

Working Group Meeting #1

April 20, 2022
10:00 a.m.

Zoom Meeting Link:

<https://scaqmd.zoom.us/j/96792532696>

Dial In: +1 (669) 900-6833

Meeting ID: 967 9253 2696

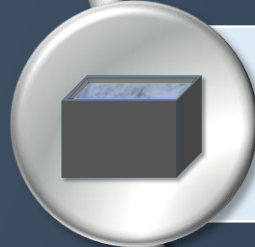
Proposed Rule 1426.1

Hexavalent Chromium Emissions
from Metal Finishing Operations

Agenda



Introduction



Overview of Metal Finishing



Rule Development Process



Discussion



Proposed Rule 1426.1




Hexavalent Chromium Emissions from Metal Finishing Operations



Introduction



Meeting Information

- South Coast AQMD acknowledges the challenges to businesses and stakeholders due to COVID-19
- To ensure safe social distancing, working group meetings will be held remotely via videoconference and teleconference (Zoom)
- Although it is a different format, staff will take the time to listen to all stakeholder comments
 - Please use the “raise hand” feature to speak:
 -  Click on the  button
 -  Dial *9
 - When it is your turn to speak, your name will be announced and the meeting host will unmute you (or dial *6 to unmute if on phone)
- In addition to working group meetings, staff is available for individual meetings



Working Group Materials

Working group materials for each working group meeting will be made available:
<https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules>

The screenshot shows the South Coast AQMD website. The navigation bar includes links for Language, F.I.N.D., About, Contact, Grants & Bids, Online Services, I'm Looking For, and Sign Up. The main menu features categories like AIR QUALITY, INCENTIVES & PROGRAMS, RULES & COMPLIANCE (highlighted), PERMITS, NEWS, WEBCASTS, & CALENDAR, TECHNOLOGY ADVANCEMENT, RESOURCES, and MEETING AGENDAS & MINUTES. The breadcrumb trail reads: Home / Rules & Compliance / Rules / South Coast AQMD Rule Book / Proposed Rules. The page title is 'Proposed Rules and Proposed Rule Amendments'. A sidebar on the left contains links for Proposed Rules, Guide to South Coast AQMD Rules, Archived, and Recent Actions. The main content area includes a paragraph stating that the page lists rules in development or recently proposed/amended. It also provides information about working group meetings, public workshops, and supporting documents. A section mentions that information on the rule development process for rules adopted or amended in the past five years can be found on the Archived Page. A note refers to the South Coast AQMD Rule Book for the current list of adopted or amended rules and regulations. A final note directs users to the monthly Governing Board Agenda for the current rule forecast. At the bottom, a table lists rule names and descriptions.

Rule Name	Description
Regulation III	Fee Rules
Rule 218.2 and Rule 218.3	Proposed Rule 218.2 - Continuous Emission Monitoring System: General Provisions Proposed Rule 218.3 - Continuous Emission Monitoring System: Performance Specifications



South Coast AQMD

- Local air pollution control agency

- Largest of the 35 local air agencies in CA and in the U.S.
- 10,743 square miles
- 17 million residents

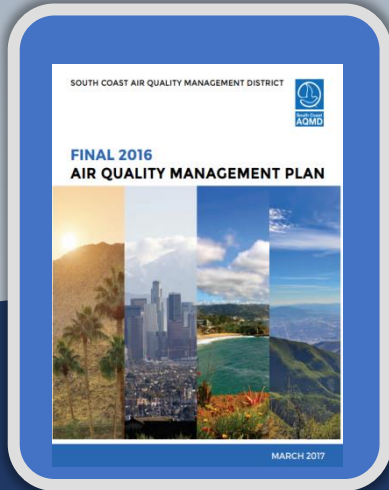
- Responsibilities

- Regulate emissions from stationary sources
- Develop and implement plans to meet national air quality standards
- Permit and inspect 28,400 affected businesses
- Administer over \$100 million of incentive funding annually

