

# What Companies Need to Know About OSHA's Occupation Exposure to Hexavalent Chromium: Proposed Rule

**3E Company is the trusted global provider of  
chemical, regulatory and compliance  
information services**



- Web Seminar audio and visual presented on the Internet. Please be sure to test the audio to ensure it works.
- If your audio speeds up or slows down it could be because you have multiple programs running. Log out of your other programs and the audio should work fine.
- The preferred screen resolution is 1024 x 768
- If you have popup blockers please disable them to optimize the visual presentation
- If you do not have access to the Internet, please call (US & Canada) 877.407.8037 or (International) +1 201.689.8037
- Click Q&A button to submit your questions. Questions will be answered at the end of the presentation
- The Web Seminar will be recorded. The audio and visual presentation link will be sent to you after the Web SeminarIntro 2

## Harold Hobbs – Safety & Health Regulatory Consultant, Georgia Power

- Has 31 years experience in the practice of environmental, health & safety
- Serves on the following Committees:
  - ASTM E-34 Safety & Health Committee
  - Executive, Long Range Planning, Hazard Communication & Ergonomics E-34 Sub-Committees
  - Vice Chair of the AIHA Law Committee and Member of the AIHA Safety Committee
  - President Elect of the Georgia Chapter of ASSE and Member of ASSE Technology Specialty Committee
- Member of the Georgia State Bar and the Environmental Law Section

## Jim Lancour – Retired from Southern Company

- Prior experience includes:
  - Safety & Health Regulatory Consultant – Southern Company
    - Advising and assisting corporate management in identifying and solving industrial hygiene problems.
  - Assistant Professor, Environmental Engineering at the University of Toledo
- BS in Civil Engineering, Michigan Technological University and MS in Industrial Health and a Doctor of Philosophy in Industrial Health from University of Michigan

# OSHA's Proposed Hexavalent Chromium Standard

**29 CFR 1910.1026**

and

**29 CFR 1926.1126**

Monday, October 4, 2004



- 1993 – OSHA petitioned for ETS to lower PEL to 0.5 ug/M<sup>3</sup> from 52 mg/M<sup>3</sup>
- OSHA denied request and initiated 6(b) Rulemaking
- August 2002 – OSHA published “Request for Information”
- April 2003 – 3<sup>rd</sup> Circuit Court ordered OSHA to:
  - Complete proposal by October 4, 2004
  - Complete Final Rule by January 18, 2006
- Proposal published in Federal Register October 4, 2004

- General Industry: applies to all *occupational exposures to chromium (VI) in all forms and compounds . . . in general industry – except exposures that occur in the application of pesticides; e.g., wood poles*



- Construction Industry: applies to all *occupational exposures to chromium (VI) in all forms and compounds . . . in construction – except exposures to Portland Cement*



- General Industry:
  - ❖ Permissible Exposure Level (PEL) =  $1 \mu\text{g}/\text{m}^3$  – 8 hour TWA
  - ❖ Action Level (AL) =  $0.5 \mu\text{g}/\text{m}^3$  – 8 hour TWA
- Construction Industry:
  - ❖ PEL =  $1 \mu\text{g}/\text{m}^3$  – 8 hour TWA
  - ❖ Action Level – **none in this standard**

- General Industry -- §(d)
  1. General
    - a. Shall determine the 8 hour TWA for each employee; i.e., a representative # of full shift, breathing zone samples for each . . . shift, job classification, and work area, **OR**
    - b. To meet this requirement . . . the employer may conduct “*representative sampling*” of employees that are expected to have the highest chromium [VI] exposure levels

- General Industry -- §(d)
  2. Initial Exposure Monitoring (IEM)
    - a. Shall determine if any employee is exposed at or above the AL
    - b. May rely on data obtained within past 12 months if it is still representative of current exposure conditions.
    - c. Objective data that is representative of current conditions which shows that exposures will not exceed the AL may be used in lieu of initial exposure monitoring.

- General Industry -- §(d)
3. Periodic Monitoring (PM)
- a. If **IEM** (**or PM?**) shows exposure levels  $< AL$ : monitoring may be discontinued
  - b. If **IEM** or **PM** shows exposure levels  $\geq AL$ : monitor at least every 6 months
  - c. If **IEM** shows exposure levels  $\geq PEL$ : monitor at least every 3 months
  - d. If **PM** shows exposure levels  $< AL$  & this is confirmed with another sample taken at least 7 days later: monitoring may be discontinued

- General Industry -- §(d)
  - 4. Additional Monitoring
    - a. Additional monitoring is required when
      - i. Changes in the production process, raw materials, equipment, personnel, work practices, or control methods have occurred that may result in new or additional exposures, or
      - ii. The employer has any reason to believe that new or additional exposures have occurred

