

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISED

PERMITTEE

Diagraph/ITW Company
Attn: Deborah Johnson
5307 Meadowland Parkway
Marion, Illinois 62959

<u>Application No.:</u> 05060051	<u>I.D. No.:</u> 199055ACG
<u>Applicant's Designation:</u> HERRIN	<u>Date Received:</u> September 8, 2009
<u>Subject:</u> Ink and Stencil Manufacturing	
<u>Date Issued:</u> March 23, 2010	<u>Expiration Date:</u> May 14, 2012
<u>Location:</u> 5307 Meadowland Parkway, Marion, Williamson County	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Ink Manufacturing and Filling, Including:
Automated Marker Assembly Machine;
Two (2) Ink Lines;
Water-based Ink Jet Line;
Glycerin/Water-based Ink Line; and
One (1) 10 HP Mixer
Canary Board Coating Line; and
Clean Up Operations

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Volatile Organic Material (VOM), 10 tons/year for any Hazardous Air Pollutant (single HAP) and 25 tons/year for any combination of such HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 3a. Pursuant to 35 Ill. Adm. Code 215.204(c)(1), all paper coatings, including oil applied in the canary board coating line, shall not exceed 2.9 lbs VOM/gallon of coating (minus water and any compounds which are exempted from the definition of VOM) as applied at each applicator.
- b. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart K shall apply only to photochemically reactive material.
- 4. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Coating Manufacturing, 40 CFR 63 Subpart HHHHH. This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP) and 25 tons/year of any combination of such HAPs, established in this permit.
- 5a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. This permit is issued based on no heating involved in manufacturing any inks at the facility except on one of the solvent-based ink manufacturing lines.
- 6a. Emissions and operation of the following processes shall not exceed the following limits:

<u>Process</u>	<u>Production</u>		<u>VOM Emissions</u>	
	<u>(Tons/mo)</u>	<u>(Tons/yr)</u>	<u>(Tons/mo)</u>	<u>(Tons/Yr)</u>
Ink Manufacturing (no heat applied)	500	4,000	7.5	60.0
Heated Solvent- based Ink Manufacturing Line	25	200	0.5	4.0
All Ink Filling	525	4,200	<u>0.5</u>	<u>4.0</u>
		Totals:	8.5	68.0

These limits are based on the maximum ink production rate and standard emission factors and formulas (Table 6.4-1, AP 42, Fifth Edition, Volume I, May 1983 for ink manufacturing involving no heating, Table 6.7-1, AP 42, Fifth Edition, Volume I, September 1991 for heated solvent-based Inks containing oils, and Equation 1 of 5.2, AP 42, Fifth Edition, Volume I, July 2008 for loading Inks into storage vessels and then loading into bottles for shipment).

- b. This permit is issued based on negligible VOM emissions from the replacement automated marker assembly machine. For this purpose, emissions shall not exceed nominal rates of 0.23 lb/hour and 1.0 tons/year.
- c. Emissions of volatile organic material (VOM) and operation of the canary board coating line shall not exceed the following limits:

<u>Material</u>	<u>VOM Content</u>		<u>VOM Usage and Emissions</u>	
	<u>(Lbs/gal)</u>	<u>(Tons/mo)</u>	<u>(tons/yr)</u>	
Oil	2.9	0.4	3.0	

These limits are based on maximum material usages, maximum VOM content, (pursuant to 35 Ill. Adm. Code 215.204(c)(1)) and all VOM emitted.

- d. Usage and emissions from all cleanup operations shall not exceed the following:

<u>VOM Usage</u>		<u>VOM Emissions</u>	
<u>(tons/Month)</u>	<u>(Tons/Year)</u>	<u>(tons/Month)</u>	<u>(Tons/Year)</u>
2.3	18.0	2.3	18.0

These limits are based on maximum material usages and maximum VOM content.

- e. Compliance with the annual VOM emission limits of Condition 6 shall be determined on a monthly basis from the sum of the data for the previous month plus the preceding 11 months (running 12 month total).
- 7a. This permit is issued based on negligible emissions of particulate matter (PM) from the water-based ink manufacturing line, the glycerin/water-based ink manufacturing line, and the 10 HP Mixer. For this purpose, emissions from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- b. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.79 tons/month and 7.9 tons/year of any single HAP and 1.99 tons/month and

19.9 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement of Section 112(g) of the Clean Air Act and the NESHAP for Miscellaneous Coating Manufacturing, 40 CFR 63 Subpart HHHHH.

- c. Compliance with the annual limits of Condition 6 shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 8a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
 - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 8 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
9. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.

10. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.
11. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 12a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Amount of each type of ink produced and whether heated or not heated (gallons or tons/month, and gallons or tons/year);
 - ii. Density of each ink produced and whether heated or not heated (lbs/gallon);
 - iii. Amount of solvents, including clean-up, coatings, and oils used (gallons or tons/month, and gallons or tons/year);
 - iv. VOM and HAP contents of each solvent, including clean-up, coatings, and oils used (lb VOM/gallon or percent weight); and
 - v. Vapor Pressure of each ink filled (psi);
 - vi. Molecular Weight of each ink filled (lb/lb-mole); and

- vii. Monthly and annual emissions of PM, VOM and HAPs from all heated ink manufacturing, all non-heated ink manufacturing, all ink filling, coating line and clean up operations, with supporting calculations (tons/month and tons/year).
 - b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
13. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 14a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

It should be noted that the 30 hp emergency gasoline generator is exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(i).

It should also be noted that VOM emission limits have been changed but the total of all VOM emission limits has not changed.

If you have any questions on this permit, please contact Randy Solomon at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:RBS:jws

cc: Illinois EPA, FOS Region 3
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the ink and stencil manufacturing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is producing 4200 tons of ink annually. The resulting maximum emissions are below the levels, (e.g., 100 tons per year for VOM, 10 tons per year for any single HAP, and 25 tons per year for any combination of such HAP) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>E M I S S I O N S (Tons/Year)</u>				
<u>Emission Unit</u>	<u>PM</u>	<u>VOM</u>	<u>Single HAP</u>	<u>Total HAP</u>
Ink Manufacturing (unheated)		60.00		
Ink Manufacturing (heated)		4.0		
Ink Filling		4.0		
Assembly Machine		1.00		
Canary Board		3.0		
Cleanup Solvent		18.0		
Water-Based Ink Manufacturing	0.44			
Glycerin/Water-Based Ink Manufacturing	0.44			
10 HP Mixer	<u>0.44</u>	<u>--</u>	<u>--</u>	<u>--</u>
Totals	1.32	90.00	7.9	19.9

RBS:jws