

# History of NIOSH Hexavalent Chromium Policy

T.J. Lentz, Ph.D., MPH

Policy Response Coordinator

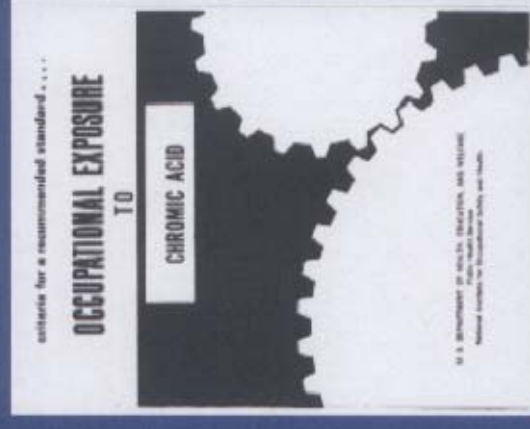
Education and Information Division

NIOSH



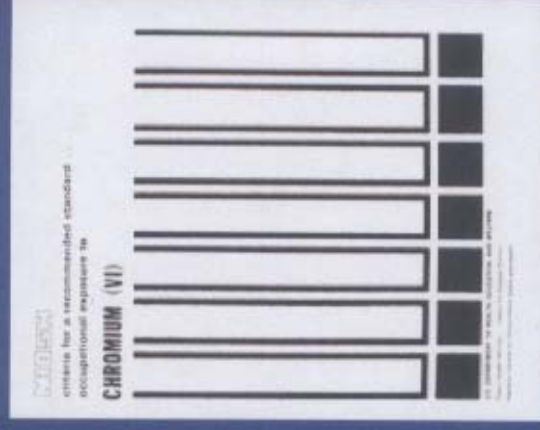
# 1973: Criteria for a Recommended Standard: Occupational Exposure to Chromic Acid

- NIOSH recommended 0.1 mg/m<sup>3</sup> as a 15-minute ceiling concentration
- NIOSH recommended supplementing this ceiling concentration with a time-weighted average of 0.05 mg/m<sup>3</sup> for an 8-hour work day



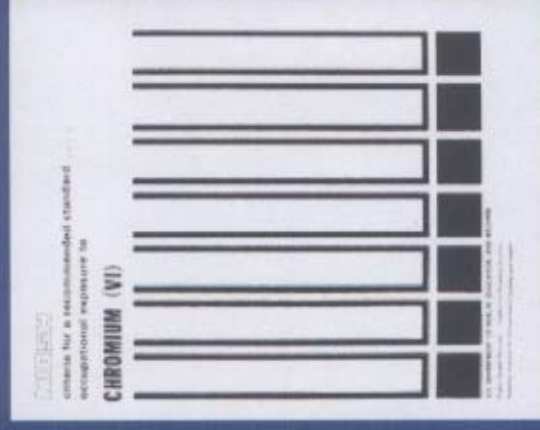
# 1975: Criteria for a Recommended Standard for Occupational Exposure to Chromium (VI)

- NIOSH supported two distinct recommended standards for Cr(VI) compounds
  - For “noncarcinogenic” water-soluble Cr(VI) compounds, NIOSH recommended a 10-hr TWA limit of  $25 \mu\text{g Cr(VI)}/\text{m}^3$  and a 15-minute ceiling limit of  $50 \mu\text{g Cr(VI)}/\text{m}^3$
  - For all other Cr(VI) compounds (relatively insoluble in water) considered carcinogenic, the REL was  $1 \mu\text{g Cr(VI)}/\text{m}^3 \text{ TWA}^*$



# 1975: Criteria for a Recommended Standard for Occupational Exposure to Chromium (VI) (continued)

- NIOSH carcinogen policy was “*no detectable exposure levels for proven carcinogenic substances*”
- REL of  $1 \mu\text{g Cr(VI)}/\text{m}^3$  TWA was based on the *limits of the analytical method* for measuring workplace exposures to Cr(VI) at that time



## 1988: Testimony to OSHA on the Proposed Rule on Air Contaminants

- NIOSH testified that evidence was sufficient to indicate that *soluble Cr(VI) compounds were also carcinogenic*
- NIOSH recommended that *all Cr(VI) compounds (soluble or insoluble in water) be classified as potential occupational carcinogens*
- *REL of 1  $\mu\text{g Cr(VI)}/\text{m}^3$  TWA was adopted by NIOSH for all Cr(VI) compounds*

# 2002: OSHA Request for Information on Occupational Exposure to Hexavalent Chromium

NIOSH reaffirmed its policy that *all Cr(VI) compounds be classified as occupational carcinogens*

## 2005: Testimony to OSHA on the Proposed Rule on Occupational Exposure to Hexavalent Chromium

- Reaffirmed policy *that all Cr(VI) compounds be classified as occupational carcinogens*
- Recommended that the *exposure limit for Cr(VI) be revised to 0.2  $\mu\text{g Cr(VI)}/\text{m}^3$  for an 8-hr TWA exposure during a 40-hr workweek*

# **September 2008: Draft Revised Criteria for a Recommended Standard for Occupational Exposure to Chromium (VI)**

- Consistent with 2005 NIOSH testimony on the OSHA Proposed Rule on Occupational Exposure to Hexavalent Chromium
  - Updated exposure assessment recommendations: no specific action level
- REL based on risk evaluation using human health effects data and consideration of analytical and technical achievability



# Public Review of Document October 15, 2008 – March 31, 2009 (Extended 60 days)

Document Cover sheet: NIOSH Criteria Document Update: Occupational Exposure to Hexavalent Chromium - Windows Internet Explorer

http://www.cdc.gov/niosh/review/public/144/

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September 2008

Document for Public Review and Comment:

NIOSH Criteria Document Update: Occupational Exposure to Hexavalent Chromium  
NIOSH Docket 144

### Introduction and Purpose

The National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) is conducting a public review of the NIOSH draft document "NIOSH Criteria Document Update: Occupational Exposure to Hexavalent Chromium." This draft NIOSH document provides a review of the available literature and an update of NIOSH policies on occupational exposure to hexavalent chromium compounds including an assessment of (1) critical animal, human, and in vitro studies on occupational exposure to hexavalent chromium; (2) relevant quantitative risk assessments about occupational exposure to hexavalent chromium; (3) appropriate methods for sampling and analysis of hexavalent chromium compounds in the workplace; (4) basis for the NIOSH revised Recommended Exposure Limit for hexavalent chromium compounds; and (5) other NIOSH recommendations for protecting workers from occupational exposure to hexavalent chromium. This guidance document does not have the force and effect of law.

The purpose of the public review of the draft document and public meeting is to obtain public comments to ensure that: (1) this hazard identification is an accurate reflection of the available scientific studies; (2) the NIOSH recommendations for protecting workers from occupational exposure to hexavalent chromium compounds are appropriate and justified; and (3) NIOSH has a transparent and scientific basis for its revised Recommended Exposure Limit for hexavalent chromium compounds. The overall goal of the review is to enhance the quality and credibility of Agency recommendations by ensuring that the scientific and technical work underlying these recommendations receives appropriate review by independent scientific and technical experts.

### Charge to Peer Reviewers

The peer review charge was developed in accordance with Office of Management and Budget (OMB) guidelines, is consistent with NIOSH peer review practice, and is intended to ensure that credible and appropriate science is used in the development of criteria documents and recommended exposure limits. The peer reviewers have been asked to consider the following questions:

1. Are the critical studies presented clearly and adequately?
2. Do all of the presented studies use scientifically valid methods and techniques?

Done

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