- General Industry -- §(d)
  - 5. Employee Notification of IEM or PM Results
    - a. Within 15 days of receiving the results the employer shall . . .
      - i. Notify each affected employee individually in writing of the results, or
      - ii. Post the results in a location that is accessible to all effected employees
    - b. When the results are above the PEL, written notice must describe corrective action being taken to reduce the levels to or below the PEL



- General Industry -- §(d)
  - 6. Accuracy of Measurement
    - a. Shall use method of monitoring and analysis that:
      - i. Can measure chromium [VI] to within an accuracy of  $\pm 25\%$ , and
      - ii. Can provide accurate measurements to within a statistical confidence level of 95 % for airborne concentrations at or above the AL

- General Industry -- §(d)
  - 7. Observation of Monitoring
    - a. Shall provide affected employees or their designated representative an opportunity to observe any monitoring of employee exposure to chromium [VI]
    - b. When observation of monitoring requires entry into an area where PPE is required the employer shall
      - i. Provide such PPE,
      - ii. Assure its proper use and compliance with applicable safety & health procedures



- **Construction Industry**
  8. This provision does not exist in the construction standard; **however**, some exposure monitoring will be necessary to determine:
    - a. If PPE is needed, and
    - b. If it is . . . the proper selection and use of the necessary PPE

- General Industry -- §(e)
  1. Establishment
    - a. When employee exposure to chromium [VI] are reasonably expected to exceed the PEL
  2. Demarcation
    - a. Must be such that it clearly establishes and alerts employees of the boundaries of the regulated area, and
    - b. Shall include the required warning signs . . . see §(1)(2)



- General Industry -- §(e)
  3. Access shall be limited to:
    - a. Authorized persons required by work duties to be present in the regulated area
    - b. Any designated representative who's purpose is to observe exposure monitoring, and
    - c. Any person authorized by OSHA



- **Construction Industry**
  1. This provision does not exist in the construction standard

- **General Industry -- §(f)**
  1. **Engineering & Work Practices**
    - a. Employer shall use engineering & work practice controls to reduce or maintain exposure to chromium [VI] at or below the PEL . . . unless . . . the employer can demonstrate that such controls are infeasible.
    - b. When such controls are not sufficient to maintain exposures at or below the PEL . . . appropriate respiratory protection may be used . . . see §(g)



- **General Industry -- §(f)**
  - 2. Engineering & Work Practices**
    - a.** Where the employer has a reasonable basis for believing that no employee in a process or task will be exposed above the PEL for 30 days or more per year (12 consecutive months) . . . the requirement to use engineering & work practice controls to achieve the PEL does not apply to that process or task.

- General Industry -- §(f)
  2. Prohibition of Rotation
    - a. The employer shall not rotate employees to different jobs to achieve compliance with the PEL

- Construction Industry -- §(d)
1. Engineering & Work Practices
    - a. *Employer shall use engineering & work practice controls to reduce or maintain exposure to chromium [VI] at or below the PEL – unless . . . the employer can demonstrate that such controls are infeasible.*
    - b. *When such controls are not sufficient to maintain exposures at or below the PEL . . . appropriate respiratory protection may be used . . . see §(e)*

- Construction Industry -- §(d)
  1. Engineering & Work Practices
    - c. *Where the employer has a reasonable basis for believing that no employee in a process or task will be exposed above the PEL for 30 days or more per year (12 consecutive months) . . . the requirement to use engineering & work practice controls to achieve the PEL does not apply to that process or task.*

- Construction Industry -- §(d)
  2. Prohibition of Rotation
    - a. *The employer shall not rotate employees to different jobs to achieve compliance with the PEL*

- **General Industry -- §(g)**
  1. General – provide respiratory protection during:
    - a. Periods . . . when installing or implementing engineering or work practice controls
    - b. Maintenance or repairs . . . when engineering or work practice controls are not feasible
    - c. In work operations . . . where engineering or work practice controls can not reduce exposure levels to or below the PEL

- General Industry -- §(g)
  1. General – provide respiratory protection
    - d. In work operations where employees are exposed above the PEL for less than 30 days per year, and engineering or work practice controls have not been implemented to reduce exposure levels to or below the PEL, or
    - e. Emergencies

- **General Industry -- §(g)**
  - 2. Respiratory Protection Program**
    - a.** Where respiratory protection is required . . . the program must be in accordance with 29 CFR 1910.134

➤ Construction Industry -- §(e) . . .