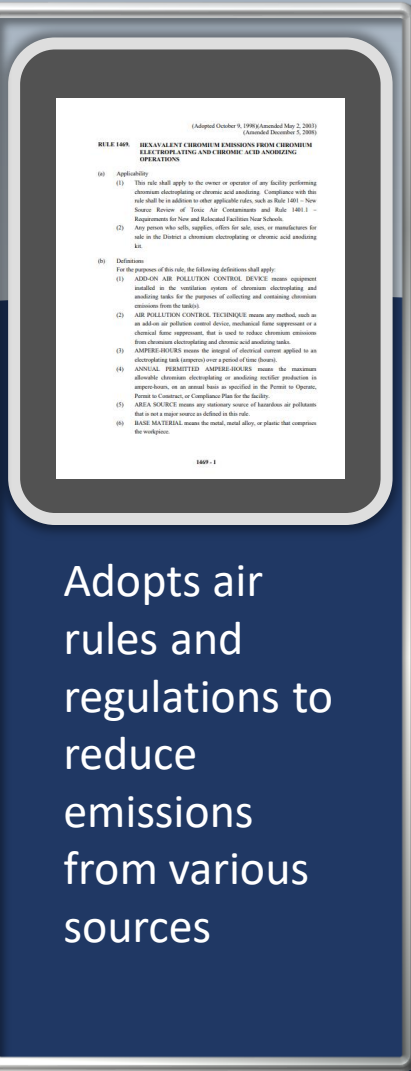




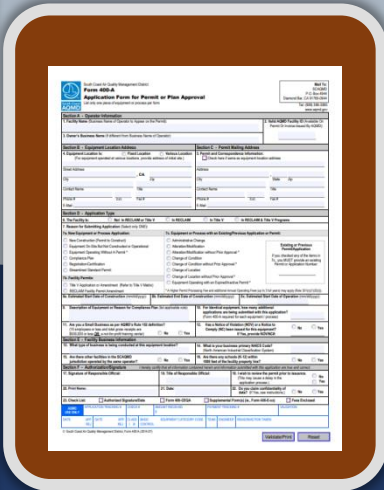
Key South Coast AQMD Activities



Develops the Air Quality Management Plan - blueprint for achieving compliance with federal and state clean air standards



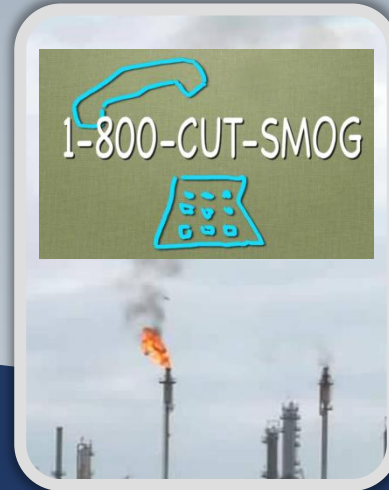
Adopts air rules and regulations to reduce emissions from various sources



Issues permits for equipment that limits the amount of air emissions to ensure compliance with air quality rules



