

1

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as

2

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

3

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

4

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

5

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Sun Chemical-General Printing Ink** located in **Hamilton** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	P023 (Mod)			
P022 (Mod)				P027 (Mod)
	P023 (Mod) Cont'd		P026 (Mod)	P027 (Mod) Cont'd
		P025 (Mod)		
P024 (Mod)		P025 (Mod) Cont'd		

Facility Name: **Sun Chemical-General Printing Ink**
 Application Number: **14-4638**
 Date: **May 12, 1999**

Ohio EPA Source <u>Number</u>	Source Identification <u>Number</u>	BAT <u>Determination</u>	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage <u>Requirements</u>
P028 (Mod)				
		Source Identification <u>Description</u>		
	P030 (Mod)	Liquid ink mixer with covers and baghouse		
			Liquid ink mixer with covers and baghouse	
				Liquid ink mixers with cover and a baghouse
P029 (Mod) P029 (Mod) Cont'd				
		Liquid ink mixer with covers and baghouse		
			Liquid ink mixer with covers and baghouse	

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Liquid ink mixers with cover and a baghouse	Liquid ink mixers with cover and a baghouse	Liquid ink mixers with cover and a baghouse	<p style="text-align: center;"><u>BAT Determination</u></p> Use of a cover for control during mixing, production limitation and a baghouse.	Use of a cover for control during mixing, production limitation and a baghouse.
Liquid ink mixers with cover and a baghouse			Use of a cover for control during mixing, production limitation and a baghouse.	

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Use of a cover for control during mixing, production limitation and a baghouse.	mixing, production limitation and a baghouse.			Applicable Federal & OAC Rules 3745-31-05
		Use of a cover for control during mixing, production limitation and a baghouse.		3745-17-07
			Use of a cover for control during mixing, production limitation and a baghouse.	3745-21-07 (G) (2)
	Use of a cover for control during mixing, production limitation and a baghouse.			3745-15-07
				3745-17-11*
				3745-31-05
Use of a cover for control during		Use of a cover for control during mixing, production limitation and a baghouse.		3745-17-07

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

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	07			3745-17-11*
3745-21-07	3745-17-11*	3745-21-07 (G) (2)	3745-17-07	
(G) (2)				3745-31-05
3745-15-07	3745-31-05	3745-15-07	3745-21-07 (G) (2)	
3745-17-11*	3745-17-07			3745-17-07
			3745-15-07	
		3745-31-05	3745-17-11*	3745-21-07 (G) (2)
3745-31-05	3745-21-07 (G) (2)	3745-17-07		
			3745-31-05	3745-15-07
3745-17-07	3745-15-07			3745-17-11*
3745-17-07	3745-17-11*	3745-21-07 (G) (2)		
			3745-17-07	
		3745-15-07		
3745-21-07	3745-31-05	3745-17-11*		
(G) (2)			3745-21-07 (G) (2)	
	3745-17-07			
3745-15-		3745-31-05	3745-15-07	

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Permit Allowable Mass Emissions and/or Control/Usage Requirements	ons A.8. and C.3. See general rule Less stringent than limits established in OAC rule 3745-31-05. See Additional Special Terms and Conditions A.1.-A.5. See Additional Special Terms and Conditions A.6.-A.7.	3745-31-05. See Additional Special Terms and Conditions A.1.-A.5. See Additional Special Terms and Conditions A.6.-A.7. See Additional Special Terms and Conditions A.8. and C.3.	See Additional Special Terms and Conditions A.1.-A.5. See Additional Special Terms and Conditions A.6.-A.7. See Additional Special Terms and Conditions A.8. and C.3.	established in OAC rule 3745-31-05. See Additional Special Terms and Conditions A.1.-A.5. See Additional Special Terms and Conditions A.6.-A.7. See Additional Special Terms and Conditions A.8. and C.3.
Additional Special Terms and Conditions A.1.-A.5.	See Additional Special Terms and Conditions A.1.-A.5.	See general rule	See general rule	See Additional Special Terms and Conditions A.8. and C.3.
Additional Special Terms and Conditions A.6.-A.7.	See Additional Special Terms and Conditions A.6.-A.7.	Less stringent than limits established in OAC rule 3745-31-05.	Less stringent than limits established in OAC rule 3745-31-05.	See general rule
Additional Special Terms and Conditions A.8. and C.3.	See Additional Special Terms and Conditions A.8. and C.3.	See Additional Special Terms and Conditions A.1.-A.5.	See Additional Special Terms and Conditions A.1.-A.5.	Less stringent than limits established in OAC rule 3745-31-05.
Additional Special Terms and Conditions A.1.-A.5.	See Additional Special Terms and Conditions A.1.-A.5.	See Additional Special Terms and Conditions A.6.-A.7.	See Additional Special Terms and Conditions A.6.-A.7.	See Additional Special Terms and Conditions A.1.-A.5.
Additional Special Terms and Conditions A.6.-A.7.	See general rule	See general rule	See Additional Special Terms and Conditions A.8. and C.3.	See Additional Special Terms and Conditions A.6.-A.7.
Additional Special Terms and Conditions A.8. and C.3.	See general rule	See general rule	See Additional Special Terms and Conditions A.8. and C.3.	See Additional Special Terms and Conditions A.6.-A.7.
Additional Special Terms and Conditions A.1.-A.5.	Less stringent than limits established in OAC rule 3745-31-05.	Less stringent than limits established in OAC rule 3745-31-05.	See general rule	See Additional Special Terms and Conditions A.8. and C.3.

