



Connecticut Department of

**ENERGY &
ENVIRONMENTAL
PROTECTION**

**BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Albea Metal Americas, Inc.
Address	1 Seemar Road, Watertown, CT 06795
Equipment Location	1 Seemar Road, Watertown, CT 06795
Equipment Description	Lacquer Machine Nos. 2 & 3 with Thermal Oxidizer
Town-Permit Numbers	200-0015
Premises Number	26
Stack Number	2
Modification Issue Date	June 12, 2014
Prior Permit Issue Date	9/23/91 (original), 8/17/92, 2/11/93 and 6/13/05
Expiration Date	None

/s/ Anne Gobin for
Robert J. Klee
Commissioner

June 12, 2014
Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

Albea Metal Americas, Inc. (AMA) is a producer of packaging cases for the cosmetics industry.

AMA uses conventional spray coatings in two Ransberg coating machines in the Lacquer Room. In a Ransberg coating application system paint is fed up to the spinning turbo disk by a small gear pump attached to the top of the coating pot. Coating is delivered to the part from a nozzle at the end of the spinning turbo disk. The electrostatically charged (35-100 kilovolts DC) turbo disk is spun by the use of compressed air and can achieve 30,000 rotations per minute. The spray pattern in a Ransberg booth creates a flat circle of electrostatically charged paint particles concentrated to an area around the part, which is held at ground potential. The flat spray pattern and strong electrostatic attraction between the parts and paint droplets reduce the amount of overspray generated in the coating booth. This in turn reduces the amount of particulate that can be captured by the exhaust air stream. The over-sprayed coating impacts and adheres to the inside walls of the booth, due to its radial outward motion, where it cures on a sacrificial "peel coat". When the coating build-up becomes too thick, the cured coating is peeled from the inside walls of the booth and disposed of as solid waste. The Ransberg coating machines are connected to electric curing ovens and a thermal oxidizer.

The coating lines are used to coat metal parts and are subject to the Metal Surface Coating MACT (40 CFR 63, Subpart M) because on the first compliance date the facility was a major source of HAPs. The coating lines are also subject to RCRA §22a-174-20(s).

B. Equipment Design Specifications

1. Ransberg Electrostatic Spinning Turbo Disk with Electric Curing Ovens
 - a. Type of Applicator: Electrostatic Spray
 - b. Number of Coating Machines: 2
 - c. Maximum Rated Capacity (gal/hr): 8.0
 - d. Minimum Transfer Efficiency (%): 90

C. Control Equipment Design Specifications

1. Smith Model No. 05080 Thermal Oxidizer
 - a. Fuel Type: Natural Gas
 - b. Maximum Fuel Firing Rate (CF/hr): 1800
 - c. Maximum Gross Heat Input (MMBTU/hr): 1.8

D. Stack Parameters

1. Minimum Stack Height (ft): 20
2. Maximum Exhaust Gas Flow Rate (acfm): 4,300
3. Maximum Stack Exit Temperature (°F): 380
4. Minimum Distance from Stack to Property Line (ft): 336

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Maximum Hourly Coating Usage, as Applied (gal/hr): 2 (for each machine)
2. Maximum Annual Coating Usage, as Applied (gal/yr): 7,400 (for all machines combined)
3. Maximum VOC Loading Rate to the thermal oxidizer (lb/hr): 28

The coating usage limits apply to any of the following components or mixtures of the following components: Paint, Enamel, Lacquer, Catalyst, Primer, Reducer, Sealer, Diluent, Additive, or other Coating Material or Preparation.

B. Control Equipment

1. Smith Model No. 05080 Thermal Oxidizer
 - a. Minimum Combustion Temperature (°F): 1400
 - b. Minimum VOC/HC Overall Control Efficiency (%): 95

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Criteria Pollutants

Pollutant	lb/hr	tpy
VOC	1.4	1.30

B. Hazardous Air Pollutants: This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCSA Section 22a-174-29. [STATE ONLY REQUIREMENT]

C. Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using emission factors from the following sources:

- VOC: *Engineering estimate with capture and destruction efficiencies as tested.*

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. The Permittee shall continuously monitor fuel consumption of the oxidizer using a non-resettable totalizing fuel meter.
2. The Permittee shall perform inspections of the control device as recommended by the manufacturer.
3. The Permittee shall continuously monitor and continuously record the thermal oxidizer's combustion temperature. The Permittee shall maintain these parameters within the ranges recommended by the manufacturer to achieve compliance with the emission limits in this permit.

