

PSI Molded Plastics New Hampshire, Inc.]	RACT ORDER
5 Wickers Drive]	November 20, 2019
Wolfeboro, NH 03894]	RO-0005
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A. Introduction

This RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to PSI Molded Plastics New Hampshire, 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. PSI Molded Plastics New Hampshire, Inc. (PSI) is a New Hampshire corporation doing business at the mailing address 5 Wickers Drive, Wolfeboro, NH 03894, telephone number (603) 941-0716.

C. Statements of Fact and Law

1. PSI owns and operates a facility located in Wolfeboro, NH primarily engaged in custom injection molding operations. Operations at the facility include coating of metal and plastic parts using a variety of coatings that require prior approval from their clients.
2. Effective June 1, 2011, NHDES readopted the New Hampshire Code of Administrative Rules Env-A 1200, *Volatile Organic Compounds (VOCs) Reasonably Available Control Technology (RACT)* with amendments.
3. Env-A 1212 established VOC content limits for miscellaneous metal and plastic parts and products coating. On and after January 1, 2016, a source whose coating application processes for miscellaneous metal and plastic parts that have combined actual emission, before controls, during any consecutive 12-month period which equal or exceed 3 tons of VOCs after the applicability date of June 1, 2011 shall be subject to Env-A 1212.
4. Actual emissions of VOCs at the Facility are greater than 3 tons per consecutive 12-month period and, therefore, PSI (at the time GI Plastek) became subject to Env-A 1212 on January 1, 2016.
5. On February 13, 2018, NHDES received an application for an administrative amendment to change the name of GI Plastek to PSI Molded Plastics New Hampshire, Inc.
6. On September 6, 2018, NHDES conducted a compliance inspection and noted that a portion of the coatings used by PSI were not in compliance with Env-A 1212.04.
7. On February 8, 2019, PSI submitted an application for a RACT Order requesting to calculate VOC emissions with the bubbling method on a monthly basis to demonstrate compliance with the VOC RACT limits of Env-A 1212. A cost evaluation of the use of recuperative, regenerative, and catalytic thermal oxidation were included in the RACT Order application. PSI concluded that these systems would be economically infeasible.

D. Order

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

1. **Miscellaneous Metal and Plastic Parts and Products Coating under Env-A 1212:**

- a. For those processes applying coating onto metal and plastic parts and products, PSI shall comply with the emission limits as specified for the applicable coating categories listed in Table 1212-1 of Env-A 1212.04 for miscellaneous metal parts, Table 1212-3 of Env-A 1212.06 for miscellaneous plastic parts, and Table 1212-5 of Env-A 1212.07 for automotive plastic parts. All limits are in units of pounds of VOC per gallon of coating, as applied, excluding water and exempt compounds.
- b. If more than one emission limit in D.1.a, applies to a specific coating, then the least stringent emission limitation shall be applied.

2. **Calculation of Emission Standard On a Solids Basis**

The emission rate limit shall be determined on a solids basis, as specified below:

- (i) "S" means the VOC emission standard in terms of pounds VOC per gallon of coating solids;
- (ii) "E_c" means the VOC emission limit as stated in Part D.1, above; and
- (iii) "d_A" means the actual mass density of the VOC in the applied surface coating formulation in terms of lb VOC/gal VOC; and
- (iv) S shall be equal to E_c divided by the difference between one and the quotient of E_c and d_A, as in the following equation:

$$S = \frac{E_c}{[1 - E_c / d_A]}$$

3. **Calculation of Allowable VOC Emissions per Coating per Month**

The allowable VOC emissions shall be calculated for each coating as follows:

- (i) "E_{al}" means the allowable VOC emission rate of a given coating in units of lbs/month or kg/month;
- (ii) "S" means the VOC emission standard in terms of lb VOC/gal or kg VOC/l of coating solids, as calculated in Part D.2, above;
- (iii) "V" means the volume of coating or dilution solvent used in a given month in units of gal/month or l/month;
- (iv) "VS" means the volume fraction solids content of the coating, in units of gal solids/gal coating or l solids/l coating as determined by calculation using the formulation; and
- (v) "E_{al}" shall be equal to the product of S, VS and V for each coating or dilution solvent used, as in the following equation:

$$E_{al} = S * VS * V$$

4. Calculation of Actual VOC Emissions per Coating per Month

The VOC emissions shall be calculated for each coating as follows:

- (i) "E_{ac}" means the actual VOC emission rate of a given coating in units of lbs/month;
- (ii) "V" means the volume of coating or dilution solvent used in a given month in units of gal/month or l/month;
- (iii) "D" means the density of the coating or dilution solvent used, in units of lb/gal or kg/l;
- (iv) "WV" means the weight fraction of VOC content of the coating, in units of lbs VOC/lb coating as determined by calculation using the formulation; and
- (v) "E_{ac}" shall be equal to the product of V, D and WV, as in the following equation:

$$E_{ac} = V * D * WV$$

5. Bubbling Calculation of the Difference Between Allowable and Actual Emissions per Coating

The difference (E) between the sum of all allowable VOC emission rates (E_{al}) and sum of the actual VOC emissions of a given month (E_{ac}) shall be calculated as in the following equation:

$$E = \Sigma(E_{al}) - \Sigma(E_{ac})$$

Compliance is shown if the calculated difference is a positive number, indicating the actual emissions are below the applicable limits.

6. Recordkeeping and Reporting Requirements

PSI shall maintain the following records in order to demonstrate compliance with this Order. Each record shall be kept for a period of at least five years.

- a. All coatings used at the facility after the issuance of this RACT order shall be either tested using Methods below or the facility will retain sufficient records for prima facie evidence in support of demonstrating compliance with the VOC RACT limit.
 - (i) Method 24, 40 CFR Part 60, Appendix A at 1-hour bake time, or an alternative test method approved by the Director and EPA; or
 - (ii) Method 24A, 40 CFR Part 60, Appendix A, or an alternative test method approved by the Director and EPA.
 - (iii) Prima facie evidence shall include all of the information required by the VOC data sheet found on either page II-2 or III-2, as applicable, of EPA document EPA-450/3-84-019, *Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings*, dated 1984.

If there is a discrepancy between the formulation data and the results of the Method 24 or 24A analysis, compliance shall be based on the results from the Method 24 or 24A analysis.


- b. 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*.

7. Work Practice Standards for Miscellaneous Metal and Plastic Parts and Products Coating

PSI shall control VOC emissions from VOC-containing coatings, thinners, coating-related waste materials and cleaning materials by complying with the requirements in Env-A 1212.03

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

Operating Permits Program Manager
NHDES, Air Resources Division
Permitting and Environmental Health Bureau
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(603) 271-6796



Craig A. Wright
Director
Air Resources Division

cc: Robert McConnell, USEPA Region I
David Mackintosh, USEPA Region I
Jeff Crothers, PSI Molded Plastics New Hampshire, Inc.
Paul Murphy, PSI Molded Plastics New Hampshire, Inc.
Stephen Slocomb, Epsilon Associates, Inc.
cc: Town of Wolfeboro