



U.S. Environmental Protection Agency Applicability Determination Index

Control Number: 0900057

Category: NSPS
 EPA Office: Region 5
 Date: 12/09/2008
 Title: Replacement Regenerative Thermal Oxidizer
 Recipient: Saunders, Helen
 Author: Czerniak, George T.
 Comments:

Part 60, A	General Provisions	
	RR	Press. Sens. Tape and Label Surface Coating

References:	60.2
	60.8
	60.14
	60.15
	60.440
	60.444

Abstract:

Q: Would the replacement of three regenerative thermal oxidizers (RTO) with a single RTO system on three pressure sensitive vinyl/paper roll coating lines trigger the performance test requirements of 40 CFR part 60, subparts A and RR, at Avery Dennison's facility in Lowell, Indiana?

A: No. NSPS subpart RR applies to any affected facility that begins construction, modification, or reconstruction after December 30, 1980. Because no construction, modification, or reconstruction appears to have occurred, NSPS requirements have not been triggered. A modification could occur if the new RTO system proves to be less efficient than the old RTO system at controlling volatile organic compounds.

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Letter:

(AE-17J)

Ms. Helen Saunders
 Vice President and General Manager
 Graphics and Reflective Products
 Avery Dennison
 670 Hardy Road, Building 11
 Painesville, Ohio 44077

Re: Performance Test Applicability for Lowell, Indiana Facility

Dear Ms. Saunders:

Thank you for your October 21, 2008, letter to the U.S. Environmental Protection Agency requesting an applicability determination regarding the replacement of three natural gas-fired regenerative thermal oxidizers ("RTO") controlling volatile organic compound ("VOC") emissions at three pressure-sensitive vinyl/paper roll coating lines with a single natural gas fired RTO at Avery Dennison's Lowell, Indiana facility. On November 29, 2007, the Indiana Department of Environmental Management ("IDEM") issued an amended Title 5 permit to include the replacement of the three RTOs with a single RTO, and Avery Dennison has very recently completed this replacement. According to the facility and the IDEM permit, two of the three roll coating lines (L2 and L3) are "affected facilities" subject to 40 CFR Part 60, Subpart RR, Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations. The IDEM permit requires performance testing on the coating lines in accordance with the requirements of 40 CFR § 60.444.

Avery Dennison believes that neither 40 CFR § 60.8 nor 40 CFR § 60.444 requirements were triggered by the installation of the new RTO because the replacement of the control equipment does not constitute a modification or reconstruction of the existing facilities (i.e., coating lines). The affected facilities (L2 and L3) satisfied the performance test requirements for new affected facilities on May 31, 2000 (L2), and February 3, 2000 (L3). While Avery Dennison recognizes that EPA and IDEM have the authority to require testing under other provisions of State and Federal law, the company requests concurrence from EPA that any testing deadline is not governed by 40 CFR § 60.8.

Regulatory Background

40 CFR § 60.440(a) states that the affected facility to which Subpart RR applies is each coating line used in the manufacture of pressure sensitive tape and label materials. 40 CFR § 60.440(c) states that Subpart RR applies to any affected facility which begins construction, modification or reconstruction after December 30, 1980.

According to 40 CFR § 60.2, "construction means fabrication, erection, or installation of an affected facility." Per 40 CFR § 60.15(a), "an existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate." In 40 CFR § 60.15(b), "reconstruction means the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and it is technologically and economically feasible to meet the applicable standards set forth in this part."

According to 40 CFR § 60.2, "Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted." In 40 CFR § 60.14(e)(5), "the addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or replaced by a system which the Administrator determines to be less environmentally beneficial" is not considered a modification under the NSPS.

40 CFR § 60.8 states, among other things, that "within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s)"

EPA's Determination

On November 20, 2008, Ms. Linda H. Rosen, of my staff, telephoned your consultant Ms. Kathy Moore, of Keramida Inc. with questions regarding the RTO replacement. On November 20, 2008, Ms. Moore sent an electronic mail ("e-mail") message to Ms. Rosen with additional information. According to this e-mail, Mr. Kevin Chemey, of Avery Dennison, provided the information in response to the questions posed by Ms. Rosen.

