES	10.0 tpy	12-month rolling time period as determined at the end of each calendar month	SC 1.7	<b>R336.1205, R336.1225, R336.1702(a)</b>
<p><b>Applicable VOC Emission Factors:</b></p> <p><b><u>Non-heatset Ink:</u></b> Retention rate of 95 percent of the VOC in the oil based ink applied to the paper, the remaining five percent by weight of VOC emitted.</p> <p><b><u>Cleanup Solution for Manual Wash:</u></b> Retention rate of 50 percent of the VOC for the manual blanket wash.</p> <p><u>References:</u>  <b>DRAFT Guideline Series –Control of VOC Emissions from Offset Lithographic Printing, USEPA, Sept. 1993</b>  <b>Alternative Control Techniques Document: Offset Lithographic Printing, USEPA 453/R-94-054, June 1994</b></p>						

**Process/Operational Limits**

- 1.2 The permittee shall not use more than 17,647 gallons of blanket wash solvent in FG-GEOMANPRESSES per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205]**
- 1.3 The permittee shall capture all waste inks, fountain solutions, and cleanup solvents and store them in closed containers. The permittee shall dispose of all waste inks, fountain solutions, and cleanup solvents in an acceptable manner in compliance with all applicable state rules and federal regulations. **[R336.1224, R336.1225, R336.1702(a)]**
- 1.4 The permittee shall implement the following listed pollution prevention techniques for FG-GEOMANPRESSES: **[R336.1225, R336.1702(a), R336.1901]**
- a. All press related cleaning solvents (blanket and roller washes) shall have composite partial vapor pressures that do not exceed 10 mmHg at 20°C (68°F).
  - b. All containers of new and used VOC-containing press related cleaning materials (blanket and roller washes, and solvent-containing cleaning towels) shall be kept closed at all times that they are not in use.

### Testing

- 1.5 The permittee shall determine the VOC content of any material, as received and as applied, using federal Reference Test Method 24 (inks, coatings, fountain solutions additives and cleaning solvents) pursuant to Rule 1040(5). Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **[R336.1702(a), R336.2001, R336.2003, R336.2004, R336.2040(5)]**

### Recordkeeping / Reporting / Notification

- 1.6 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **[R336.1205, R336.1224, R336.1225, R336.1702(a)]**
- 1.7 The permittee shall keep the following information on a monthly basis for FG-GEOMANPRESSES:
- a) The type, and amount (in gallons or pounds), of each material used. This includes but is not limited to inks, fountain solutions, blanket wash/press wash or cleaning solvents, adhesives, ink-jet inks, makeup solvents, UV coatings, purge and clean-up solvents.
  - b) The VOC content of each material, with water, (in percent by weight or pounds per gallon), as received and as applied.
  - c) The amount (in pounds) of blanket wash reclaimed.
  - d) The amount of blanket wash used for manual cleaning operations.
  - e) Manufacturer's information confirming that the blanket and roller washes used have composite partial vapor pressures that do not exceed 10 mmHg at 20°C (68°F)
  - f) VOC emission calculations determining the blanket/manual wash annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
  - g) VOC emission calculations determining the non blanket/manual wash annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1205, R336.1225, R336.1702(a)]**

- 1.8 The permittee shall maintain a current listing from the manufacturer of the chemical composition of each inks, fountain solutions, blanket wash/press wash or cleaning solvents, adhesives, ink-jet inks, makeup solvents, UV coatings, purge and clean-up solvents as applicable, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1224, R336.1225, R336.1702, R336.1901]**

**Stacks/Vents Restrictions**

1.9 The exhaust gases from any press within FG-GEOMANPRESSES shall not be discharged to the ambient air at any time. [R336.1224, R336.1225, R336.1702(a), R336.1901, 40 CFR 52.21(c) & (d)]

**The following conditions apply to: FGFACILITY**

**Emissions Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirements</b>
2.1a	Each Individual HAP	FGFACILITY	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	SC 2.6	R336.1205(3)
2.1b	Aggregate HAPs	FGFACILITY	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	SC 2.6	R336.1205(3)
2.1c	VOCs	FGFACILITY	Less than 90.0 tpy	12-month rolling time period as determined at the end of each calendar month	SC 2.7	R336.1205(3)

**Testing**

2.3 The permittee shall determine the HAP content of any material, as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. [R336.1205(3)]

2.4 The permittee shall determine the VOC content, water content, and density of any ink, fountain solution and cleanup solvent, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. [R336.1205(3)]

**Recordkeeping/Reporting/Notification**

2.5 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. [R336.1205, R336.1224, R336.1225, R336.1901]

2.6 The permittee shall keep the following information on a monthly basis for FGFACILITY:

- a) Gallons or pounds of each HAP containing material used.
- b) Where applicable, gallons or pounds of each HAP containing material reclaimed.
- c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
- d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.

- e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1205, R336.1224, R336.1225, R336.1901]**

2.7 The permittee shall keep the following information on a monthly basis for FGFACILITY:

- a) Gallons or pounds of each VOC containing material used.
- b) Where applicable, gallons or pounds of each VOC containing material reclaimed.
- c) VOC content, in pounds per gallon or pounds per pound, of each VOC containing material used.
- d) VOC emission calculations determining the monthly emission rate in tons per calendar month.
- e) VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1205(3)]**