

Surface Coating of Wood Building Products

A Closer Look at Air Quality Requirements

Surface coaters of Wood Building Products 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 wood building products 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 wood building products located in the Denver-Metro area are also subject to the *Specific Provisions* of Regulation No. 7 contained in Section IX.A and IX.M. 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 wood building products 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.

Wood building products means . . .

All flat wood manufacturing and surface finishing facilities that manufacture printed interior panels made of hardwood, plywood, and thin particle board; natural finish hardwood plywood panels; or hardboard paneling with Class II finishes. (This does not include the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.) (*Reg. No. 7, Section IX.M.2*).

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.M.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/apstationarylibrary.html

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

TYPE OF FINISH (REGARDLESS OF THE NUMBER OF COATS APPLIED)	KILOGRAM/100 SQUARE METERS OF OF COATED FINISHED PRODUCT (as applied)	POUND/1000 SQUARE FEET OF OF COATED FINISHED PRODUCT (as applied)
Printed interior panels	2.9	6.0
Natural finish hardwood plywood panels	5.8	12.0
Class II finishes on hardboard panels	4.8	10.0

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 wood building products are subject to federal regulations called Maximum Achievable Control Technology (MACT) standards. Specifically, surface coaters of wood building products that are major sources of hazardous air pollutants (HAPs) must comply with the MACT standards provided in 40 CFR Part 63, Subpart QQQQ. Surface coaters that were operating on or before June 21, 2002 must be in compliance with the standard by May 28, 2006, while all other affected surface coaters must be in compliance by May 28, 2003 or the source startup date.

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

Is Your Business Affected by Subpart QQQQ?**An Affected Source is . . .** (§63.4681)

Any new or existing facility that is a *major source* and applies coatings to *wood building products* that uses at least 4,170 liters (1,100 gallons) of coating per year.

A Major Source is . . .

A facility that emits (or is located at or is part of a facility that emits) over ten

The MACT standard for surface coaters of wood building products is available for download through the Electronic Code of Federal Regulations at www.gpoaccess.gov/ecfr/index.html (search under Title 40, Volume 12, Part 63, Subpart QQQQ)

tons per year of a single hazardous air pollutant (HAP) or over 25 tons per year of total HAPs.

A wood building product is . . .

Any product that contains more than 50% (by weight) wood or wood fiber (excluding glass components) and is used in the construction of a residential, commercial, or institutional building.

Coatings are . . .

Material applied to a substrate for decorative, protective, or functional purposes, including but not limited to, paints, sealants, caulks, inks, adhesives, and maskants.

*Exemptions to Subpart QQQQ are provided in §63.4681.

Emission Limits

Surface coaters affected by Subpart QQQQ must demonstrate compliance with the HAP emission limits shown in Table 3 (§§ 63.4681 and 63.4690):

Table 3: Emission Limits (40 CFR Part 63, Subpart QQQQ)				
TYPE OF SUBSTRATE	EXISTING SOURCE (OPERATING ON OR BEFORE JUNE 21, 2002)		NEW/RECONSTRUCTED SOURCE (BEGINNING OPERATION AFTER JUNE 21, 2002)	
	KILOGRAM OF HAP/ LITER OF SOLIDS (as applied)	POUND OF HAP/ GALLON OF SOLIDS (as applied)	KILOGRAM OF HAP/ LITER OF SOLIDS (as applied)	POUND OF HAP/ GALLON OF SOLIDS (as applied)
Doors, Windows & Miscellaneous	231	1.93	57	0.48
Flooring	93	0.78	0	0.00
Interior Wall Paneling and Tileboard	183	1.53	5	0.04
Other Interior Panels	20	0.17	0	0.00
Exterior Siding & Primed Doorskins	7	0.06	0	0.00

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 (§ 63.4692).

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 QQQQ)

REPORT REQUIREMENT	REPORT DESCRIPTION
Initial Notification [§63.4710]	The initial notification notifies the APCD that your affected source is subject to the Wood Building Products Surface Coating MACT Standards.
Notification of Intent to Conduct a Performance Test [§63.7(b)]	If your affected source 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 [§63.4710]	You must submit a Notification of Compliance Status form within 30 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.
Performance Test Report [§63.4720]	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 [§63.4720]	You must submit the report immediately 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.
Semiannual Compliance Reports [§63.4720]	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 due on July 31 and January 31.)
Records [§63.4730]	You must maintain records necessary to document compliance with the rule for at least 5 years. Design/operation records for control and monitoring equipment must be kept for the life of the equipment. 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 websites 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