B. Record Keeping

1. The Permittee shall make and keep daily records of the volume and type of VOC disposed and means of disposal.
2. The Permittee shall make and keep records of the following information for each calendar month: [RCSA §22a-174-20(s)(8)(A)]
 - a. Name and description of each coating and cleaning solvent,
 - b. VOC content of each coating and diluent, as applied, and the associated calculations,
 - c. VOC content of each coating or cleaning solvent, as supplied,
 - d. The amount of each coating and cleaning solvent:
 - i. Purchased, or
 - ii. Used,
 - e. A Material Safety Data Sheet (MSDS), Environmental Data Sheet, Certified Product Data Sheet, or an equivalent data sheet for each coating and cleaning solvent,
 - f. Documentation of control device efficiency and capture efficiency using an applicable EPA reference method or alternate method as approved by the commissioner and the Administrator, and
 - g. Date and type of maintenance performed on air pollution control equipment

3. If the MSDS or equivalent data sheet does not contain the volatile content for a surface coating, the Permittee shall determine the volatile content of surface coatings by using either Reference Method 24 or 24A as found in 40 CFR 60, Appendix A. When determining the volatile fraction of a coating using American Society for Testing and Materials method D-2369, the bake time must be one hour. [RCSA §22a-174-20(s)(aa)(6)]
4. The Permittee shall make and keep records of monthly and consecutive 12 month coating usage. The consecutive 12 month coating usage shall be determined by adding the current month's coating usage to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
5. The Permittee shall make and keep records of monthly and consecutive 12 month fuel consumption. The consecutive 12 month fuel consumption shall be determined by adding (for each fuel) the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
6. The Permittee shall calculate and record the monthly and consecutive 12 month VOC emissions in units of tons. The consecutive 12 month VOC emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
7. The Permittee shall make and keep annual records of the type and quantity of any solvent used to clean the lacquer machines. In addition, accurate annual records must be kept of the quantity and type of solvents spilled, evaporated, or manifested as waste material.
8. The Permittee shall make and keep records of the thermal oxidizers' combustion temperature.
9. The Permittee shall make and keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request. [RCSA §22a-174-20(s)(8)(B)]

C. Reporting

The Permittee shall submit to the Department, reports of any exceedances of the material usage or emission limitations, set forth in this permit, in writing within 30 days of the date of such exceedance. Such report shall at a minimum include:

1. a description of the nature of the exceedance;
2. the duration and magnitude of the exceedance;
3. the steps taken to reestablish compliance;

4. the success of such steps; and
5. the steps taken to assure that compliance is maintained in the future.

PART V. STACK EMISSION TEST REQUIREMENTS

Stack emission testing shall be performed in accordance with the [Emission Test Guidelines](#) available on the DEEP website.

Stack testing shall be required for the following pollutant(s):

- PM PM₁₀ PM_{2.5} Other HAPS:
 VOC Capture Efficiency VOC Destruction Efficiency

- A.** During emission testing, the Permittee shall operate the coating operation at or above 90% of Maximum VOC Loading Rate as listed in Part II.A.3 of this permit.
- B.** Recurrent stack testing for the above pollutants shall be conducted within five years from the date of the previous stack test.
- C.** The Permittee shall determine the destruction efficiency of the control device by using reference methods 18, 25, 25A or 25B as found in 40 CFR 60, Appendix A. The Permittee shall determine capture efficiency using a test method recommended or approved by the administrator. [RCSA §22a-174-20(s)(aa)(7)]
- D.** The Permittee shall calculate the Overall Control Efficiency as follows:

$$\text{Overall Control Efficiency (\%)} = \{[\text{Capture Efficiency to the thermal oxidizer from the Lacquer Room (\%)}] \times [\text{Destruction Efficiency (\%)}]\} / 100$$
- E.** Stack test results shall be reported as follows: Capture Efficiency (%), Destruction Efficiency (%), Overall Control Efficiency (%) and lb/hr
- F.** The Permittee shall submit test results within 60 days after completion of testing.

PART VI. OPERATION AND MAINTENANCE REQUIREMENTS

- A.** The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
- B.** The Permittee shall operate the Lacquer Room under negative pressure.
- C.** The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.
- D.** The interlock system controlling the thermal oxidizer and the coating equipment must be in operation at all times.

- E.** In the event that the thermal oxidizer shall malfunction, the interlock system must immediately shutdown production on the lacquer machines until the thermal oxidizer is repaired.
- F.** The Permittee shall cover all open drums and vessels that contain solvents, cleaners, coatings, or cleaning rags so as to minimize the amount of VOCs emitted to the atmosphere. Empty containers shall be disposed of in a manner consistent with handling techniques for hazardous materials, as applicable.
- G.** The Permittee shall not, during any one day, dispose of more than one and one half gallons (5.7 liters) of any VOC or of any material containing more than one and one half gallons (5.7 liters) of any VOC by any means which will permit the evaporation of such solvent into the atmosphere. [RCSA §22a-174-20(i)]
- H.** The Permittee shall use the following work practices: [RCSA 22a-174-20(s)(5)]
 1. New and used VOC-containing coating, diluent or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
 2. Spills and leaks of VOC-containing coating, diluent or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating, diluent or cleaning solvent shall be absorbed and removed immediately;
 3. Absorbent applicators, such as cloth and paper, which are moistened with a VOC containing coating or solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
 4. VOC-containing coating, diluent and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

PART VII. SPECIAL REQUIREMENTS

- A.** The Permittee shall comply with all applicable sections of the following National Emission Standards for Hazardous Air Pollutants at all times.

Title 40 CFR Part 63, Subpart M and A

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

- C.** The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23. [STATE ONLY REQUIREMENT]
- D.** The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VIII. ADDITIONAL TERMS AND CONDITIONS

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B.** Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C.** This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D.** This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not parties to this permit.
- E.** Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."
- F.** Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- G.** Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.
- H.** The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier.

Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

- I. Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.