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
See general rule	nal Special Terms and Conditions A.8. and C.3.			
Less stringent limits established in OAC rule 3745-31-05.	See general rule Less stringent than limits established in OAC rule 3745-31-05.			
See Additional Special Terms and Conditions A.1.-A.5.				
See Additional Special Terms and Conditions A.6.-A.7.				
See Additional				

Facility Name: **Sun Chemical-General Printing Ink**
 Application Number: **14-4638**
 Date: **May 12, 1999**

SUMMARY
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Organic Compound	29.5
PM	0.44**
PM ₁₀	0.44**

* Assume PM = PM₁₀.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Hamilton County Dept. of Env. Services, 250 William Howard Taft Road, Cincinnati, OH 45219-2660.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Hamilton County Dept. of Env. Services, 250 William Howard Taft Road, Cincinnati, OH**

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

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Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Applicable Emission Limitations and/or Control Requirements

1. The total combined organic compound emissions from emissions units P022-P030 shall not exceed 29.5 tons per year. The tons per year limitation shall be based upon a rolling, 12-month summation.
2. The emissions of Hazardous Air Pollutants (HAPs) as identified in Section 112(b) of Title III of the Clean Air Act from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation.
3. The following hourly emission limitations shall not be exceeded.

<u>Emissions Unit</u>	<u>lb(s) OC/ hour</u>	<u>lb PM/ hour</u>
P022	2.28	0.03
P023	1.52	0.02
P024	1.90	0.03
P025	1.52	0.02
P026	0.95	0.01
P027	3.81	0.06
P028	4.06	0.06
P029	0.46	0.01
P030	0.12	0.01

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

- * The pounds per hour emission limitation are based on the emissions units potential to emit. Therefore, no hourly recordkeeping, deviation reporting, or compliance methods are required.
4. The total combined PM/PM10 emissions from emissions units P022-P030 shall not exceed 0.44 ton per year. This emission limitation is based on the emissions units potential to emit. Therefore, no recordkeeping, deviation reporting, or compliance methods are required.
5. The maximum annual production rate for emissions unit P022-P030 combined shall not exceed 12,393,201 lbs of ink per year, based upon a rolling, 12-month summation of the production rates.

To ensure enforceability during the first twelve (12) calendar months of operation following the issuance of this permit, the permittee shall not exceed the production levels specified in the following table:

<u>Month</u>	<u>Maximum Allowable Cumulative Production (pounds)</u>
1	6,196,601
1-2	6,196,601
1-3	6,196,601
1-4	6,196,601
1-5	6,196,601
1-6	6,196,601
1-7	7,229,368
1-8	8,262,135
1-9	9,294,901
1-10	10,327,668
1-11	11,360,435
1-12	12,393,201

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

6. Fugitive visible particulate emissions shall not exceed 20% percent opacity, as a three-minute average, except as specified by rule.

15

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

7. Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
8. If any photochemically reactive ink is produced on any day in any of the emissions units, then that emissions unit will be limited to 40 pounds of OC per day in accordance with OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. None.

