

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Videojet Technologies, Inc.
Attn: Roger Wichtendahl
1500 North Mittel Boulevard
Wood Dale, Illinois 60191-1073

Application No.: 91070095 I.D. No.: 043800AAL
Applicant's Designation: PRINTPRO1 Date Received: April 30, 2001
Subject: Non-Contact Inkjet Unit Assembly and Testing
Date Issued: Expiration Date:
Location: 1500 Mittel Drive, Wood Dale

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of the following, pursuant to the above-referenced application:

Manufacturing and Sample Lab

32 Test Stations on Final Assembly Line
8 Printers in the Sample Lab

Engineering Lab

78 Test Stations
13 Hoods

SR Training Room

4 Printers

Test Chambers

10 Printers in Each of 4 Chambers (40 Printers)

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., volatile organic material (VOM) to less than 25 tons per year, and hazardous air pollutants (HAPs) to less than 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs). As a result, the source is excluded from the requirements 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 for this location.

2a. Total combined operations and emissions of the printers and associated equipment (i.e., printers, test stations and chambers, hoods) shall not exceed the following limits:

i.

VOM in Ink and Solutions Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
2.0	19.2	2.0	19.2

A. Monthly VOM in ink and makeup solutions usage limits shall be determined using the following equation:

Unit = tons/month

$$\text{VOM in material usage} = \sum_{i=1}^n (\text{material}_i \text{ usage}) \times (\text{weight \% VOM content of material}_i)$$

These limits are based on maximum VOM usage and a material balance.

ii.

Adjusted* VOM in Cleaning Solutions Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0.4	1.7	0.4	3.7

* Adjusted VOM in cleaning solutions usage = actual VOM in cleaning solutions usage - VOM from cleaning solutions which is collected in drums and shipped offsite.

These limits are based on a material balance and take into account the VOM used in the cleaning solutions which is collected in drums and shipped offsite and therefore not emitted at this plant.

b. Total combined single HAP usage and emissions from all emission units and activities shall not exceed the following limits:

<u>Single HAP¹ Usage</u>	<u>Single HAP¹ Emissions</u>
<u>(Tons/Year)</u>	<u>(Tons/Year)</u>
9.9	9.9

¹ Single HAP means any individual HAP listed in Section 112(b) of the Clean Air Act as amended in 1990 (e.g., xylene, toluene).

These limits are based on a material balance and assume 100% of the HAPs used are emitted.

- c. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
 - d. Compliance with the annual limits of this permit 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).
- 3a. The Permittee shall collect and record the following information each day:
- i. A list giving the name and identification number of each ink, makeup solution, cleaning solution, and any other material used containing VOM.
 - ii. A list of HAPs present and the weight percent content of each HAP for each ink, makeup solution, cleaning solution, and any other material used containing VOM.
 - iii. The weight percent VOM content of each ink, makeup solution, cleaning solution, and any other material used containing VOM.
 - iv. Actual usage rate of each ink, makeup solution, cleaning solution, and any other material used containing VOM (lbs/month and tons/year).
 - v. Usage rate of VOM in inks, VOM in makeup solutions, VOM used in cleaning solutions, and adjusted VOM in cleaning solutions (lbs/month and tons/year).
 - vi. VOM used in cleaning solutions which is collected and shipped offsite (lbs/month and tons/year).
 - vii. Usage and emissions of single HAPs (lbs/month and tons/year).
 - viii. Individual VOM and HAP emissions from use of ink, makeup solutions, cleaning solutions, and the total combined VOM and HAP emissions at this source (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 three 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.

4. If there is an exceedance of 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. 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 violation and efforts to reduce emissions and future occurrences.
5. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system 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
9511 West Harrison
Des Plaines, Illinois 60016

6. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
 - a. Annual usage of each ink, makeup solution, adjusted cleaning solutions usage, solder flux, and any other material used containing VOM (in tons/yr).

If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

If you have any questions on this permit, please call John Blazis at 217/782-2113.

Donald E. Sutton, P. E.
Manager, Permit Section
Division of Air Pollution Control

DES:JPB:psj

cc: Illinois EPA, FOS Region 1
Illinois EPA, Compliance Section
USEPA - Lotus Notes

Attachment A- Emissions Summary

This attachment provides a summary of the maximum emissions of the ink jet printing equipment manufacturer 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 source. The resulting maximum emissions are below the levels, (e.g., 25 tons/yr of VOM) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source should be less than predicted in this summary to the extent that materials are not used at the maximum levels on which this permit is based.