Conducts periodic inspections to ensure compliance with air quality requirements



Responds to air quality complaints from the public

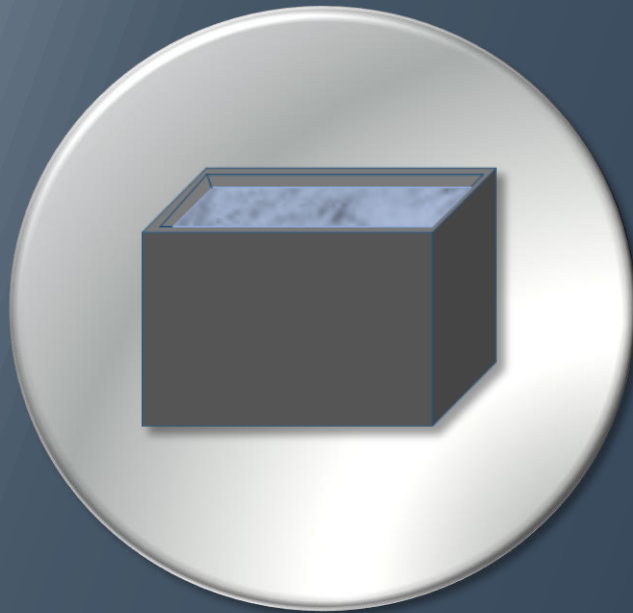


Conducts ambient air quality monitoring, including special studies

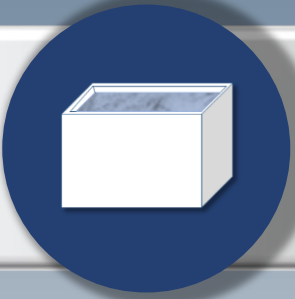


Proposed Rule 1426.1

Hexavalent Chromium Emissions from Metal Finishing Operations

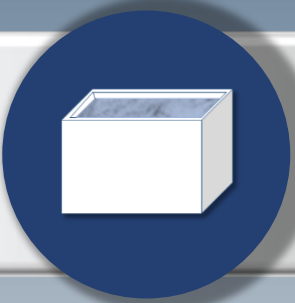


Overview of Metal Finishing



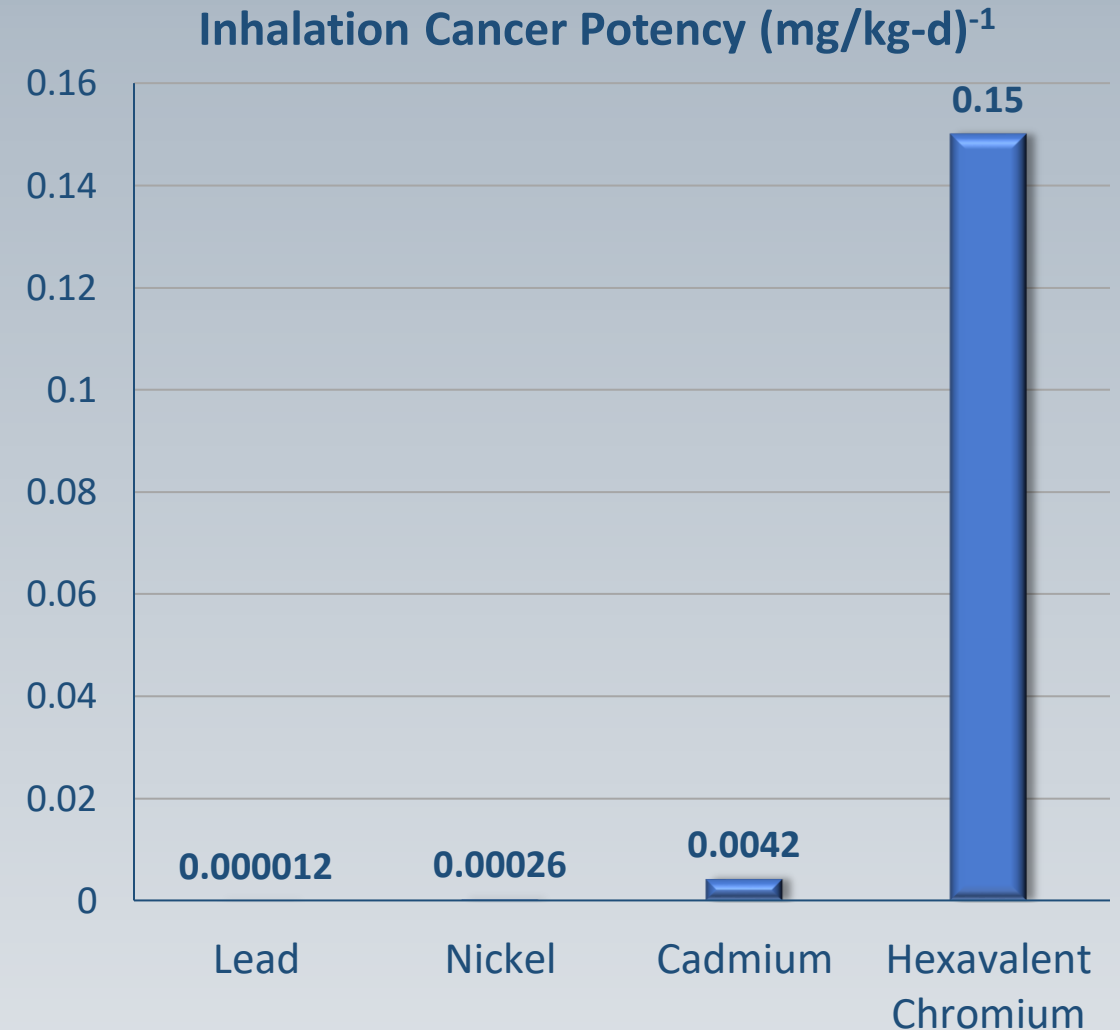
Metal Finishing

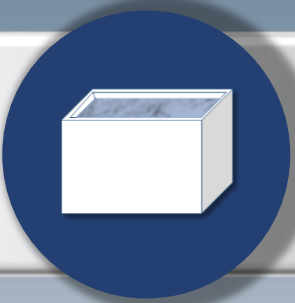
- Metal finishing is the surface treatment of a substrate to achieve desired characteristics (e.g. anti-corrosion, durability, adhesion)
- Metal finishing operations support many industries:
 - Home, kitchen, and bath fixtures
 - Machinery and industrial equipment
 - Aerospace (commercial and military)
- Metal finishing is a process where a part is submerged into a tank, or series of tanks, with a solution that contains a metal such as:
 - Anodizing
 - Conversion coating
 - Electroforming
 - Electroless plating
 - Electroplating
 - Electropolishing
 - Etching
 - Passivation
 - Pre-dip
 - Sealing
 - Stripping



