

IOSH Local Emphasis Program

IA/LEP 3

- **Record Type:** Local Emphasis Program
 - **Directive Number:** IA/LEP 3
 - **Subject:** Local Emphasis Program (LEP) for Hexavalent Chromium in General Industry and Construction
 - **Information Date:** 02/24/2009
-



IOSHA IA/LEP 3

Workforce Development Department
(IOSHA)

Iowa Occupational Safety and Health

ABSTRACT

Purpose: To establish and implement a Local Emphasis Program (LEP) for programmed health inspections of general industry establishments and construction worksites to identify evaluate and control the hazards associated with exposure to hexavalent chromium.

References: OSHA/IOSH Instructions: IOSHA CPL 2.103, CPL 04-00-001 (CPL 2-0.102A), IOSHA Instruction CPL 2.25I, CPL 02-00-141, CPL 02-00-051, CPL 02-02-074

Cancellations: None

Action Offices: State of Iowa

Originating Office: State of Iowa

Contact: (515) 281-8066

By and Under the Authority of

Stephen J. Slater

Deputy Labor Commissioner/IOSH Administrator

TABLE OF CONTENTS

<u>Abstract</u>	Cover Page
<u>Table of Contents</u>	2
I. <u>Purpose</u>	3
II. <u>Scope</u>	3
III. <u>Action</u>	3
IV. <u>Expiration</u>	3
V. <u>References</u>	3
VI. <u>Background</u>	3
VII. <u>Program Procedures</u>	4
VIII. <u>Recording in IMIS</u>	6
IX. <u>Evaluation</u>	7
Appendix A - <u>General Industry Standard Industrial Classification (SIC) codes selected</u>	8
Appendix B – <u>Typical Industries/Operations with Cr(vI) Exposures</u>	9

- I. Purpose. This notice establishes and implements a Local Emphasis Program (LEP) for programmed health inspections to identify, evaluate, and control the hazards associated with exposure to hexavalent chromium. This program affects worksites where exposures to hexavalent chromium are likely due to the work tasks performed.
- II. Scope. This Notice applies to general industry establishments and construction worksites within the jurisdictional boundaries of the Iowa Division of Labor State OSHA Enforcement program.
- III. Action. The IOSH Administrator shall ensure that the procedures established in this instruction are adhered to in the scheduling of programmed inspections.
- IV. Expiration. This Notice is effective until cancelled
- V. References.
 - A. IOSHA Instruction CPL CPL 2.103, Field Inspection Reference Manual (IAFIRM), dated September 26, 1994.
 - B. OSHA Instruction CPL 04-00-001 (CPL 2-0.102A), Procedures for Approval of Local Emphasis Programs (LEPs), November 10, 1999.
 - C. IOSHA Instruction CPL CPL 2.25I, Scheduling System for Programmed Inspections.
 - D. OSHA Instruction CPL 02-00-141 Inspection Scheduling for Construction dated July 14, 2006.
 - E. OSHA Instruction CPL 02-00-051 (CPL 2.51J), Exemptions and Limitations Under the Current Appropriations Act, dated May 28, 1998.
 - F. OSHA Instruction CPL 02-02-074 Inspection Procedures for the Chromium (VI) Standards
- VI. Background. Chromium hexavalent (Cr(VI)) compounds, often called hexavalent chromium, exist in several forms. Industrial uses of hexavalent chromium compounds include chromate pigments in dyes, paints, inks, and plastics; chromates added as anticorrosive agents to paints, primers, and other surface coatings; and chromic acid electroplated onto metal parts to provide a decorative or protective coating. Hexavalent chromium can also be formed when performing "hot work" such as welding on stainless steel or melting chromium metal. In these situations the chromium is not originally hexavalent, but the high temperatures involved in the process result in oxidation that converts the chromium to a hexavalent state. OSHA considers all Cr(VI) compounds to be carcinogenic. In addition to lung cancer, Cr(VI) is also

capable of causing airway sensitization or asthma, nasal ulcerations and septum perforations, skin sensitization or allergic contact dermatitis, irritant contact dermatitis and skin ulcerations, and eye irritation.

Exposure to hexavalent chromium is covered by separate standards, 1910.1026 and 1926.1126 for general industry and construction respectively. The standards became effective on May 30, 2006. Employers with 20 or more employees were given 6 months from the effective date to comply with most of the provisions. Employers with less than 20 employees were allowed 12 months from the effective date to come into compliance with most of the provisions. All employers were given 4 years from the effective date to install feasible engineering controls. The standards lower the permissible exposure limit for hexavalent chromium to 5 micrograms of Cr(VI) per cubic meter of air as an 8-hour time-weighted average.

