

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

In the matter of a request for approval of a biofiltration)
system located at the Serigraph, Inc. Plant 2 printing)
facility 3801 East Decorah Road, West Bend, Wisconsin,))
as an equivalent VOC control technology.)

DECISION AM-04-200

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

FINDINGS OF FACT

The Department of Natural Resources (Department) finds that:

1. Serigraph Company, Inc. (Serigraph) Plant 2 is located at 3801 East Decorah Road, City of West Bend, County of Washington, Wisconsin.
2. Serigraph owns and operates screen printing units and sheet fed lithographic printing presses at Plant 2 which result in the emission of volatile organic compounds (VOCs) to the ambient air.
3. Serigraph constitutes a screen printing facility and the screen printing units operated at Plant 2 are subject to the requirements of s. NR 422.145, Wis. Adm. Code.
4. Section NR 422.145(2), Wis. Adm. Code, prohibits the owner or operator of a screen printing unit from causing, allowing or permitting the emission of any VOCs in excess of the following:
 - a. 0.40 kilograms per liter (3.3 pounds per gallon) of ink or coating, excluding water, delivered to an applicator for general inks or coatings.
 - b. 0.80 kilograms per liter (6.7 pounds per gallon) of ink or coating, excluding water, delivered to an applicator for special purpose inks or coatings.
 - c. 0.80 kilograms per liter (6.7 pounds per gallon) of ink or coating, excluding water, delivered to a roll coating applicator associated with screen printing.
5. Section NR 422.04(2), Wis. Adm. Code, establishes the general methods for achieving compliance with the emission limitations in ch. NR 422, Wis. Adm. Code, including an equivalent system or approach demonstrated to reliably control emissions to a level at or below the applicable emission limit and approved by the Department.
6. In a letter to the Department dated July 22, 2003, Serigraph requested approval to use an existing biofiltration system as an equivalent system or approach under s. NR 422.04(2)(d), Wis. Adm. Code, for demonstrating compliance with the VOC emission limitations applicable to screen printing units at Plant 2, when using inks or coatings with a VOC content in excess of the emission limitations.
7. Serigraph installed a biofiltration system at Plant 2 to reduce VOC emissions from facility operations in order to meet the requirements associated with obtaining an air

construction permit for the facility. This system has been in operation since May of 1997. The following printing units are connected to and controlled by the biofiltration system: equipment number 222, 224, 246, 253, 259, 261, 264, 266, 268, 269, 271, 272, 276, 277, and 278.

8. The print room and air collection system for the biofilter is designed as a Permanent Total Enclosure in accordance with EPA Method 204. On May 4, 1999 air flow testing was performed at the Plant 2 facility which demonstrated that 100% of the VOC emissions from the permanent total enclosure room are vented to the biofiltration system.
9. Compliance emission testing of the biofilter performed in winter of 1997, spring of 1998, and December 14, 1999 has shown it has at least an 80% control efficiency (adjusted for methane). The Plant 2 facility's air construction permit 99-POY-132, dated December 2, 1999, required the biofilter's control efficiency to be at least 80%.
10. Serigraph has demonstrated to the satisfaction of the Department that the biofiltration system is capable of reliably controlling VOC emissions from screen printing operations at Plant 2 to a level at or below the applicable emission limitations in s. NR 422.145(2), Wis. Adm. Code.

CONCLUSIONS OF LAW

The Department concludes that:

1. The Department has the authority under s. 285.11, Stats., to promulgate rules to establish control techniques or operating procedures for a screen printing operation.
2. The Department has the authority to approve an equivalent system for meeting VOC emission limitations under s. NR 422.04(2), Wis. Adm. Code.
3. The issuance of this decision is reasonable and necessary to accomplish the purposes of ss. 285.01 to 285.87, Stats., and s. NR 422.04(2)(d) and s. NR 422.145, Wis. Adm. Code.

DECISION

The Department hereby approves the biofiltration system at the Serigraph Plant 2 facility as an equivalent system under s. NR 422.04(2)(d), Wis. Adm. Code, for demonstrating compliance with the applicable VOC emission limitations under s. NR 422.145(2), Wis. Adm. Code, subject to the following conditions:

1. Serigraph shall operate the biofiltration system to demonstrate compliance with the VOC emission limitations in s. NR 422.145(2)(a) to (c), Wis. Adm. Code, whenever using inks or coatings with a VOC content greater than 0.40 kilograms per liter (3.3 pounds per gallon), excluding water, for general inks and coatings, or 0.80 kilograms per liter (6.7 pounds per gallon), excluding water, for special purpose inks or coatings, as delivered to an applicator.
2. On any day that Serigraph operates the biofiltration system under condition 1, Serigraph shall calculate and record daily allowable emissions reflecting all inks and coatings used,

for each individual printing unit used to apply noncompliant inks or coatings, using the equation in s. NR 422.04(4), Wis. Adm. Code. If Serigraph uses inks or coatings, some of which are subject to the 0.40 kilograms per liter (3.3 pounds per gallon) VOC content limitation and others subject to the 0.80 kilograms per liter (6.7 pounds per gallon) VOC content limitation, on the same unit on the same day, calculations shall be made separately for inks and coatings subject to each numerical emission limitation. The results shall then be added and recorded as the allowable emissions for that printing unit for that day.