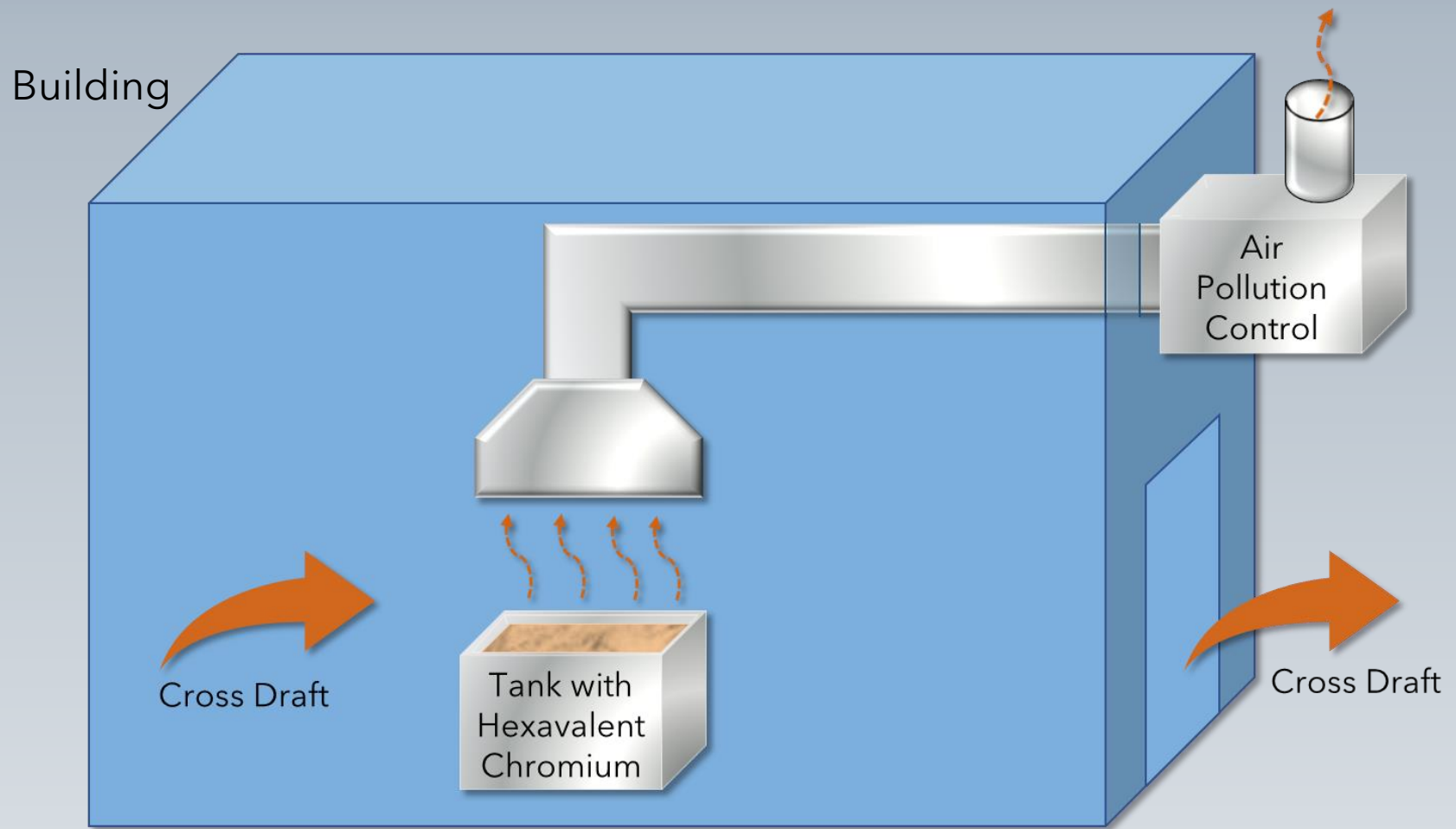
Hexavalent Chromium

- Hexavalent chromium is a metal toxic air contaminant (TAC)
- Increased exposure to hexavalent chromium may increase the chances of experiencing one or more negative health effects
 - Cancer
 - The inhalation cancer potency risk assessment health value for hexavalent chromium is more than 35 times higher than any other metal plating TACs regulated by South Coast AQMD
 - Non-cancer from long-term (chronic) exposure
 - Respiratory System
 - Hematologic System





Point and Fugitive Emission Sources



Point Source

Emissions originate from a fixed point (such as an exhaust stack)

Fugitive Source

Facility generated emission which become airborne (excludes emissions from control device exhaust)



Overview of South Coast AQMD Rules for Metal Finishing Facilities

- Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing
 - Applies to facility performing chromium electroplating or chromic acid anodizing operations
 - Reduces fugitive and point source emissions
- Rule 1426 – Emissions from Metal Finishing Facilities
 - Applies to a facility performing metal finishing with hexavalent chromium, nickel, cadmium, or lead
 - Primarily reduces **fugitive** source emissions



Rule 1426 Series Approach

Rule 1426
(Hexavalent Chromium, Nickel, Cadmium, and Lead)

- Fugitive source emission reduction

Proposed Rule 1426.1
(Hexavalent Chromium)

- Point source emission controls
- Possibly other enhancements

Proposed Rules for Other Metal TACs as Needed

- Point source emission controls
- Possibly other enhancements



Summary Overview of the Regulatory Approach for Metal Finishing Operations

Categories	Rule 1469	Rule 1426	PR 1426.1
Rule Title	Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations	Emissions from Metal Finishing Operations	Hexavalent Chromium Emissions from Metal Finishing Operations
