Surface Coating of Paper and Other Webs

A Closer Look at Air Quality Requirements

Surface coaters of Paper and Other Webs in Colorado are subject to very specific and often complex State and Federal air quality requirements that exist above and beyond reporting and permitting requirements common to other surface coating operations. This fact sheet supplements the general regulatory information provided in *A Guide to Environmental Regulations for Colorado Surface Coating Operations.* Specific requirements for surface coaters of paper and other webs covered in this fact sheet include Colorado Air Regulation No. 7 and Federal Maximum Achievable Control Technology Standards (MACT).

Colorado Air Regulation No. 7

Colorado Air Regulation No. 7 limits volatile organic compound (VOC) emissions from all businesses in Colorado. Regulation No. 7 is available for download through the Colorado Department of Public Health and Environment (CDPHE) Air Pollution Control Division (APCD) web page at www.cdphe.state.co.us/op/regs/airregs.asp.

The *General Provisions* of Regulation No. 7 require select Colorado surface coaters to reduce emissions using Reasonably Achievable Control Technology (**RACT**). These requirements may include the use of low VOC coatings, high transfer efficiency spray guns, or other technology such as thermal oxidizers that achieve a high degree of emission control.

Surface coaters of paper or other webs located in the Denver-Metro area are also subject to the *Specific Provisions* of Regulation No. 7 contained in Section IX.A and IX.I. These provisions include limits on the content of VOCs allowed in certain coatings applied at the facility.

Is Your Business Affected by the *Specific Provisions* of Regulation No. 7?

Your business is affected by the Specific Provisions of Regulation No. 7 if you surface coat paper and other webs in the Denver 1-Hour Ozone Attainment/ Maintenance Area, which includes:

> All of Denver, Broomfield, Jefferson, Douglas, and Boulder County (excluding Rocky Mountain National Park) and the western portions of Adams and Arapahoe Counties.
>
> **Paper coating includes, but is not limited to . . .**
>
> The production of: coated, glazed, decorated, and varnished paper; carbon and pressure-sensitive copy papers; paper adhesive-labels and tapes; blue-print; photographic and copier paper. It also includes coating of metal foil such as gift wrap and packaging. *(Reg. No. 7, Section IX.I.1).*

Emission Limits

Surface coaters affected by the specific provisions of Regulation No. 7 must demonstrate compliance, on a daily basis, with the VOC emission limits shown in Table 1 *(Reg. No. 7, Section IX.I.3)*. The CDPHE Small Business Assistance Program (SBAP) can provide guidance and tools to businesses required to track and record daily VOC emissions.

A Guide to Environmental Regulations for Colorado Surface Coating Operations and supplemental fact sheets for other types of surface coaters are available through the APCD Guidance Document Library at **www.cdphe.state.co.us/ap/stationarylibrary.html**

Table 1: Emission Limits (Regulation 7 – Section IX.I)

TYPE OF COATING	KILOGRAM OF VOC/ LITER OF COATING (as applied)	POUND OF VOC/ GALLON OF COATING (as applied)
All coatings in the paper coating line	0.35	2.9

Additional Recordkeeping Requirements

Surface coaters affected by Regulation No. 7 using add-on control equipment must also maintain **daily** records as listed in Table 2.

Table 2: Overview of Additional Reporting Requirements (Regulation 7 – Section IX.A)

ADD-ON CONTROL EQUIPMENT	REQUIRED RECORDKEEPING
Capture System	Fan power use, duct flow, duct pressure
Carbon Adsorber	Bed temperature, bed vacuum pressure, pressure at the vacuum pump, accumulated time of operation, concentration of VOC in the outlet gas, solvent recovery
Refrigeration System	Compressor discharge and suction pressures, condenser fluid temperature, solvent recovery
Incinerator System	Exhaust gas temperature, temperature rise across a catalytic incinerator bed, flame temperature, accumulated time of incineration

Maximum Achievable Control Technology (MACT) Standards

Some very select surface coaters of paper and other webs are subject to federal regulations called Maximum Achievable Control Technology (MACT) standards. Specifically, surface coaters of paper and other webs that are major sources of hazardous air pollutants (HAPs) must comply with the MACT standards provided in 40 CFR Part 63, Subpart JJJJ. Surface coaters that were operating on or before September 13, 2000 must be in compliance with the standard by December 5, 2005, while all other affected surface coaters must be in compliance by December 4, 2002 or the source startup date.

The USEPA provides extensive guidance on Subpart JJJJ at the **Implementation Information for the Surface Coating MACTs** webpage located at www.epa.gov/ttn/atw/coat/common/coatingsdisc.html.