According to Mr. Chemey, the RTO system was replaced to provide both VOC control and to act as a heat source for the three coating lines. This will eliminate the need for Avery Dennison to use the

existing gas burners in the ovens. The new RTO system is expected to achieve the same level of destruction efficiency as the replaced RTOs. Specifically, the destruction efficiencies for the previous three RTOs were 99.8 percent (L1), 99.5 percent (L2) and 98.5 percent (L3). Avery Dennison expects the efficiency of the new system to be about 99.8 to 99.9 percent VOC destruction. Mr. Chemey also states that there have been no changes to the existing capture systems at each coating station. However, new duct work from the drying ovens to the new RTO was installed.

The system was designed so that if the new RTO falls below the minimum operating temperature, the coating lines will automatically shutdown. The three existing RTOs will remain in place indefinitely, as back-up units, in the event that the RTO is down for any extended period of time.

According to Mr. Chemey, the only physical changes to the coating lines were changes in ductwork which resulted in about \$500,000 in capital costs for the three lines. The cost of installing a single coating line of the type being operated is approximately \$5 to \$7 M.

Based on the written and electronic information provided by Avery Dennison, the replacement of the three separate RTO systems with one RTO system controlling all three lines does not appear to have triggered the NSPS construction, modification or re-construction requirements of 40 CFR Part 60, Subpart RR at this time. Construction was not triggered because new affected facilities (i.e. coating lines) were not installed. Reconstruction was not triggered because the cost of installing new ductwork to route emissions to the new RTO system (about \$500,000) was less than 50 percent of the cost of installing a comparable new coating line (\$5-7 M).

The definition of "modification" specifically exempts the addition of air pollution control equipment unless the Administrator determines, in the case of a replacement, that the new system is less environmentally beneficial than the old system. At this point, EPA is not in possession of information indicating that Avery Dennison's new RTO system is less environmentally beneficial than the previous RTO system, based on the following: (1) Avery Dennison does not anticipate a decrease in VOC destruction efficiency with the new RTO system in comparison with the old; (2) Avery Dennison does not anticipate changes in the capture efficiency with the new RTO system; (3) the coating lines will shutdown if the new RTO falls below the minimum operating temperature; and (4) the three old RTOs will remain in place as back up control devices.

Therefore, because neither construction, reconstruction nor modification requirements have not been triggered as of this time, there is no initial start up of a new affected source and the provisions of 40 CFR § 60.8 regarding initial performance testing do not apply. 40 CFR Part 60, Subpart RR does not contain recurring performance test requirements for facilities which are already subject to the NSPS. However, as stated previously, Avery Dennison may need to test under other State or Federal regulatory authorities.

Please note that a modification could occur if the new RTO system (including capture) proves to be less efficient in controlling VOCs or in some other way shows itself to be less environmentally beneficial than the old RTO system. Avery Dennison should conduct capture and destruction efficiency testing to show that the new system's overall VOC control efficiency is comparable to that of the replaced system. In conducting capture efficiency testing, a temporary total enclosure ("TTE") must be installed and a TTE test conducted in accordance with 40 CFR Part 51, Appendix M, Method 204, or the facility must have a permanent total enclosure ("PTE") installed. A PTE, if used, must capture and contain all VOC emissions for discharge through the control device and must meet the requirements of 40 CFR Part 51, Appendix M, Method 204. If test results or other information indicates that a modification did occur with the RTO replacement, L1 would become subject to the NSPS Subpart RR requirements retroactively to the date that the modification occurred.

If you have any questions regarding this letter, feel free to contact Linda H. Rosen, of my staff, at (312) 886-6810.

Sincerely,

George T. Czerniak
Chief
Air Enforcement and Compliance Assurance Branch

cc: Craig Henry, Acting Section Chief

Office of Enforcement-Air Section
Indiana Department of Environmental Management

Phil Perry, Chief
Office of Air Quality
Indiana Department of Environmental Management