Purpose	Reduce emissions from hexavalent chromium electroplating or chromic acid anodizing operations	Reduce fugitive emission from hexavalent chromium, nickel, cadmium, and lead, metal finishing operations	Reduce point source emissions from hexavalent chromium metal finishing operations
Building Enclosures	Yes	Yes	Possibly ¹
Housekeeping	Yes	Yes	Possibly ¹
Best Management Practices	Yes	Yes	Possibly ¹
Point Source Controls	Yes	No	Yes

PR 1426.1 would not apply to facilities subject to Rule 1469

¹ – Already addressed in Rule 1426, but may be enhanced



Rule 1469 Key Changes

Initial Adoption

1998

- Incorporated requirements from Rule 1169
- Reduced emission limits
- Allowed use of chemical fume suppressants
- Improved compliance verification

Amendments

2003

- Reduced emission limits
- Limited air sparging
- Required training of operators

2008

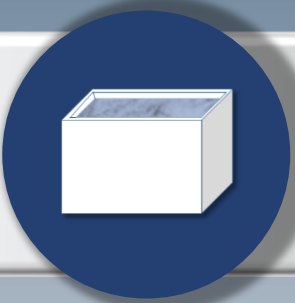
- Reduced emission limits
- Required initial source testing
- Amended to be consistent with CARB chrome plating requirements

2018

- Required controls for uncontrolled tanks
- Verified operation of add-on controls
- Limited cross-draft conditions
- Evaluated chemical fume suppressants
- Amended to be consistent with NESHP

2021

- Enhanced requirements to minimize fugitive emissions with building enclosure, housekeeping, and best management practices requirements



Overview of Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations

- The 2018 amendments to Rule 1469 reduced point and fugitive sources of emissions
 - Point source emission reductions achieved through:
 - Installation of controls on tanks that exceed a hexavalent chromium concentration and are either rectified, air sparged, or heated
 - Verified by periodic source testing and parametric monitoring
 - Fugitive emission reductions achieved through:
 - Enhanced housekeeping (e.g. HEPA vacuums)
 - Best management practices (e.g. restrict compressed air cleaning near tanks)
 - Building enclosure requirements (e.g. reduce cross drafts)



