
Fujifilm Dimatix, Inc.]	RACT ORDER
101 Etna Road]	July 8, 2021
Lebanon, NH 03766]	RO-0006
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A. Introduction

This RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Fujifilm Dimatix, Inc., pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division (NHDES), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 29 Hazen Drive, Concord, NH 03302, telephone number (603) 271-1370.
2. Fujifilm Dimatix, Inc. (Fujifilm) is a registered corporation in New Hampshire doing business at the mailing address of 101 Etna Road, Lebanon, NH 03766, telephone number (603) 443-5300.

C. Statements of Fact and Law

1. Fujifilm operates a facility located on Etna Road in Lebanon, NH that produces piezoelectric ink jet print heads and printing systems. Fujifilm generates emissions of volatile organic compounds (VOCs) from its manufacturing operations.
2. Effective June 1, 2011, NHDES readopted the New Hampshire Code of Administrative Rules Env-A 1200, *VOCs Reasonably Available Control Technology (RACT)* with amendments.
3. Env-A 1220, *Miscellaneous Industrial Adhesives*, established VOC content limits for miscellaneous industrial adhesives and adhesive primer application processes. On and after January 1, 2016, a source whose adhesive application processes have combined actual emission, before controls, during any consecutive 12-month period which equal or exceed 3 tons of VOCs shall be subject to Env-A 1220.
4. On September 30, 2020, NHDES received annual emission reports for 2016 through 2019 from Fujifilm. The annual reports show actual VOC emissions from the adhesive spray operations have exceeded 3 tons per year, therefore Fujifilm became subject to Env-A 1220 on January 1, 2016.
5. Fujifilm uses adhesives to bond metal to metal and other substrates, therefore, pursuant to Env-A 1220.02(c), the less restrictive adhesive limit of 2.1 pounds VOC per gallon, minus water and exempt compounds, for the “other substrates” category in Table 1220-1 applies.
6. On July 16, 2020, NHDES received from Fujifilm an application for a temporary permit to operate a total of eight adhesive spray coating booths at the facility. The application also indicated that the emissions from the adhesive operation exceeded 3 tons of VOCs per year triggering applicability of Env-A 1220. Amendments to the application were received on September 3, 2020, December 1, 2020 and December 28, 2020.

7. On February 12, 2021, Fujifilm submitted a request for a VOC RACT Order proposing a modified emission rate for the adhesive applied as well as the use of emission reduction credits (ERCs) to offset the gap between future actual emissions and allowable emissions. This application was deemed sufficient on March 31, 2021.
8. Fujifilm evaluated the feasibility of using an alternative adhesive. None of the alternatives evaluated could meet the functional requirements necessary, therefore an alternative adhesive is not technically feasible.
9. Fujifilm considered the use of add-on controls including condensation, wet scrubbing, thermal or catalytic oxidation, and adsorption. Condensation, wet scrubbing and adsorption were not technically feasible. Thermal or catalytic oxidation were not economically feasible.
10. Fujifilm is currently using an adhesive with an actual VOC content of 6.29 pounds per gallon, excluding water and exempt compounds, as applied.
11. Fujifilm purchased nine ERCs on June 7, 2021 (Emissions Reductions Trading Registry Batch ID# 08VGPB01C).

D. Order

Based on the statements of fact and law, NHDES hereby orders Fujifilm, effective upon issuance of this Order, to comply with the following requirements as RACT:

1. Fujifilm shall limit total adhesive VOC emissions from the adhesive spray booths (EU01) to less than 12.2 tons, not including solvent cleaning associated with spray booth operations, during any consecutive 12-month period.
2. Fujifilm shall control VOC emissions by using adhesives that meet a limit of 2.1 pounds of VOC per gallon coating (lb VOC/gal), as applied, excluding water and exempt compounds. If the adhesive exceeds the limit, then ERCs will be used to offset the gap between actual emissions and emissions allowed by the rule.
3. Fujifilm shall obtain ERCs approved under the State Implementation Plan for the purpose of satisfying the requirements of this Order by acquiring ERCs on the open market in accordance with Env-A 3000, *ERCs Trading Program*. This Order grants approval to Fujifilm to use those ERCs in accordance with the procedures described in Env-A 3000. ERCs can only be used for compliance after the date of purchase.
4. Fujifilm will continue to investigate alternative spray equipment technology and employ good operating practices in order to minimize air emissions.
5. Fujifilm shall comply with the provisions of Env-A 1220.04, *Application Methods*, Env-A 1220.05, *Work Practices for Waste Materials*, and Env-A 1220.06, *Work Practices for Cleaning Materials*.

6. Emission Credit Use and Calculations

The calculations for use of ERCs shall be done on a calendar year basis.

ERCs required are calculated as follows:

$$\text{ERCs} = \text{Actual emission rate} - \text{Rate of allowable emissions}$$

where,

$$\begin{aligned} \text{Actual emission rate} &= \frac{\text{Actual lbs VOC (minus water and exempt compounds)}}{\text{gal adhesive}} \\ & * \frac{\text{gal of adhesive used (minus water and exempt compounds)}}{\text{year}} \end{aligned}$$

$$\begin{aligned} \text{Rate of allowable emissions} &= \frac{2.1 \text{ lbs VOC (Env - A 1220 limit)}}{\text{gal adhesive}} \\ & * \frac{\text{gal of adhesive used (minus water and exempt compounds)}}{\text{year}} \end{aligned}$$

7. Recordkeeping and Reporting Requirements

- a. Fujifilm shall maintain monthly records for adhesives, thinners and cleaners which contain VOCs. This information, along with the VOC content records required in 7.b. below, shall be used to calculate the monthly VOC emissions from the process as required by Env-A 903.02, *General Recordkeeping Requirements for Process Operations*.
- b. All coatings subject to this VOC RACT Order at the Facility after the issuance of this RACT Order shall be either tested using the methods listed in Env-A 804.04, *Calculation of VOC Content of a Coating Formulation*, or Fujifilm will retain sufficient records for prima facie evidence, per Env-A 804.03, *Indication of the VOC Content of a Coating Formulation*, in order to demonstrate compliance with the VOC RACT limit.
- c. Maintain records in accordance with Env-A 904, *VOC Emission Statements Recordkeeping Requirements*, and submit reports in accordance with Env-A 908, *VOC Emission Statements Reporting Requirements*.
- d. As part of the Annual Emissions Report submitted annually by April 15th of the following year, include information detailing efforts taken to reduce adhesive usage and find adhesives with lower VOC contents. The report shall contain the following information:
 - (i) A technical evaluation of efforts to reduce adhesive usage; and
 - (ii) A technical evaluation of each alternative adhesive considered and the basis for acceptance or rejection; or
 - (ii) A statement indicating that no reduction efforts were attempted and no alternative adhesives were evaluated during the time period covered by the report.
- e. As part of the Annual Emissions Report submitted annually by April 15th of the following year, include the actual number of ERCs used to demonstrate compliance for the year, and show that value does not exceed the balance of ERCs held by Fujifilm as identified by Emissions Reductions Trading Registry Batch ID#.

Please address any correspondence and communication in reference to this Order to the following:

Operating Permits Program Manager
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Permitting and Environmental Health Bureau
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P.O. Box 95
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(603) 271-6796



Craig A. Wright
Director
Air Resources Division

cc: Robert McConnell, USEPA
City of Lebanon