**Note:** same as General Industry §(g)

1. General – provide respiratory protection during:
  - a. *Periods . . . when installing or implementing engineering or work practice controls,*
  - b. *Maintenance or repairs . . . when engineering or work practice controls are not feasible,*
  - c. *In work operations . . . where engineering or work practice controls can not reduce exposure levels to or below the PEL*



- Construction Industry -- §(e)
  1. General – provide respiratory protection
    - d. In work operations where employees are exposed above the PEL for less than 30 days per year, and engineering or work practice controls have not been implemented to reduce exposure levels to or below the PEL, or*
    - e. Emergencies*

- Construction Industry -- §(e)
  - 2. Respiratory Protection Program
    - a. *Where respiratory protection is required . . . the program must be in accordance with 29 CFR 1910.134*

- General Industry -- §(h)
  1. Provision & Use
    - a. When a hazard is or is likely to be present for skin or eye contact to chromium [VI] . . . the employer shall:
      - i. Provide the appropriate Personal Protective Clothing (PPC) and Personal Protective Equipment (PPE) . . . at no cost to the employee, and
      - ii. Ensure its use by the employee



- General Industry -- §(h)
  - 2. Removal & Storage
    - a. When contaminated PPC & PPE is removed for laundering, cleaning, maintenance, or disposal . . . such articles shall be stored and transported in sealed, impermeable bags or other closed, impermeable containers.
    - b. Bags or containers of contaminated PPC or PPE That are removed from change rooms for laundering, cleaning, maintenance, or disposal . . . such shall be labeled as stated in § (1)

- General Industry -- §(h)
  - 3. Cleaning & Replacement
    - a. All PPC & PPE shall be cleaned, laundered, maintained, and replaced as necessary to preserve its effectiveness
    - b. Removal of contaminated chromium [VI] from PPC & PPE by blowing, shaking, or any other means that disperses chromium [VI] into the air or onto an employee's body **is prohibited**

- General Industry -- §(h)
  - 3. Cleaning & Replacement
    - c. Must inform person who launders or cleans contaminated PPC or PPE that . . . laundry and cleaning should be done in a manner that minimizes eye or skin contact with chromium [VI] and effectively prevents the release of airborne chromium [VI] above the PEL

➤ Construction Industry -- §(f) . . .

**Note:** same as General Industry §(h)

1. General – provide respiratory protection

*a. When a hazard is or is likely to be present for skin or eye contact to chromium [VI] . . . the employer shall:*

- i. Provide the appropriate Personal Protective Clothing (PPC) and Personal Protective Equipment (PPE) . . . at no cost to the employee, and*
- ii. Ensure its use by the employee*

- Construction Industry -- §(f)
  2. Removal & Storage
    - a. *Must remove all contaminated PPC & PPE at the end of the work shift or at the completion of tasks involving chromium [VI] . . . whichever comes first.*
    - b. *No contaminated PPC or PPE may be removed from the workplace except by those who are responsible to launder, clean, maintain, or dispose of such articles.*

- Construction Industry -- §(f)
  - 2. Removal & Storage
    - c. When contaminated PPC & PPE is removed for laundering, cleaning, maintenance, or disposal . . . such articles shall be stored and transported in sealed, impermeable bags or other closed, impermeable containers.*
    - d. Bags or containers of contaminated PPC or PPE That are removed from change rooms for laundering, cleaning, maintenance, or disposal . . . such shall be labeled as stated in § (i)*

- Construction Industry -- §(f)
  - 3. Cleaning & Replacement
    - a. All PPC & PPE shall be cleaned, laundered, maintained, and replaced as necessary to preserve its effectiveness*
    - b. Removal of contaminated chromium [VI] from PPC & PPE by blowing, shaking, or any other means that disperses chromium [VI] into the air or onto an employee's body is prohibited*

- Construction Industry -- §(f)
  3. Cleaning & Replacement
    - c. *Must inform person who launders or cleans contaminated PPC or PPE that . . . laundry and cleaning should be done in a manner that minimizes eye or skin contact with chromium [VI] and effectively prevents the release of airborne chromium [VI] above the PEL*

- **General Industry -- §(i)**
  1. **General**
    - a. Where PPC & PPE is required . . . change rooms (in conformance with § 1910.141) must be provided
    - b. Where skin contact to chromium [VI] occurs . . . washing facilities (in conformance with § 1910.141) must be provided
    - c. Eating and drinking areas must be in conformance with § 1910.141

- **General Industry -- §(i)**
  - 2. Change Rooms**
    - a. Change Rooms shall be equipped with:**
      - i. Separate storage facilities for PPC and PPE, and**
      - ii. Street clothing**
    - b. These facilities must also prevent cross-contamination**