Issues Identified During the 2018 Amendments to Rule 1469

Operations generating hexavalent chromium emissions:



Rectified

- Electrolytic operations where a diode allows electric current to flow in one direction only
- Gas bubbles rise to the surface and rupture



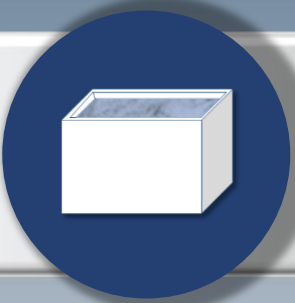
Air Sparged

- The tank is agitated with air
- Gas bubbles rise to the surface and rupture



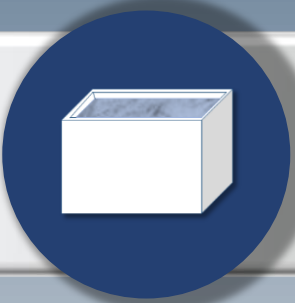
Heated

- The tank is heated
- Vapors are emitted from the tank



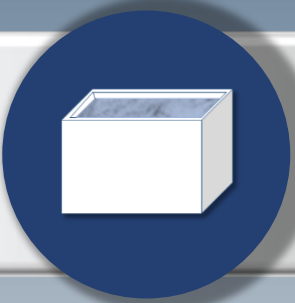
Issues Identified During the 2018 Amendments to Rule 1469 Cont.

- Additional tanks that are rectified, air sparged, or heated were identified as potential sources of hexavalent chromium emissions, such as:
 - Rinse Tanks
 - Seal Tanks
 - Passivation Tanks
 - Chemical Conversion Tanks
 - Stripping Tanks
- Hexavalent chromium emissions from these uncontrolled tanks can impact surrounding communities
- Amendments further addressed fugitive and previously uncontrolled point source emissions from tanks



Overview of Rule 1426 – Emissions from Metal Finishing Operations

- Rule 1426 targets fugitive emission from hexavalent chromium, nickel, cadmium, and lead, metal finishing operations (adopted in 2003, last amended in 2021)
 - Amendments focused on reducing fugitive emission with Best Management Practices, Housekeeping, and Building Enclosure requirements from Rule 1469
- Rule 1426 was developed to control fugitive emissions with the intent to control point source emission in a future rule making (e.g., 1426.1)



Overview of the Regulatory Approach for Proposed Rule 1426.1

- Tanks containing hexavalent chromium that are rectified, air sparged, or heated are at facilities not subject to Rule 1469
- PR 1426.1 would address the regulatory gap and is needed to reduce hexavalent chromium emissions
 - Focus on reduction of hexavalent chromium emissions from point sources
 - Considering enhancing fugitive source reduction requirements from Rule 1426 as needed





Proposed Rule 1426.1

Hexavalent Chromium Emissions from Metal Finishing Operations



Rule Development Process



Overview of Rule Development Process

Working group and stakeholder meetings continue throughout process

**Information
Gathering
and Analysis**

**Preliminary
Draft Rule
and Staff
Report**

**Public
Workshop**

**Draft Rule
and Staff
Report**

**Public
Hearing**



Working Groups

- Comprised of stakeholders and representatives from industry (regulated industry, equipment suppliers), community and environmental groups, labor associations, government agencies, and academia
- Working group meetings are held throughout the rule development process and are open to the public
- Objectives:
 - Build consensus and work through challenges
 - Opportunities for early input
 - Implement requirements
- Assists staff in understanding:
 - Key issues and concerns
 - Industry terms, industry practices, etc.
 - Applicable technologies





Stakeholder Input

- Stakeholders can provide input during working group meetings and throughout the rulemaking process
- Early input is strongly encouraged to help develop proposed rule amendments and to address issues
- Working group meetings, individual meetings, and site visits allow stakeholders to dialogue directly with staff and discuss individual issues





Gathering Information

- Information is used to provide more context
- Used to accurately characterize information used for the rulemaking and its impacts such as cost
- Sharing knowledge benefits the rule





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Rule 1426.1





Next Steps



Public Hearing



Continue to develop rule concepts



Continue information gathering



Hold working group meetings



PR 1426.1 Staff Contacts

Please contact staff with any questions or comments

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Proposed Rule 1426.1

Hexavalent Chromium Emissions from Metal Finishing Operations



Open Discussion