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for all organic compounds used in the formulation of finished inks for emissions units P022-P030:
 - a. the name and identification of each batch of ink produced;
 - b. the amount of each organic material used in the formulation of inks, in pounds; and,
 - c. the total combined monthly OC emissions, in tons per month. This calculation shall be based on the below equation; and,

The summation of $[(b) \times 1.36 \text{ percent}^*)/2000]$ for each liquid organic material used in the formulation of inks.

* Emission factor derived from the testing of similar sources by Sun Chemical.

- d. the rolling, 12-month summation of OC emissions (the summation of the current month's emission total and the previous eleven (11) calendar month emission totals).

This information does not have to be kept on a line-by-line basis.

2. The permittee shall collect and record the following information each month for the entire facility:
 - a. the name and identification number of each batch of ink produced containing a HAP(s);
 - b. the number of pounds of each batch of ink produced;
 - c. the individual Hazardous Pollutant (HAP) content for each HAP per pound of ink produced in pounds of individual HAP per pound of ink;

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

- d. the total combined HAP content of each ink in pounds of combined HAPs per pound of ink [sum all the individual HAP contents from (c)];
- e. the total individual HAP emissions for each HAP from all inks employed in pounds or tons per month

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

[for each individual HAP, the summation of (b) times 1.36 percent times (c)];

- f. the total combined HAP emissions from all inks employed in tons per month [the summation of (b) times 1.36 percent times (d)];
- g. the updated rolling, 12-month summation for individual HAP emissions for each HAP, in tons. This shall include the information for the current month and the preceding eleven calendar months; and,
- h. the updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Dept. of Env. Services contact. This information does not have to be kept on a line-by-line basis.

- 3. The permittee shall collect and record the following information for each emissions unit on a daily basis when a photochemically reactive ink is produced in that emissions unit:
 - a. the company identification for each batch produced;
 - b. the total amount of all organic material used in each batch, in pounds;
 - c. the total combined amount of all organic material used during the day for all batches, in pounds; and,
 - d. the total daily OC emissions from all batches produced. This calculation shall be based on the below equation.

$$\text{Daily OC emissions} = ((c) * 1.36 \text{ percent}^*)$$

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

* Emissions factor arrived at from the testing of similar sources by Sun Chemical.

4. The permittee shall maintain monthly records of the following information:
 - a. the production rate for each month; and,
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the production rates.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative production rate for each calendar month.

5. All records required by this permit to install shall be retained on file for a period of not less than five years unless otherwise indicated by the Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

D. Reporting Requirements

1. The permittee shall submit annual reports which specify the total organic compound emissions from emissions units P022-P030. These reports shall be submitted by January 30 of each year and cover the previous years operation.
2. The permittee shall submit deviation(excursion)reports for any exceedance of the emission limitations listed in Additional Special Term and Condition A.1.
3. The permittee shall submit deviation (excursion) reports which include the following information:

An identification of each day during which the OC emissions exceeded 40 pounds per day, and the actual OC emissions for each such day.

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

4. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP emissions limitations in Additional Special Term and Condition A.2. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 30 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
5. The permittee shall submit deviation reports that identify all exceedances of the rolling, 12-month production rate limitation and for the first 12 calendar months of operation following issuance of this permit, all exceedances of the maximum allowable cumulative production levels.
6. The permittee shall submit required reports in the following manner:
 - a. reports of any required monitoring and/or recordkeeping information shall be submitted to the Hamilton County Department of Environmental Services; and,
 - b. except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Hamilton County Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06).

E. Compliance Methods/Testing Requirements

1. Compliance with the visible emission limits outlined in OAC rule 3745-17-07 shall be demonstrated by the methods outlined in OAC rule 3745-17-03(B).
2. Formulation data or USEPA Method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the OC contents of the liquid organic materials used in the formulation of inks.

Facility Name: **Sun Chemical-General Printing Ink**

Application Number: **14-4638**

Date: **May 12, 1999**

3. Compliance with the organic compound emissions limitations for these emissions unit shall be demonstrated by the emission records required in Additional Special Term and Condition C.1.
4. Compliance with the HAP emission limitations will be determined by the recordkeeping in Additional Special Term and Condition C.2.
5. Compliance with the production rate limitation will be determined by the recordkeeping in Additional Special Term and Condition C.4.

F. Miscellaneous Requirements

1. This permit to install shall supersede all the air pollution control requirements in permit to install 14-1080.