- General Industry -- §(i)
3. Wash Facilities
- a. The employer shall:
    - i. Provide readily accessible wash facilities capable of removing chromium [VI] from the skin, and
    - ii. Ensure affected employees use these facilities, as necessary
  - b. The employer shall ensure employees who have skin contact with chromium [VI] wash their hands and faces:
    - i. At the end of the work shift,
    - ii. Prior to eating, drinking, smoking, chewing tobacco or gum, applying cosmetics, or
    - iii. Using the toilet



- General Industry -- §(i)
  - 4. Eating & Drinking Areas
    - a. Ensure that eating & drinking areas and surfaces are maintained as free from contamination of chromium [VI] as practicable
    - b. Ensure that employees wearing PPC & PPE do not enter eating & drinking areas . . . unless . . . surface chromium [VI] has been removed by methods that do not disperse chromium [VI] into the air or onto an employee's body



- General Industry -- §(i)
  - 5. Prohibited Activities
    - a. In areas where skin or eye contact occurs, the employer shall ensure that employees do not:
      - i. Eat, drink, smoke, chew tobacco or gum, or apply cosmetics in these areas, or
      - ii. Carry the products associated with these activities in these areas, or
      - iii. Store such products in these areas

➤ Construction Industry -- §(g) . . .

**Note:** same as General Industry §(i)

1. General

- a. Where PPC & PPE is required . . . change rooms (in conformance with 29 CFR 1926.51) must be provided*
- b. Where skin contact to chromium [VI] occurs . . . washing facilities (in conformance with 29 CFR 1926.51) must be provided*
- c. Eating and drinking areas must be in conformance with 29 CFR 1926.51*

- Construction Industry -- §(g)
  - 2. Change Rooms
    - a. *Change Rooms shall be equipped with:*
      - i. *Separate storage facilities for PPC and PPE, and*
      - ii. *Street clothing*
    - b. *These facilities must also prevent cross-contamination*

- Construction Industry -- §(g)
3. Wash Facilities
- a. The employer shall:*
- i. Provide readily accessible wash facilities capable of removing chromium [VI] from the skin, and*
  - ii. Ensure affected employees use these facilities, as necessary*
- b. The employer shall ensure employees who have skin contact with chromium [VI] wash their hands and faces:*
- i. At the end of the work shift,*
  - ii. Prior to eating, drinking, smoking, chewing tobacco or gum, applying cosmetics, or*
  - iii. Using the toilet*



- Construction Industry -- §(g)
  4. Eating & Drinking Areas
    - a. *Ensure that eating & drinking areas and surfaces are maintained as free from contamination of chromium [VI] as practicable*
    - b. *Ensure that employees wearing PPC & PPE do not enter eating & drinking areas . . . unless . . . surface chromium [VI] has been removed by methods that do not disperse chromium [VI] into the air or onto an employee's body*

- Construction Industry -- §(g)
  - 5. Prohibited Activities
    - a. In areas where skin or eye contact occurs, the employer shall ensure that employees do not:*
      - i. Eat, drink, smoke, chew tobacco or gum, or apply cosmetics in these areas, or*
      - ii. Carry the products associated with these activities in these areas, or*
      - iii. Store such products in these areas*

- General Industry -- §(j)
  1. General
    - a. Employer shall ensure that:
      - i. All surfaces are maintained as free as practicable of accumulations of chromium [VI]
      - ii. All spills and releases of chromium [VI] containing materials are cleaned up promptly

➤ General Industry -- §(j)

2. Cleaning Methods

- a. HEPA-filter vacuums or other methods that will minimize likelihood of exposure to chromium [VI]
- b. Shoveling, sweeping and brushing may be used . . . only . . . when HEPA-filter vacuums or other methods that will minimize likelihood of exposure to chromium [VI] have been tried and found to be ineffective



- General Industry -- §(j)
  - 2. Cleaning Methods
    - c. Cannot use compressed air to remove chromium [VI] from a surface . . . unless . . . it is used in conjunction with a ventilation system designed to capture the resulting dust cloud
    - d. Ensure that cleaning equipment is handled such that re-entry of chromium [VI] into the workplace is minimized

- General Industry -- §(j)
  - 3. Disposal – Ensure that:
    - a. Waste, scrap, debris and other chromium [VI] contaminated materials consigned for disposal . . . are . . . collected and sealed in impermeable bags or other closed, impermeable containers
    - b. Bags or container of waste, scrap, debris and other chromium [VI] contaminated materials consigned for disposal . . . are . . . labeled in accordance with § (1)

- **Construction Industry**
  1. This provision does not exist in the construction standard

