
Hutchinson Sealing Systems North America Inc.]
171 Route 85]
PO Box 169]
Newfields, NH 03856]

Final RACT ORDER
March 22, 2012
ARD-11-001

A. Introduction

This RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Hutchinson Sealing Systems North America Inc., pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division (“DES”), 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. Hutchinson Sealing Systems, Inc. (“HSS”) is a Delaware corporation, having a mailing address of 1060 Centre Road, Auburn Hills, MI.

C. Statements of Fact and Law

1. HSS owns and operates a facility located on Route 85 in Newfields, NH.
2. HSS is primarily engaged in the production of sealing systems that are designed for use in automotive and various other applications. The sealing strips are produced by several complex processes involving metal roll forming, rubber and plastic extruding, flocking (or the application of a low-friction coating) and curing, followed by certain secondary operations including but not limited to trimming, notching, saw cutting, stretch bending, molding and assembly.
3. On August 8, 2002, DES issued RACT Order # ARD-01-002 to HSS for the sealing systems production operations. The RACT Order required HSS to:
 - a. Terminate the Body Stock Preparation Process operations, and the Metal Parts Painting Operations; and
 - b. Continue to research and test water-based and/or high solids adhesives and low friction primer and top coatings as new products become available in search of RACT-compliant coatings (3.5 pounds of VOCs per gallon of coating excluding water and exempt VOC compounds as applied); and/or obtain credits or use its own shutdown ERCs to comply with the VOC RACT requirements of 3.5 pounds of VOCs per gallon of coating excluding water and exempt VOC compounds as applied
4. On August 8, 2002, DES submitted to United States Environmental Protection Agency (USEPA) VOC RACT Order # ARD-01-002 as a revision to the New Hampshire State Implementation plan (SIP).

5. Effective July 1, 1979, DES adopted PART Env-A 1200 STATIONARY SOURCES OF VOLATILE ORGANIC COMPOUNDS (VOCs). Effective June 1, 2011, DES revised and adopted Env-A 1220.
6. On November 9, 2009, HSS submitted an application for renewal of State Permit to Operate FP-S-0255.
7. On August 11, 2011, HSS submitted an addendum to the permit renewal application to include a modification to Thermoplastics Extrusion Line #9 [TPV Line #9] and the installation of an associated control device (catalytic oxidizer).
8. On October 3, 2011, HSS submitted a request for a modification to VOC RACT Order ARD-01-002 to be allowed to generate DERs for the over control of VOCs generated from the modification to TPV Line #9 and the installation of the catalytic oxidizer.
9. On March 22, 2012, HSS will be issued a renewal of its State Permit to Operate for the Sealing System Production Operations, which will allow HSS to modify the “front end” of TPV#9, and install and operate a catalytic oxidizer to control those VOC emissions.
10. HSS’ current VOC emitting sources subject to this Order include the following:

Emission Unit ID	Process/Device Identification
EU01	Extrusion Line #12
EU02	Extrusion Line #13
EU03	Extrusion Line #14
EU04	Extrusion Line #15
EU07	Thermoplastics Extrusion Line #7
EU08	Thermoplastic Vulcanizates Line #8
EU09	Thermoplastic Vulcanizates Line #9

11. DES will submit a request to withdraw RACT Order # ARD-01-002 to EPA to be replaced with this RACT Order ARD-11-001 as a SIP revision

D. Order

Based on the above findings and determinations, DES hereby orders HSS as follows:

1. Comply with the VOC limit codified in Env-A 1220.02 of 6.3 lbs VOC/gallon of coating as applied, excluding water and exempt VOC compounds, as a monthly average for all motor vehicle weather-strip adhesive coatings applied by using credits in accordance with D.4. below.
2. Continue to research and test water-based and/or high solids coatings as new products become available;
3. HSS shall be allowed to use discrete emissions reductions (DERs) or emissions reductions credits (ERCs) for the purpose of complying with VOC RACT by acquiring DERs or ERCs on the open market or by self-generating ERCs in accordance with Chapter Env-A 3000 and in accordance with HSS’ June 30, 1998 Notice of ERC Generation and the accompanying protocols dated June 7, 1999 (i.e., substitute NOx for VOC credits, ration 1:1) or by self-generating DERs in accordance with Chapter Env-A 3100 and in accordance with the provisions in Part E of this Order for self-generation of DERs.

