

Surface Coating of Metal Coil

A Closer Look at Air Quality Requirements

Surface coaters of Metal Coil 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 metal coil covered in this fact sheet include Colorado Air Regulation No. 7, Federal Maximum Achievable Control Technology Standards (MACT), and Federal New Source Performance Standards (NSPS).

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 metal coil located in the Denver-Metro area are also subject to the Specific Provisions of Regulation No. 7 contained in Section IX.A and IX.D. 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 metal coil 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.

Coil coating means . . .

Any surface coating applied by spray, roller, or other means onto one or both surfaces of flat metal sheets or strips that come in rolls or coils. (*Reg. No. 7, Section IX.D.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.D.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.D)

TYPE OF COATING:	KILOGRAM OF VOC /LITER OF COATING (as applied)	POUND OF VOC/GALLON OF COATING (as applied)
All coatings	0.31	2.6

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 metal coil are subject to federal regulations called Maximum Achievable Control Technology (MACT) standards. Specifically, surface coaters of metal coil that are major sources of hazardous air pollutants (HAPs) must comply with the MACT standards provided in 40 CFR Part 63, Subpart SSSS. Surface coaters that were operating on or before July 18, 2000 must be in compliance with the standard by June 10, 2005, all other affected surface coaters must be in compliance by June 10, 2002 or the source startup date.

The USEPA provides extensive guidance on Subpart SSSS 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 SSSS?**An Affected Source is . . .** (§63.5090)

All metal coil coating lines at a new or of hazardous air pollutants (HAPs).

A Major Source of HAPs 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.

Coil coating lines are . . .

The collection of equipment used to apply an organic coating to metal coils including web unwind or feed stations, wet sections, coating application stations, curing ovens, and quench stations.

The MACT standard for surface coaters of metal coil 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 SSSS)

Metal coil means. . .

A continuous metal strip that is at least 0.15 millimeters (0.006 inches) thick and is packaged in a roll or coil prior to coating, but does not include metal webs that are coated for use in flexible purchasing.

*Exemptions to Subpart SSSS are provided in §§63.5090 and 63.5110.

Emission Limits

Surface coaters affected by Subpart SSSS must demonstrate compliance with the HAP emission limits shown in Table 3 (§63.5120):

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

TYPE OF SOURCE	OPTION 1	OPTION 2	OPTION 3
Existing or New	2% (98% reduction) of the HAP applied each month of the 12-month compliance period	0.046 kilogram HAP/liter coating solids applied during the 12-month compliance period	20 parts per million by volume on a dry basis when an oxidizer is used in combination with a capture system that achieves 100% capture

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 (§63.5121).

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 SSSS)

REPORT REQUIREMENT	REPORT DESCRIPTION
Initial Notification [§63.5180]	The initial notification notifies the APCD that your facility is subject to the Metal Coil Surface Coating MACT Standards.
Notification of Intent to Conduct a Performance Test [§63.5180]	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 [§63.5180]	You must submit a Notification of Compliance Status form by July 30, 2006, if you are an existing source, or 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 [§63.5180]	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.

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Startup, Shutdown, Malfunction Reports [§63.5180]	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. If actions taken were consistent with the plan, the report must be submitted semi-annually.
Semiannual Compliance Reports [§63.5180]	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 [§63.5190]	You must maintain records necessary to document compliance with the proposed rule for at least 5 years. There may be additional requirements depending on the compliance option that you choose.

New Source Performance Standards (NSPS)

Surface coaters of metal coil may be subject to additional federal requirements (referred to as new source performance standards [NSPS]) provided in 40 CFR Part 60, Subpart TT.

Is Your Business Affected by Subpart TT?

An Affected Source is . . . (§60.460)

Each metal coil coating surface coating operation that was constructed, modified, or reconstructed after January 5, 1981, including: each prime coat operation, each finish coat operation, and each prime and finish coat operation combined, when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

Metal Coil Surface Coating Operation means . . . (§60.461)

The application system used to apply an organic coating to the surface of any continuous metal strip with thickness of 0.15 millimeter (0.006 inch) or more that is packaged in a roll or coil.

The NSPS for surface coaters of metal coil is available for download through the Electronic Code of Federal Regulations at www.gpoaccess.gov/ecfr/index.html (search under Title 40, Volume 6, Part 60, Subpart TT)

Emission Limits

Surface coaters of metal coil for business machines subject to the NSPS must demonstrate compliance with the VOC emission limits shown in Table 5 (§60.462):

Table 5: Emission Limits (40 CFR Part 60, Subpart TT)

SCENARIO	KILOGRAM OF VOC/LITER OF COATING (as applied)	POUND OF VOC/GALLON OF COATING (as applied)
Limit for each calendar month that the facility does not use an emission control device(s)	≤0.28	≤2.33
Limit for each calendar month that the facility continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency	≤0.14 or 10 percent (90 % reduction) of the VOC's applied	≤1.17 or 10 percent (90 % reduction) of the VOC's applied
Limit for each calendar month that the facility intermittently uses an emission control device operated at the most recently demonstrated overall efficiency	Between 0.14 kg/l (or a 90% emission reduction) and 0.28 kg/l of coating solids applied	Between 1.17 kg/l (or a 90% emission reduction) and 2.33 kg/l of coating solids applied

Affected surface coaters must conduct initial performance tests and must either perform monthly calculations or retain appropriate documentation to demonstrate compliance with the NSPS emission limits. Detailed calculation and documentation procedures are specified in §60.463 of the NSPS.

Additional Recordkeeping Requirements

Subpart TT includes specific notification, recording, and reporting requirements as summarized in Table 6. Reports must be submitted to the CDPHE APCD, while records must be retained on site and made available to the APCD upon request.

Table 6: Overview of Additional Reporting Requirements (40 CFR Part 60, Subpart TT)

REPORT REQUIREMENT	REPORT DESCRIPTION
Notification of Intent to Conduct a Performance Test [§60.8]	If your facility is required to conduct performance test, you must submit a notification of intent to conduct a performance test 30 days prior to the test.
Initial Performance Test Report [§60.465.a]	If your facility is required to conduct performance test, you must submit an Initial Performance Test Report. The requirements of the report vary depending on the compliance option that you choose, and are specified in §60.465.
Quarterly Non Compliance Report [§60.465.c]	This quarterly report identifies instances in which the VOC limit is exceeded at the facility. If no such exceedances occur, a report stating this must be submitted semiannually.
Records [§60.465.d and §60.465.e]	You must maintain records necessary to document compliance with the rule for at least 2 years. Additional monitoring and recordkeeping requirements are provided in §60.464 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