- General Industry -- §(k)
  1. General
    - a. Medical Surveillance exams shall be made available to at no cost at a reasonable time and place for all employees:
      - i. Who are or may be occupationally to chromium [VI] exposed above the PEL for 30 or more days per year
      - ii. Experiences signs or symptoms of adverse health effects associated with chromium (VI) exposure
      - iii. Exposed in an emergency
    - b. Exams are to be performed by or under direction of a **Physician or other Licensed Health Care Professional (PLHCP)**



- General Industry -- §(k)
  2. Frequency – shall provide exam
    - a. Within 30 days of initial assignment . . . Unless . . . employee has had one provided in accordance with this standard within the past 12 months
    - b. Annually
    - c. Within 30 days of a PLHCP's written medical opinion recommending an additional examination

- General Industry -- §(k)
  2. Frequency – shall provide exam
    - d. Whenever an employee shows signs or symptoms of adverse health associated with chromium [VI] exposure
    - e. Within 30 days of an exposure that occurs during an emergency that results from an uncontrolled release of chromium [VI]
    - f. At termination of employment . . . unless . . . employee has had one provided in accordance with this standard within the past 6 months

- General Industry -- §(k)
  - 3. Contents of Examination
    - a. Medical & Work history
      - i. With emphasis on past, present and anticipated future exposure to chromium [VI];
      - ii. Any history of respiratory dysfunction;
      - iii. Any history of asthma, dermatitis, skin ulceration or nasal septum perforation; and
      - iv. Smoking status & history
    - b. Physical exam of skin & respiratory tract, and
    - c. Any other tests recommended by the PLHCP

- General Industry -- §(k)
4. Info provided to the PLHCP
- a. A copy of this standard
  - b. description of employee's current & past duties\*
  - c. Employee's current & former exposure levels\*
  - d. A description of PPE used or to be used – including when & how long the PPE was used
  - e. Info from employee's other previously provided employment-related exams

\* As it relates to chromium [VI] exposures



- General Industry -- §(k)
  - 5. PLHCP's Written Medical Opinion
    - a. Shall be obtained within 30 days & contain:
      - i. Opinion as to whether the PLHCP has detected a medical condition that would place the employee at an increased risk of material impairment from further exposure to chromium [VI]
      - ii. Any limitations on exposure to chromium [VI] or use of PPE; e.g., respirators
      - iii. A statement that the PLHCP has explained the results of the exam to the employee . . . including: any medical condition related to chromium [VI] exposure that requires further evaluation or treatment & any precautions for use of PPE or PPC

- General Industry -- §(k)
  - 5. PLHCP's Written Medical Opinion
    - b. The PLHCP shall not reveal to the employer any specific findings or diagnoses unrelated to chromium [VI] exposure
    - c. The employer shall provide a copy of the PLHCP's written medical opinion to the examined employee within 2 weeks of receiving it

➤ Construction Industry -- §(h)

1. General

- a. Medical Surveillance exams shall be made available at no cost at a reasonable time and place for all employees:
  - i. *Who are or may be occupationally to chromium [VI] exposed above the PEL for 30 or more days per year . . . Not in Construction Standard . . .*
  - ii. Experiences signs or symptoms of adverse health effects associated with chromium (VI) exposure
  - iii. Exposed in an emergency
- b. Exams are to be performed by or under direction of a PLHCP



- Construction Industry -- §(h)
  2. Frequency – shall provide exam
    - a. *Within 30 days of initial assignment . . . unless . . . employee has had one provided in accordance with this standard within the past 12 months -- Not in Construction Standard*
    - b. *Annually -- Not in Construction Standard*
    - c. Whenever an employee shows signs or symptoms of adverse health associated with chromium [VI] exposure

- Construction Industry -- §(h)
  - 2. Frequency – shall provide exam
    - d. Within 30 days of an exposure that occurs during an emergency that results from an uncontrolled release of chromium [VI]
    - e. Within 30 days of a PLHCP's written medical opinion recommending an additional examination
    - f. *At termination of employment . . . unless . . . employee has had one provided in accordance with this standard within the past 6 months --  
Not in Construction Standard*



- Construction Industry -- §(h)
  - 3. Contents of Examination
    - a. *Medical & Work history*
      - i. *Emphasis on past, present and anticipated future exposure to chromium [VI];*
      - ii. *Any history of respiratory dysfunction;*
      - iii. *Any history of asthma, dermatitis, skin ulceration or nasal septum perforation; and*
      - iv. *Smoking status & history*
    - b. *Physical exam of skin & respiratory tract, and*
    - c. *Any other tests recommended by the PLHCP*