The primary intent of these OSHA standards is to protect employees from lung cancer resulting from inhalation of Cr(VI). By targeting employers in SIC codes known or likely to have tasks with employee exposures to hexavalent chromium, it is OSHA's goal to ensure compliance with the new standards which will in turn reduce and/or eliminate hazardous exposure to hexavalent chromium.

VII. Program Procedures. This LEP includes two major activities: targeting/site selection, and inspections.

A. Targeting/Site Selection

1. General Industry establishments

Using the SIC codes listed in Appendix A, The Workforce Data and Business Development Bureau at Iowa Workforce Development will prepare a master list of establishments. Establishments on the master list are arranged alphabetically by company name. The list is then randomized and maintained by the Iowa Division of Labor Management Information section. Iowa OSHA will request from the Iowa Division of Labor Management Information section cycles of five to fifty employers from the random number table. Any establishment which had a comprehensive safety inspection in the previous 24 months of generating the cycle will be deleted from the list. Inspections may then be scheduled using the first cycle list. Establishments on the cycle list may be inspected in any order, so that resources are efficiently used. Once a cycle has begun, all establishments in the cycle will be inspected before a new cycle is begun, except for carryovers that will be allowed as provided in IOSHA Instruction CPL 2.25I, at paragraph B.I.b.(l)(e). Based on local knowledge, establishments that are not likely to have occupational exposures to hexavalent chromium or firms known

to be out of business may be deleted, documenting the basis for such determinations. CSHOs will proceed with the programmed inspection where it has been determined that a new business is using the same plant and equipment of the previous business.

2. Construction Sites

- a. Paint removal from steel structures is identified in OSHA Instruction CPL 02-02-074, Inspection Procedures for the Chromium (VI) Standards, (see appendix B) as operations with CR(VI) exposures. Lead chromate, zinc chromate and strontium chromate are typical Cr(VI) chemicals used.
- b. Construction of ethanol plants often involves the welding of stainless steel tanks, piping and fittings. The welding of stainless steel has a high potential for hexavalent chromium exposure. Stainless steel welding is identified in OSHA Instruction CPL 02-02-074, Inspection Procedures for the Chromium (VI) Standards, (see appendix B).

A Special Emphasis Sites list will be requested from the OSHA Construction Inspection Targeting Application in accordance with CPL 02-00-141, Inspection Scheduling for Construction. The list will be generated using the following selection criteria:

End Use:	Bridge	End Use:	Ethanol Plant
Type:	Alteration	Type:	Alteration/New Construction
Dollar Amt:	\$?		

All other criteria will remain unspecified. The generated Special Emphasis Sites lists will be inspected in accordance with the directive as specified in this section.

- b. Each Special Emphasis Sites list requested will become a construction inspection cycle. The construction inspection cycles will run concurrently with the general industry inspection cycles.

B. Inspections

- 1. This LEP will target general industry establishments with 11 or more employees, as well as all construction sites as specified in B.2., above. If, during the opening conference of an inspection of any general industry establishment, it is determined that the establishment currently employs fewer than 11 employees and the employer's NAICS code is listed on Appendix A of CPL 02-00-051 Enforcement Exemptions and

Limitations under the Appropriations Act, the inspection will continue if tasks are identified which could result in exposures to hexavalent chromium. Construction sites selected will receive an inspection regardless of the number of employees on the jobsite.

2. Inspections are to begin upon the effective date of this Instruction.
3. Each establishment/construction site selected for inspection shall receive a focused health inspection. The scope of the inspection will be limited to tasks/exposures to hexavalent chromium and any other plain view hazard(s). The CSHO should inquire during the opening conference if any of the processes performed by the employer involve hexavalent chromium. The processes may include, but not be limited to those listed in Appendix B. In the event, that the CSHO concludes that no opportunity for hexavalent chromium exposure exists, the CSHO shall exit the establishment and categorize the inspection as a no inspection.
4. If it is determined that a general industry establishment selected for inspection has a different SIC code than was reported, and the SIC is not listed in Appendix A, the inspection will continue if tasks are identified which could result in exposures to hexavalent chromium.
5. If a general industry establishment selected for inspection is no longer at the address that was listed with the Workforce Data and Business Development Bureau, the inspection will continue if the same establishment is still in business.
6. If the establishment/construction site on the inspection list has a different name and/or is under new ownership, the inspection will continue if the current establishment/construction site has tasks which could result in exposures to hexavalent chromium.