4. As an alternative to the emission rate limit stated in D.1. above, HSS may use add-on control, bubbling, DERs/ERCs or any combination of the previous methods, and comply with a solids-based emission rate limit as calculated below:
- a. Emission standard on a solids basis shall be determined as specified below:
 - i. "E_c" means the VOC emission limit as stated in Part D.1., above; and
 - ii. "d_A" means the actual mass density of the VOC in the applied surface coating formulation in terms of lbs VOC/gal VOC; and
 - iii. "S" means the VOC emission standard in terms of lbs VOC/gallon of coating solids as applied; and 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:

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

- b. Allowable VOC emissions for each coating as applied shall be calculated as follows:
 - i. "S" means the VOC emission standard in terms of lbs VOC/gal coating solids as applied or kg VOC/l of coating solids as applied, as calculated in Part D.4.a. above;
 - ii. "V_S" means the volume fraction solids content of the coating as applied, in units of gal solids/gal coating or l solids/l coating as determined by calculation using the formulation;
 - iii. "G" means the volume of coating as applied used in the coating line on a given day in units of gal/day or l/day; and
 - iv. "E_{al}" means the allowable VOC emission rate of a given coating as applied minus water and exempt VOC compounds in units of lbs/day or kg/day; and shall be equal to the product of S, V_S and the quotient of W and D for each coating, as in the following equation:

$$E_{al} = S * V_s * G$$

- c. Actual VOC emissions for each coating as applied shall be calculated as follows:
 - i. "W_v" means the weight fraction of VOC content of the coating minus water and exempt VOC compounds, in units of lbs VOC/gal coating as determined by calculation using the formulation;
 - ii. "G" means the volume of coating as applied used in the coating line on a given day in units of gal/day or l/day; and
 - iii. "E_{unc}" means the actual, uncontrolled VOC emission rate of a given coating as applied minus water and exempt VOC compounds in units of lbs VOC/day; and shall be equal to the product of W_v and G, as in the following equation:

$$E_{unc} = W_v * G$$

- iv. "DRE" means the destruction removal efficiency of the pollution control device as measured during the most recent emissions testing of the unit.¹
- v. "E_c" means the actual, controlled VOC emission rate of a given coating as applied in units of lbs/day; and shall be equal to the product of E_{unc} and one minus the DRE, as in the following equation:

$$E_c = E_{unc} * (1 - DRE)$$

- d. Bubble and Use of DERs - Emission credit use calculations shall be done on a daily basis as follows:
 - i. HSS shall be allowed to bubble the emissions from multiple coatings and/or use DERs to offset excess emissions.
 - ii. Excess emissions shall be calculated for each coating by subtracting the actual emissions from the allowable emissions (E_{al} – E_{unc} for coatings that are not controlled by the control device, or E_{al} – E_c for coatings that are controlled). The excess emissions from all the coatings shall be added together (bubbling), and based on the results, one of the following shall be required:
 - 1. If the result of the bubble calculation is a positive number, then the source is in compliance with the emission limits and no further action is required.
 - 2. If the result of the bubble calculation is a negative number, then actual emissions exceed the allowable emission rates and need to be offset with the use of credits. The actual DERs required shall be calculated by taking the absolute value of the total excess emissions and dividing by an environmental benefit factor of 0.9.
- 5. HSS shall either test all coatings according to Env-A 804.04, or retain sufficient records for prima facie evidence in support of demonstrating compliance with the VOC RACT limit specified in D.1 above.
- 6. Annually by September 1, HSS shall continue to true up the balance of credits required for the previous year (for the period from June 1 to May 31) and shall report the balance to DES.
- 7. HSS shall comply with the recordkeeping and reporting requirements of New Hampshire Code of Administrative Rules Chapters Env-A 3000 and Env-A 3100 for ERC and DER generation and use.
- 8. HSS shall comply with the recordkeeping and reporting requirements of the New Hampshire Code of Administrative Rules Chapter Env-A 900.

E. Discrete Emissions Reductions (Credits)

- 1. HSS shall be allowed to generate DERs in accordance with Env-A 3100 for surplus reductions below the following emissions rates:
 - a. The alternative limit (an overall control efficiency of at least 85%) to the VOC emission limit (6.3 lb/gal) for motor vehicle weather-strip adhesive listed in table 1220-1, in accordance with Env-A 1220.02(e). This is equivalent to a facility-wide emissions rate

¹ Prior to the initial compliance test of the control device required in Section VI., Table 5, Item 5 of permit SP-0141, the DRE shall be equal to 95.0%.

- equal to 15% of uncontrolled emissions.
- b. The emissions rate of 3.5 lb/gal included in conditions D.2. and D.3. of RACT Order ARD-01-002 dated August 8, 2002; and
 - c. An emissions rate of 23 tons/year, in order to preserve the previously agreed upon protocol for calculating the 22 ERCs that Hutchinson Sealing Systems (HSS) receives each year.
2. If HSS exceeds any of the above emissions rates, then no DER credits would be generated.
 3. Calculation of the uncontrolled facility-wide emissions shall be in accordance with Monitoring and Testing condition 4 of Table 5 of State Permit to Operate SP-0141. Actual calendar year emissions shall be reported in accordance with Reporting condition 1 of Table 7 of the permit. The daily allowable emissions rate for credit generation shall be calculated by substituting 3.5 lb/gal for the VOC RACT limit of 6.3 lb/gal in the above VOC RACT compliance calculations in Part D.

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

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Please address any correspondence and communication in reference to the ERCs or DERs to the following:

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