- Construction Industry -- §(h)
4. Info provided to the PLHCP
- a. *A copy of this standard*
  - b. *Description of employee's current & past duties\**
  - c. *Employee's current & former exposure levels\**
  - d. *A description of PPE used or to be used – including when & how long the PPE was used*
  - e. *Info from employee's other previously provided employment-related exams*

*\* As relates to chromium [VI] exposures*

- Construction Industry -- §(h)
  - 5. PLHCP's Written Medical Opinion
    - a. *Shall be obtained within 30 days & contain:*
      - i. *Opinion as to whether the PLHCP has detected a medical condition that would place the employee at an increased risk of material impairment from further exposure to chromium [VI]*
      - ii. *Any limitations on exposure to chromium [VI] or use of PPE; e.g., respirators*
      - iii. *A statement that the PLHCP has explained the results of the exam to the employee . . . including: any medical condition related to chromium [VI] exposure that requires further evaluation or treatment & any precautions for use of PPE or PPC*



- Construction Industry -- §(h)
  - 5. PLHCP's Written Medical Opinion
    - b. The PLHCP shall not reveal to the employer any specific findings or diagnoses unrelated to chromium [VI] exposure*
    - c. The employer shall provide a copy of the PLHCP's written medical opinion to the examined employee within 2 weeks of receiving it.*

- General Industry -- §(1)
  1. General
    - a. The requirements of 29 CFR 1910.1200 (Haz Com) for labels, MSDSs, and training apply with the following requirements
  2. Warning Signs
    - a. Legible and readily visible warning signs shall be displayed at all approaches to *Regulated Areas* to allow an employee to read the signs and take the necessary protective steps before entering the area

- **General Industry -- §(1)**  
Warning Signs – shall contain at least the following information:

**DANGER  
CHROMIUM [VI]  
CANCER HAZARD  
CAN DAMAGE SKIN, EYES, NASAL  
PASSAGES, AND LUNGS  
AUTHORIZED PERSONNEL ONLY  
RESPIRATORS REQUIRED IN THIS AREA**



➤ General Industry -- §(1)

3. Warning Labels

- a. Ensure bags or containers of contaminated clothing and equipment be removed for laundering, cleaning, or maintenance, and containers of waste, scrap, debris, and other materials containing chromium [VI] that are cosigned for disposal bear the appropriate warning labels



- **General Industry -- §(1)**  
Warning Labels– shall contain at least the following information:

**DANGER  
CHROMIUM [VI]  
CANCER HAZARD  
CAN DAMAGE SKIN, EYES, NASAL  
PASSAGES, AND LUNGS**

- General Industry -- §(1)
  - 4. Employee Information and Training
    - a. For employees exposed to chromium [VI] or who have eye or skin contact with chromium [VI] . . . provide
      - i. Training
      - ii. Ensure employee participation in training and
      - iii. Maintain record of training
    - b. Initial training
      - i. Prior to or at time of initial assignment
      - ii. Not required if employee has had the required training in past 12 months and can demonstrate knowledge of the required elements

- General Industry -- §(1)
  - 4. Employee Information and Training
    - c. Shall provide understandable training and ensure demonstration of knowledge in:
      - i. Health hazards associated with Cr<sup>+6</sup> exposure
      - ii. Location, manner of use and release of Cr<sup>+6</sup> and the specific nature of operations that could result in exposure to Cr<sup>+6</sup> . . . especially above the PEL
      - iii. The job's engineering & work practice controls
      - iv. Purpose, proper selection, fitting, limitations and use of PPE & PPC
      - v. Emergency procedures

- General Industry -- §(1)
  - 4. Employee Information and Training
    - c. Shall provide understandable training and ensure demonstration of knowledge in:
      - vi. Measures that can be used to protect oneself from Cr<sup>+6</sup> exposure; e.g., personal hygiene and smoking
      - vii. The purpose & description of medical surveillance program
      - viii. Contents of this standard
      - ix. Employee's right to access of records under 29 CFR 1910.1020(g)



- General Industry -- §(1)
  - 4. Employee Information and Training
    - d. Additional training
      - i. When necessary to ensure that each employee maintains an understanding of the safe use and understanding of Cr<sup>+6</sup> in the work place
      - ii. Workplace changes; e.g., modification of equipment, tasks or procedures, that result in an increase in Cr<sup>+6</sup> exposures that are reasonably expected to . . .
        - ✓ Exceed the AL, or
        - ✓ Result in a hazard from skin or eye contact
    - e. Make copy of standard & appendices available at no cost to affected employees

- Construction Industry -- §(i)
  1. General
    - a. The requirements of 29 CFR 1910.1200 (HazCom) for labels, MSDSs, and training apply with the following requirements.
  2. **Warning Signs -- Not in Construction Standard**
    - a. *Legible and readily visible warning signs shall be displayed at all approaches to Regulated Areas to allow an employee to read the signs and take the necessary protective steps before entering the area*