VIII. Recording in IMIS.

- A. Current instructions for completing the appropriate inspection classification boxes (Items 24 and 25) on the OSHA-1, shall be applied when recording inspections conducted under the LEP as follows:
 1. The OSHA-1 for a programmed inspection conducted under this local emphasis program shall be marked "Planned" (Item 24) and "Local Emphasis Program" (Item 25c). Record "CRV6" in space 25c.
2. If it is determined that an inspection will not commence at a general industry establishment selected due to reasons such as

ten or fewer employees, wrong SIC code, establishment is out of business, etc., the OSHA-1 shall be coded "No Inspection" in Item 35d and the appropriate block shall be marked in Item 45. The OSHA-1 shall nonetheless be coded as described in A.1. above.

3. If it is determined that an inspection will not commence at a construction site selected due to process not active, the OSHA-1 shall be coded "No Inspection" in Item 35d and the appropriate block shall be marked in Item 45. The OSHA-1 shall nonetheless be coded as described in A.1. above.
4. The OSHA-1 for any unprogrammed inspections related to complaints or referrals requiring inspection, imminent danger, and fatality catastrophe investigations will be coded as normally required under the FIRM. In addition the designation "CRV6" will be recorded in the LEP space (Item 25c).

IX. Evaluation. No later than November 15 of each year this program remains in effect, the Iowa Division of Labor will prepare a formal written evaluation of this LEP in the format specified by OSHA Instruction CPL 04-00-001, Appendix A.

Appendix A
General Industry Standard Industrial Classification (SIC) codes selected

SIC	Industry
2011	Meat Packing Plants
2013	Sausages and Other Meat Products
2015	Poultry Slaughtering and Processing
2599	Furniture and Fixtures, Not Elsewhere Classified
2816	Inorganic Pigments
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
2865	Cyclic Organic Crudes & Intermediates, and Organic Dyes & Pigments
3089	Plastics Products, Not Elsewhere Classified
3211	Flat Glass
3221	Glass Containers
3229	Pressed & Blown Glass & Glassware, Not Elsewhere Classified
3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills
3321	Gray and Ductile Iron Foundries
3322	Malleable Iron Foundries
3324	Steel Investment Foundries
3325	Steel Foundries, Not Elsewhere Classified
3398	Metal Heat Treating
3421	Cutlery
3442	Metal Doors, Sash, Frames, Molding, and Trim
3444	Sheet Metal Work
3469	Metal Stampings, Not Elsewhere Classified
3471	Electroplating, Plating, Polishing, Anodizing, and Coloring
3479	Coating, Engraving, and Allied Services, Not Elsewhere Classified
3556	Food Products Machinery
3585	Air Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment
3589	Service Industry Machinery, Not Elsewhere Classified
3721	Aircraft
3724	Aircraft Engines and Engine Parts
3728	Aircraft Parts and Auxiliary Equipment, Not Elsewhere Classified
7532	Top, Body, and Upholstery Repair Shops and Paint Shops

Appendix B
Typical Industries/Operations with Cr(VI) Exposures

Industry/Operation	Comment / Typical Cr(VI) Chemical Used
Iron and Steel Foundries; Steel Mills; Forging	Chromium Metal, Cr(VI) Fume
Welding of Stainless Steel or Cr(VI) coatings	Cr in Steel Oxidized to Cr(VI) fume welded or touch-cut
Manufacture of Pesticides	CCA and ACC
Manufacture of Glass	Sodium Dichromate Dihydrate
Cleaning Laboratory Glassware	Potassium Dichromate
Electroplating; Chrome Plating	Chromic Acid
Construction with Pressure-Treated Wood	CCA and ACC
Manufacture of Chromate Pigments	Dichromates, Lead Chromate (Chrome Yellow), Strontium Chromate, Zinc Chromate
Painting (Aerospace, Auto Body repair, Traffic Markings), Paint Removal from Steel Structures	Lead Chromate, Zinc Chromate, Strontium Chromate
Manufacture of Paint	Lead Chromate, Zinc Chromate, Strontium Chromate
Fiberglass Production	Cr(VI) Contaminants Formed in Furnace