The MACT standard for surface coaters of paper and other webs is avaiable for download through the Electronic Code of Federal Regulations at **www.gpoaccess.gov/ecfr/index.html** (search under Title 40, Vol. 12, Part 63, Subpart JJJJ)

Is Your Business Affected by Subpart JJJJ?

An Affected Source is . . . (§63.3300)

Any new or existing facility that is a *major source* and applies coatings to *paper and other webs*.

A Major Source is . . .

A facility that emits (or is located at or is part of a facility that emits) over ten tons per year of a single HAP or over 25 tons per year of total HAPs.

Web Coating Lines . . .

Include lines for coating metal webs used in flexible packaging and coating fabric substrates used in pressure sensitive tape and abrasive materials. This involves the application of a continuous layer of coating material across the

width, or any portion of the width, of a web substrate and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

A Web Substrate is . . .

A continuous substrate (such as paper, film, or foil) which is flexible enough to be wound or unwound as rolls.

**Exemptions to Subpart JJJJ are provided in §63.3300.*

Emission Limits

Surface coaters affected by Subpart JJJJ must demonstrate compliance with the HAP emission limits shown in Table 3 *(§63.3320):*

Table 3: Emission Limits (40 CFR Part 63, Subpart JJJJ)

	If you are an existing source (operating on or before September 13, 2000), limit your organic HAP emissions to no more than…	If you are a new source (beginning operation after September 13, 2000), limit your organic HAP emissions to no more than…
Option 1	5% of the organic HAP applied for each month	2% of the organic HAP applied for each month
Option 2	4% of the mass of coating materials applied for each month	1.6% of the mass of coating materials applied for each month
Option 3	20% of the mass of coating solids applied for each month	8% of the mass of coating solids applied for each month
Option 4	Oxidizer outlet organic HAP concentration of 20 ppmv on a dry basis, by compound, and a capture efficiency of 100%	

Surface coaters that reduce emissions by using a capture system and add-on control device (e.g., thermal and catalytic oxidizers, select solvent recovery systems, condensers) must also comply with MACT *operating limits*. These limits are site-specific parameter limits determined during the initial performance test of the system (§63.3321).

Additional Recordkeeping Requirements

The MACT includes notification, recordkeeping, and reporting requirements as summarized in Table 4. Reports must be submitted to the CDPHE Air Pollution Control Division (APCD), while records must be retained on site and made available to the APCD upon request.

Table 4: Overview of Additional Reporting Requirements (40 CFR Part 63, Subpart JJJJ)

REPORT REQUIREMENT	REPORT DESCRIPTION
Initial Notification [§63.3400]	The initial notification notifies the APCD that your facility is subject to the Paper and Other Webs Surface Coating MACT Standards.
Notification of Intent to Conduct a Performance Test [§63.3400, §63.9(e)]	If your facility is required to conduct a performance test (e.g., those with add-on control equipment), you must submit a notification of intent to conduct a performance test 60 days prior to the test.
Notification of Compliance Status [§63.3400, §63.9(h)]	You must submit a Notification of Compliance Status form by August 2, 2006, if you are an existing source, or within 60 days after the end of the initial compliance period if you are a new source. This form notifies the APCD that your facility is in compliance with the MACT Standards.

continued on page 4

Performance Test Report [§63.3400, §63.10(d)(2)]	If your facility is required to conduct a performance test (e.g., those with add-on control equipment), you must submit a performance test report within 60 days after completion of the performance test.
Startup, Shutdown, Malfunction Reports [§63.3400]	You must submit the report within 2 days with a follow-up letter within 7 days after the event if there is a startup, shutdown, or malfunction of the control device during the reporting period that is not consistent with the startup, shutdown, and malfunction plan. If actions taken were consistent with the plan, the report must be submitted semi-annually.
Semiannual Compliance Reports [§63.3400]	In addition to the initial compliance period, each affected source must submit semiannual compliance reports. (Each reporting year is divided into two semiannual reporting periods.)
Records [§63.3400]	You must maintain records necessary to document compliance with the rule for at least 5 years. There may be additional requirements depending on the compliance option that you choose.

Small Business Assistance Contacts

The CDPHE Small Business Assistance Program (SBAP) and Generator Assistance Program (GAP) provide free services to small businesses seeking help in understanding and complying with environmental regulations. If you have questions on environmental requirements for your surface coating operation, visit our web-sites or call us at:

SBAP: 303.692.3175 or 303.692.3148
www.cdphe.state.co.us/ap/sbap.asp

GAP: 303.692.3415
www.cdphe.state.co.us/hm/gap/gaphom.asp