




THERMAL SPRAYING ATCM ADVISORY

California Environmental Protection Agency
 **Air Resources Board**

September 2005

In December 2004, the Air Resources Board approved the “Airborne Toxic Control Measure to Reduce Hexavalent Chromium and Nickel Emissions from Thermal Spraying” (Thermal Spraying ATCM.) This regulation will be published in the California Code of Regulations (CCR) and will become legally effective on September 30, 2005 (see title 17, CCR, section 93102.5.) Provided below is some general information about the implementation of the Thermal Spraying ATCM. The text of the Thermal Spraying ATCM and additional details can be found on the ARB website

<http://www.arb.ca.gov/coatings/thermal/thermal.htm>.

Who must comply with the Thermal Spraying ATCM?

Businesses in California that conduct thermal spraying using materials that contain chromium, chromium compounds, nickel, or nickel compounds must comply with the Thermal Spraying ATCM. Thermal spraying processes include, but are not limited to: flame spraying, plasma spraying, electric arc wire spraying, high-velocity oxy-fuel (HVOF) spraying, and detonation gun spraying. The regulation does not apply to portable thermal spraying operations.

What are the permitting requirements for thermal spraying operations?

All unpermitted thermal spraying operations must submit permit applications to permitting agencies by **October 1, 2005**, if they use materials containing chromium, chromium compounds, nickel, or nickel compounds. New thermal spraying operations must submit permit applications prior to initial startup. The Thermal Spraying ATCM only requires that stationary sources submit permit applications, but some permitting agencies require permits for portable operations as well. To identify the permitting agency in your area, please refer to the website

<http://www.arb.ca.gov/app/dislookup/dislookup.php>. Point of contact information for permitting agencies can be found at <http://www.arb.ca.gov/capcoa/roster.htm>.

Who must submit emissions information?

All thermal spraying operations at stationary sources must report emissions information to permitting agencies by **October 1, 2005**, if they use materials containing chromium, chromium compounds, nickel, or nickel compounds. The emissions information must cover the time period between July 1, 2004 and July 1, 2005, unless the permitting agency approves the use of a different time period. Emissions can be calculated using the method contained in the Thermal Spraying ATCM, Appendix A

(<http://www.arb.ca.gov/coatings/thermal/thermal.htm>.) Emissions can also be quantified by using data from a stack test, but the use of stack test data must be approved by the permitting agency. For most thermal spraying operations, the emissions information needs to be submitted only once to establish a baseline and determine the type of control device required. However, permitting agencies may have additional submittal requirements.



THERMAL SPRAYING ATCM ADVISORY

What are the control requirements for existing thermal spraying operations?

The Thermal Spraying ATCM requires the use of an enclosure or booth and an add-on control device for existing thermal spraying operations that use materials containing chromium, chromium compounds, nickel, or nickel compounds. The required control efficiencies range from 90% (e.g., a water curtain) up to 99.97% (e.g., a HEPA filter), depending on the quantity of emissions. In addition, hourly emissions of nickel cannot exceed 0.1 lb/hr, since short-term exposure to nickel can cause adverse health effects (e.g., irritation and allergic sensitization.) After a facility owner or operator completes their initial emission inventory, they can determine the type of control device that is required by referring to the regulation, section (c)(1), (<http://www.arb.ca.gov/coatings/thermal/thermal.htm>) or by contacting their permitting agency. Thermal spraying operations must meet the applicable control requirements by **January 1, 2006**.

Are there additional requirements for new and modified thermal spraying operations?

Yes. The requirements for new and modified sources are more stringent. Both new and modified thermal spraying operations must use a control device that achieves at least 99.97% control efficiency (e.g., a HEPA filter), regardless of the emissions quantity. In addition, new thermal spraying operations cannot operate at all unless they are located outside of an area that is zoned for residential or mixed use and are located at least 500 feet from the boundary of an area that is zoned for residential or mixed use. New thermal spraying operations must also undergo a site specific analysis by the permitting agency to ensure protection of public health. Please note that a “new thermal spraying operation” is defined in the ATCM as one that begins initial operations on or after January 1, 2005.

What are the monitoring, inspection, and maintenance requirements?

A brief summary of monitoring, inspection, and maintenance requirements is provided below. For complete requirements and details, please refer to the regulation, section (e), (<http://www.arb.ca.gov/coatings/thermal/thermal.htm>) or contact your permitting agency.

Requirement	Frequency
Dry Filter – Record pressure drop reading across filter	Weekly
Water Curtain - Record water flowrate	Weekly
Conduct visual inspection to identify leaks	Every 90 days
Replace filters	Per manufacturer specifications
Measure inward face velocity	Annually

What kind of records do I need to keep?

Facilities must keep records of monitoring, inspection, and maintenance activities as described above and in the ATCM. Also, facilities must record the quantity of materials used for all thermal spraying products that contain chromium, chromium compounds, nickel, or nickel compounds. If equipment malfunctions or failures occur, records must be kept to document the circumstances of the breakdown and the repair actions taken. (Note: Many permitting agencies have specific reporting requirements for equipment breakdowns. Contact your permitting agency for details.) Records must be maintained on-site for at least five years and be readily accessible for inspection and review by your permitting agency.

Where can I get more information?

Visit the ARB website (<http://www.arb.ca.gov/coatings/thermal/thermal.htm>) or contact your permitting agency.