- Construction Industry -- §(i)  
*Warning Signs – shall contain at least the following information: -- Not in Construction Standard*

➤ Construction Industry -- §(i)

2. Warning Labels

- a. Ensure bags or containers of contaminated clothing and equipment to be removed for laundering, cleaning, or maintenance, and containers of waste, scrap, debris, and other materials containing chromium [VI] that are cosigned for disposal bear the appropriate warning labels*

- Construction Industry -- §(i)  
Warning Labels– shall contain at least the following information:

***DANGER  
CHROMIUM [VI]  
CANCER HAZARD  
CAN DAMAGE SKIN, EYES, NASAL  
PASSAGES, AND LUNGS***

- Construction Industry -- §(i)
  - 3. Employee Information and Training
    - a. *For employees exposed to chromium [VI] or who have eye or skin contact with chromium [VI] . . . provide:*
      - i. *Training*
      - ii. *Ensure employee participation in training and*
      - iii. *Maintain record of training*
    - b. *Initial training*
      - i. *Prior to or at time of initial assignment*
      - ii. *Not required if employee has had the required training in past 12 months and can demonstrate knowledge of the required elements*

- Construction Industry -- §(i)
  - 3. Employee Information and Training
    - c. *Shall provide understandable training and ensure demonstration of knowledge in:*
      - vi. *Measures that can be used to protect oneself from Cr<sup>+6</sup> exposure; e.g., personal hygiene and smoking*
      - vii. *The purpose & description of medical surveillance program*
      - viii. *Contents of this standard*
      - ix. *Employee's right to access of records under 29 CFR 1910.1020(g)*

- Construction Industry -- §(i)
  - 3. Employee Information and Training
    - d. Additional training*
      - i. When necessary to ensure that each employee maintains an understanding of the safe use and understanding of Cr<sup>+6</sup> in the work place*
      - ii. Workplace changes; e.g., modification of equipment, tasks or procedures, that result in an increase in Cr<sup>+6</sup> exposures that are reasonably expected to . . .*
        - ✓ *Exceed the AL, or*
        - ✓ *Result in a hazard from skin or eye contact*
    - e. Make copy of standard & appendices available at no cost to affected employees*

- **General Industry -- §(m)**
  - 1. Exposure Measurements**
    - a.** Maintain an accurate record of all Cr<sup>+6</sup> exposure monitoring
    - b.** The record shall contain
      - i.** Date of each sample taken
      - ii.** Operation being monitored
      - iii.** Sampling & analytical methods used & evidence of their accuracy
      - iv.** Number, duration, and results of samples
      - v.** Type of PPE worn and
      - vi.** Name, SSN, & job classification of person sampled and all employees represented by the monitoring



- **General Industry -- §(m)**
  - 2. Historical Monitoring Data
    - a. If historical monitoring data taken within the past 12 months has been used to show exposures to  $\text{Cr}^{+6}$  for a particular job are below the AL . . . an accurate record of the data relied upon shall be established and maintained
    - b. The record shall include info that reflects
      - i. Data was collected using methods that meet accuracy required by this standard,
      - ii. The processes & work practices in use at the time of the historical monitoring was done . . . are . . . the same as those for which the historical samples are to be used in lieu of initial monitoring



- General Industry -- §(m)
  - 2. Historical Monitoring Data
    - b. The record shall include info that reflects
      - iii. Environmental conditions prevailing when the historical monitoring data was obtained . . . are . . . the same as those on the job for which initial monitoring will not be performed, and
      - iv. Other data relevant to the operations, materials, processing or employee exposures covered by this exemption



- General Industry -- §(m)
  - 3. Objective Data
    - a. If objective is used to satisfy the initial monitoring requirement . . . an accurate record of the data relied upon shall be established and maintained
    - b. Record shall include at least the following info:
      - i. The Cr<sup>+6</sup> containing material in question
      - ii. The source of the objective data
      - iii. The testing protocol and results of testing, or analysis of material for the release of Cr<sup>+6</sup>

- General Industry -- §(m)
  - 3. Objective Data
    - b. Record shall include at least the following info:
      - iv. A description of the operations exempted from initial monitoring . . . and . . . how the data supports the exemption, and
      - iii. Other data relevant to the operations, materials, processing or employee exposures covered by this exemption
    - c. Maintain records for duration of reliance on said data . . . and . . . make them available according to 29 CFR 1910.1020