1. Total combined emissions of the printers and associated equipment (i.e., printers, test stations and chambers, hoods):

<u>VOM in Ink and Solutions Usage</u>		<u>VOM Emissions</u>	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
2.0	19.2	2.0	19.2

<u>Adjusted* VOM in Cleaning Solutions Usage</u>		<u>VOM Emissions</u>	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0.4	1.7	0.4	3.7

* Adjusted VOM in cleaning solutions usage = actual VOM in cleaning solutions usage - VOM from cleaning solutions which is collected in drums and shipped offsite.

2. Total combined single HAP usage and emissions from all emission units and activities:

<u>Single HAP¹ Usage</u>	<u>Single HAP¹ Emissions</u>
<u>(Tons/Year)</u>	<u>(Tons/Year)</u>
9.9	9.9

¹ Single HAP means any individual HAP listed in Section 112(b) of the Clean Air Act as amended in 1990 (e.g., xylene, toluene).

3. As a consequence of the requirements of this permit, the emissions of hazardous air pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source will be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs so that HAP emissions do not trigger the requirements to obtain a Clean Air Act Permit Program permit from the Illinois EPA.

PROJECT SUMMARY

INTRODUCTION

Videojet Systems International (Videojet) manufactures non-contact ink jet printing equipment. Videojet also Manufactures its own Circuit Boards.

Videojet has requested that the Illinois Environmental Protection Agency (Agency) issue a Federally Enforceable State Operating Permit (FESOP) which will restrict emissions below major source threshold levels of the Clean Air Act Permit Program (CAAPP) i.e., volatile organic material (VOM) to less than 25 tons per year, and hazardous air pollutants (HAPs) to less than 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs. As a result of the issuance of this FESOP, Videojet will not be required to obtain a CAAPP permit.

The FESOP limits emissions and material usage, and has conditions requiring recordkeeping and reporting to ensure that emissions will remain below those levels that would require them to obtain a CAAPP permit. Videojet has proposed such limits and is willing to accept a permit containing these limits.

DESCRIPTION OF OPERATIONS

The printing equipment manufactured at Videojet is tested by various groups of employees. Engineers run tests to insure new products work within design specification. Manufacturing employees test some printers before leaving the line to verify specification. These test utilize ink and makeup solutions to print, and then cleaning solution is used for cleanup. Used inks, makeup solution, and cleaning solution is collected in drums and shipped offsite.

The flux is used by the welding operations in the manufacture of the circuit boards.

Emission Units

Manufacturing and Sample Lab;

- ! wave solder machine
- ! reflow oven
- ! 32 test stations on final assembly line
- ! 8 printers in the sample lab

Engineering Lab;

- ! 78 test stations
- ! 13 hoods

SR training Room;

- ! 4 printers

Test Chambers;

! 10 printers in each of 4 chambers (40 printers).

EMISSIONS

The operations at Videojet are sources of VOM and HAP emissions. Emissions will occur during the printing operations, during cleanup, and as a result of the flux usage.

Potential emissions as limited by the FESOP:

<u>Total Combined VOM (tons/yr)</u>	<u>Total Combined HAPs (tons/yr)</u>	<u>Single HAP (tons/yr)</u>
23.01	23.01	9.9

APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with Illinois Pollution Control Board emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

After reviewing the technical material in the application the Agency has determined that the coating lines are in compliance with all applicable standards.

CONTENTS OF PERMIT

The permit will be the mechanism used to ensure that all applicable emission limits and requirements are met both initially and on a continuous basis. The permit contains conditions on emissions, material usage, recordkeeping, and reporting. These conditions will effectively serve to maintain compliance.

REQUEST FOR COMMENTS

It is the Agency's preliminary determination that the proposed permit meets all applicable State and Federal air pollution control requirements and will effectively and enforceably restrict emissions below CAAPP major source thresholds.

Comments are requested by the Agency on the proposed issuance of this permit and the proposed conditions of the draft permit. Comments must be addressed

to the Illinois Environmental Protection Agency, Division of Air Pollution Control, P.O. Box 19506, Springfield, Illinois 62794-9506.

DES:JRR:drk