3. The biofiltration system shall be operated at an overall VOC emission control efficiency of at least 80% as determined under conditions 6. and 7.
4. On any day that Serigraph operates the biofiltration system under condition 1, Serigraph shall calculate and record daily actual emissions for each printing unit used to apply noncompliant inks or coatings using a biofilter destruction efficiency of 80%.
5. For each day Serigraph operates the biofiltration system under condition 1, Serigraph shall prepare a statement that documents either compliance or noncompliance with the applicable VOC emission limitations established in s. NR 422.145 (a) to (c), Wis. Adm. Code. A printing unit shall be determined to be in compliance where the allowable emissions for the unit calculated under condition 2 are greater than or equal to the actual emissions for the unit calculated under condition 4.
6. Serigraph shall conduct a test consistent with s. NR 439.07, Wis. Adm. Code, to document the VOC emission control efficiency of the biofiltration system as follows:
 - a. The test shall be conducted within 120 days after receipt of this determination while operating at 100% capacity.
 - b. If operation at 100% capacity is not feasible, the source shall operate at a capacity level that is approved by the Department in writing.
 - c. The Department shall be informed in writing at least 20 working days prior to any emission testing so a Department representative can witness the testing. At the time of notification an emission test plan shall also be submitted to the Department for approval.
 - d. If the compliance emission tests cannot be conducted by the dates required in this condition, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
 - e. Two copies of the report on the tests shall be submitted to the Department for evaluation within 60 days after the tests.
7. Serigraph shall conduct periodic emission testing consistent with s. NR 439.07 and s. NR 439.075, Wis. Adm. Code, to demonstrate compliance with the VOC emission control efficiency requirement as follows:
 - a. The testing shall be conducted every 60 months, within 90 days of the anniversary date of receipt of this determination while operating at 100% capacity.
 - b. If operation at 100% capacity is not feasible, the source shall operate at a capacity level that is approved by the Department in writing.
 - c. The Department shall be informed in writing at least 20 working days prior to any emission testing so a Department representative can witness the testing. At the time of notification an emission test plan shall also be submitted to the Department for approval.

- d. If the compliance emission tests cannot be conducted by the dates required in this condition, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s);
 - e. Two copies of the report on the tests shall be submitted to the Department for evaluation within 60 days after the tests.
8. Whenever emission testing is required by the Department, the following test methods shall be employed:
- a. USEPA Method 24 or 24A shall be used to determine the organic solvent content, the volume of solids, the weight of solids, the water content and the density of coatings and inks.
 - b. USEPA Method 18, 25, or 25A shall be used to determine organic compound emission concentrations or emission rates.
9. Serigraph shall maintain all records required under this approval in accordance with the applicable requirements in s. NR 439.04(1) through (5), Wis. Adm. Code. The records shall include the following items and shall be made available for inspection by a Department staff during normal business hours:
- a. A unique name or identification number for each coating or ink, as applied.
 - b. The VOC content of each coating or ink, as applied, in units of pounds of VOC per gallon, excluding water.
 - c. The allowable emission rate pursuant to s. NR 422.145, in pounds per gallon of coating or ink, excluding water.
 - d. The amount of each coating or ink in gallons, delivered to the applicator.
 - e. The volume fraction of solids in each coating or ink, delivered to the applicator.
 - f. The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator.
 - g. The total allowable emissions as calculated under s. NR 422.04(4), Wis. Adm. Code.
 - h. The actual emissions for those coatings or inks for which allowable emissions were calculated under s. NR 422.04(4), Wis. Adm. Code, when considering the control device.
 - i. Control device monitoring data.
 - j. A log of operating time for the capture system, control device, monitoring equipment and the associated coating or printing line or operation.
 - k. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
 - l. Copies of all records required under this section shall be retained by the owner or operator for a period of at least 5 years.
10. Serigraph shall submit an annual certification of compliance with the conditions of this decision to the Wisconsin Department of Natural Resources, Plymouth Service Center, PO Box 408, Plymouth, WI 53073 in accordance with the following:
- a. The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.
 - b. The report shall be submitted to the Plymouth Service Center Office within 60 days after the end of each reporting period.
 - c. The report shall provide identification of each condition that is the basis of the compliance certification.

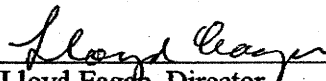
- d. The report shall state the compliance status of the facility with respect to each condition of this decision.
- e. The report shall provide information as to whether compliance was intermittent or continuous.
- f. The report shall identify the methods used for determining the compliance status of the facility, currently and over the previous 12 month period.
- g. Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision, you should know that Wisconsin Statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to s. 285.81, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30 day filing period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary


Lloyd Eagan, Director
Bureau of Air Management

Dated: 11/29/04