- General Industry -- §(m)
3. Medical Surveillance
- a. Establish and maintain an accurate record for each employee covered in the medical surveillance program
  - b. Record shall include the following info:
    - i. Name and SSN
    - ii. Copy of PLHCP's written opinions and
    - iii. Copy of info provided to the PLHCP
  - c. Maintain records . . . and . . . make them available according to 29 CFR 1910.1020



➤ General Industry -- §(m)

5. Training

- a. At completion of training, a record that identifies the individuals trained and the date training was completed. Maintain this record for 3 years after completion of training
- b. Upon request . . . all materials relating to employee information and training shall be made available to OSHA; i.e., the Assistant Secretary or the Director

- Construction Industry -- §(j)
1. *Exposure Measurements*
    - a. *Maintain an accurate record of all Cr<sup>+6</sup> exposure monitoring*
    - b. *The record shall contain:*
      - i. *Date of each sample taken*
      - ii. *Operation being monitored*
      - iii. *Sampling & analytical methods used & evidence of their accuracy*
      - iv. *Number, duration, and results of samples*
      - v. *Type of PPE worn and*
      - vi. *Name, SSN, & job classification of person sampled and all employees represented by the monitoring*



*Not in Construction Standard*

## Construction Industry -- §(j) Historical *Monitoring Data*

- a. If historical monitoring data taken within the past 12 months has been used to show exposures to Cr<sup>+6</sup> for a particular job are below the AL . . . an accurate record of the data relied upon shall be established and maintained*
- b. The record shall include info that reflects:*
  - i. Data was collected using methods that meet accuracy required by this standard,*
  - ii. The processes & work practices in use at the time of the historical monitoring was done . . . are . . . the same as those for which the historical samples are to be used in lieu of initial monitoring*



*Not in Construction Standard*

➤ Construction Industry -- §(j)

**2. *Historical Monitoring Data***

**b. *The record shall include info that reflects:***

- iii. *Environmental conditions prevailing when the historical monitoring data was obtained . . . are . . . the same as those on the job for which initial monitoring will not be performed and***
- iv. *Other data relevant to the operations, materials, processing or employee exposures covered by this exemption***

***Not in Construction Standard***



➤ Construction Industry -- §(j)

3. *Objective Data*

- a. *If objective is used to satisfy the initial monitoring requirement . . . an accurate record of the data relied upon shall be established and maintained*
- b. *Record shall include at least the following info:*
  - i. *The Cr<sup>+6</sup> containing material in question*
  - ii. *The source of the objective data*
  - iii. *The testing protocol and results of testing or analysis of material for the release of Cr<sup>+6</sup>*



*Not in Construction Standard*

- Construction Industry -- §(j)
3. *Objective Data*
- b. Record shall include at least the following info:*
- iv. A description of the operations exempted from initial monitoring . . . and . . . how the data supports the exemption and*
- iii. Other data relevant to the operations, materials, processing or employee exposures covered by this exemption*
- c. Maintain records for duration of reliance on said data . . . and . . . make them available according to 29 CFR 1910.1020*



*Not in Construction Standard*

➤ Construction Industry -- §(j)

1. Medical Surveillance

- a. *Establish and maintain an accurate record for each employee covered in the medical surveillance program*
- b. *Record shall include the following info:*
  - i. *Name and SSN*
  - ii. *Copy of PLHCP's written opinions and*
  - iii. *Copy of info provided to the PLHCP*
- c. *Maintain records . . . and . . . make them available according to 29 CFR 1910.1020*



➤ Construction Industry -- §(j)

2. Training

- a. *At completion of training, a record that identifies the individuals trained and the date training was completed. Maintain this record for 3 years after completion of training*
- b. *Upon request . . . all materials relating to employee information and training shall be made available to OSHA; i.e. the Assistant Secretary or the Director*



- General Industry -- §(n)
  1. Effective Date – 60 days after publication of final rule in the Federal Register
  2. Start-up Dates – all obligations of standard will commence 90 days after the *effective date* of the standard, except for:
    - a. Change rooms shall be provided no later than **one** year after the *effective date*
    - b. Engineering Controls shall be implemented no later than **two** years after the *effective date*

- Construction Industry -- §(k)
  1. *Effective Date – 60 days after publication of final rule in the Federal Register*
  2. *Start-up Dates – all obligations of standard will commence 90 days after the effective date of the standard, except for:*
    - a. *Change rooms shall be provided no later than one year after the effective date*
    - b. *Engineering Controls shall be implemented no later than two years after the effective date*

- For more information on OSHA's Proposed Hexavalent Chromium Standard, visit:
  - [www.osha.gov](http://www.osha.gov)
  - [www.gpoaccess.gov/ecfr/](http://www.gpoaccess.gov/ecfr/)



# Q&A

