

**AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO**

**IMPLEMENTATION OF CALIFORNIA AIR RESOURCES BOARD'S
AIRBORNE TOXIC CONTROL MEASURE (ATCM) TO REDUCE EMISSIONS OF
HEXAVALENT CHROMIUM AND NICKEL FROM THERMAL SPRAYING**

WORKSHOP REPORT

A workshop notice for local implementation of the Statewide Airborne Toxic Control Measure (ATCM) to Reduce Emissions of Hexavalent Chromium and Nickel from Thermal Spraying (Title 17 of the California Code of Regulations (CCR), Section 93102.5) was mailed to all known individuals who have thermal spray booths permitted by the District. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and other interested parties.

A workshop was held on January 25, 2006, and five members of the public attended the workshop where oral and written comments were received. The comments and District responses are as follows:

1. WORKSHOP COMMENT

The regulation requires an inward face velocity of 100 ft/min be met as measured in accordance with Appendix 2 of the regulation. Our facility's booths are fully enclosed, downdraft systems that operate under a negative pressure throughout the application area and emission control system. We do not believe Appendix 2 is an accurate way to measure inward face velocity for fully enclosed, downdraft systems. Furthermore, we do not believe that inward face velocity measurements are relevant to capture efficiency for these types of booths and request that these measurements not be required for fully enclosed downdraft systems.

DISTRICT RESPONSE

State requirements do not allow the District to exempt a facility from measuring inward face velocity nor from meeting the velocity standard specified in the regulation. However, the regulation does allow the District to approve an alternative method to Appendix 2 for measuring inward face velocity. Accordingly, the District suggests that an alternative method be provided to the District by the facility for approval and compliance with the regulation.

2. WORKSHOP COMMENT

The ATCM allows the control efficiency guaranteed by the manufacturer to be used and does not require a source test to verify the control efficiency of add-on control equipment. The ATCM also does not require facilities to conduct tracer testing on units with HEPA systems installed. Will the District require an owner or operator to source test their thermal spraying booths to

Workshop Report
Implementation of ATCM to Reduce Emissions of
Hexavalent Chromium & Nickel from Thermal Spraying

-2-

verify the manufacturer's guaranteed control efficiency? Will the District require tracer testing be conducted on thermal spray booths with HEPA filters as their control option? We feel that requiring these two tests are unnecessary and beyond the legal authority of the District. We also believe that if these tests will be required, they should be codified into the District's rule book and follow established rule development procedures, so facilities have an opportunity to comment on these testing requirements and protocols.

DISTRICT RESPONSE

The commenter is correct in stating that the ATCM does not require source testing be conducted to verify the control efficiency of add-on control equipment, but the regulation does allow districts the option to require source testing to confirm hexavalent chromium or nickel emissions. Specifically, Subsection (d)(3) states, "In addition, a permitting agency may require that a source test be performed to quantify hexavalent chromium and/or nickel emissions from thermal spraying operations".

At this time, the District does not intend to require source testing to verify the manufacturer's guarantee of control device efficiency. However, pursuant to Subsection (d)(3), the District will require an initial source test of newly installed or modified thermal spraying booths to verify emissions assumed in conducting a health risk assessment in accordance with District Rule 1200 during the application process, unless the risk is considered de minimus. The District will consider risk to be de minimus for new or modified booths if, based on standard emission calculations, the estimated increase in cancer risk is less than 0.1 in a million, the estimated increase in chronic Health Hazard Index (HHI) is less than 0.1, and the estimated increase in acute HHI is less than 0.1.

Further, proper installation of control systems, including those with a HEPA filter, is required to fully protect public health from the toxic risks associated with hexavalent chromium and nickel emissions. Accordingly, the District will require a tracer dye test, or a District-approved alternative test, to ensure the correct installation of control system components.

Comments on either of these District policies may be made to the District during the application process or appealed to the Hearing Board pursuant to District Rule 25.

3. WORKSHOP COMMENT

The ATCM required an initial emission inventory for the 12-month period from July 1, 2004, through July 1, 2005, be submitted by October 1, 2005, and subsequent Annual Emission Reports by March 1st of each calendar year. We request that this information be submitted to the District's Emission Inventory Section and that it be combined with the existing emission inventory process. We also request that the due date of this thermal spraying usage report be

Workshop Report
Implementation of ATCM to Reduce Emissions of
Hexavalent Chromium & Nickel from Thermal Spraying

-3-

changed from March 1st of each year to the date the emission inventory report is due for each facility. Finally, we request that data for the initial emission inventory requirement be taken from past emission inventory submittals, even if data has not been reported since an AB2588 reporting year.

DISTRICT RESPONSE

For the initial emission inventory that was due for each facility by October 1, 2005, the District used a facility's toxic emissions inventory for their thermal spraying booths in either 2003 or 2004. Facilities that did not submit a toxic inventory for calendar year 2003 or 2004 were requested to submit toxic emissions data from their thermal spraying booths for their 2005 emission inventory request.

Annual emissions inventories are only required to be submitted March 1st of each year for facilities requesting to be classified as a remotely-located or low-emissions facility pursuant to Subsections (c)(1)(E) and (c)(1)(F), respectively. A facility requesting either of these designations under the ATCM will be required to submit a report to the District by March 1st of each year, summarizing their hexavalent chromium and nickel emissions from the previous year. It is the facility's responsibility to annually demonstrate they continue to meet the emission requirements for either a low-usage facility or remotely-located facility.

4. WORKSHOP COMMENT

Does a new thermal spraying booth added at an existing thermal spraying operation have to meet the requirements of a new thermal spraying operation, modified thermal spraying operation or existing thermal spraying operation?

DISTRICT RESPONSE

A thermal spraying booth installed after January 1, 2005, at an existing thermal spraying operation is subject to the standards for modified thermal spraying operations as specified in Subsection (c)(2). New booths at existing operations are considered a modification because Subsection (b)(17)(B) defines a "modification" to include any addition to an existing permit unit that requires an Authority to Construct. "Permit Unit" is defined in Subsection (b)(21), as "...any article, machine, piece of equipment, device, process, or combination thereof, which may cause or control the release of air emissions of hexavalent chromium or nickel from a thermal spraying operation and which requires a permit to operate issued by a permitting agency..." Therefore, a "Permit Unit" can be a combination of thermal spraying equipment or processes. Permit unit is not necessarily limited to a single booth.

5. WORKSHOP COMMENT

Our facility has dry cartridge and HEPA filters installed in series on our thermal spraying booths. The checklist in Appendix 3 of the regulation requires quarterly inspections of the HEPA. We cannot do this without breaking the seal and replacing the HEPA. It does not seem that the intent of the regulation was to compromise the integrity of our sealed control system.

DISTRICT RESPONSE

Only the applicable items in the checklist in Appendix 3 must be inspected. If the HEPA filter cannot be visually inspected without compromising the integrity of the control system, then that checklist item is not applicable for that particular control device. A facility may also comply with this requirement by installing an inspection port to the clean side of the filter.

6. WORKSHOP COMMENT

Why is a HEPA filter that has a control efficiency of 99.97% at 0.3 microns considered a better control than a high-efficiency dry filter with a control efficiency of 99.999% at 0.5 microns?

DISTRICT RESPONSE

Particles sized 0.3 microns are the most difficult size to capture and retain on a filter. Particles either greater or smaller than 0.3 microns are easier to capture on a filter due to particle dynamics and capture mechanisms. This means that a HEPA filter is more efficient than a high-efficiency dry filter because its capture efficiency is tested against the size of particle that is the most difficult to capture.