

**North Carolina Department of Labor  
Occupational Safety and Health Division**

**Raleigh, North Carolina**

Field Information System

Operational Procedure Notice 135G

**Subject:** Special Emphasis Program for Exposures to Health Hazards

**A. Purpose.**

This Operational Procedure Notice (OPN) establishes and implements the Special Emphasis Program (SEP) for health inspections where employees may be exposed to health hazards such as lead, chromium (VI) or Cr(VI), crystalline silica, asbestos, and isocyanates. The SEP for exposures to health hazards is intended to reduce levels of occupational exposures to lead, Cr(VI), crystalline silica, asbestos, and isocyanates in targeted sites.

This OPN also provides guidance to compliance safety and health officers (CSHOs) for conducting *initial and follow-up* health hazard SEP inspections. This document supplements procedures beyond standard inspection protocol set forth in the N. C. Field Operational Manual (FOM).

**B. Scope.**

This instruction applies statewide to establishments under OSH Division jurisdiction.

**C. Action.**

This Operational Procedure Notice provides for special emphasis inspections in accordance with NCGS 95-136.1(b)(3) due to a high risk for serious or fatal work related injuries or illnesses. Bureau chiefs and district supervisors will ensure that procedures established in this operational procedural notice are adhered to when scheduling and conducting inspections related to occupational exposures to lead, Cr(VI), crystalline silica, asbestos, and isocyanates.

**D. References.**

1. North Carolina Field Operations Manual.
2. Occupational Safety and Health Administration Technical Manual: OSHA Instruction TED 1-0.15A.
3. OSHA Instruction CPL 2-2.58, December 13, 1993, 29 CFR 1926.62, Lead Exposure in Construction: Inspection and Compliance Procedures.
4. OSHA Instruction STD 3-8.1, October 30, 1978, Welding, Cutting, or Heating of Metals Coated with Lead-bearing Paint.

5. OSHA Instruction CPL 2-2.38D, March 28, 1998, Inspection Procedures for the Hazard Communication Standard.
6. OSHA Instruction CPL 03-00-009, August 14, 2008, National Emphasis Program: Lead.
7. OSHA Instruction CPL 03-00-007, January 24, 2008, National Emphasis Program – Crystalline Silica.
8. OSHA Instruction CPL 2-2.63 (Revised), November 3, 1995, Inspection Procedures for Occupational Exposure to Asbestos Final Rule 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001.
9. OSHA Instruction CPL 02-02-074, January 24, 2008, Inspection Procedures for Chromium (VI) standards.
10. OSHA Instruction CPL 02-02-076, February 3, 2010, National Emphasis Program - Hexavalent Chromium
11. OSHA Regional Notice 2007-30 (CPL 04) R, October 1, 2007, Local Emphasis Program Involving Exposure to Hexavalent Chromium, Philadelphia, Region 3.
12. *OSHA Instruction CPL 03-00-017, June 20, 2013, National Emphasis Program – Isocyanates.*

E. **Special Emphasis Program History.**

Since 2000, NCDOL's Strategic Plan has included goals and two SEPs that focused on preventing occupational exposure to lead and silica. In 2006, the lead and silica SEPs were combined and expanded to include asbestos, isocyanates and styrene. This combined SEP was called the Health Hazards Special Emphasis Program. This SEP was revised in 2008 for the Strategic Management Plan years 2009-2013. At that time styrene was eliminated and Cr(VI) was added. In January 2011 and January 2013, additional NAICS codes were added to the isocyanates tables to better target industry groups using these chemicals.

F. **Background.**

1. **Lead.**

Over the past several years OSHA inspections have documented elevated blood lead levels in construction and other workers. The source of the exposure includes cutting, welding, grinding, or abrasive blasting on steel surfaces such as bridges and tanks that are coated with lead-bearing paints. In response, several state plan states, area offices, and regions have developed local emphasis programs to address this hazard. North Carolina has also determined that an increased uniform OSH enforcement presence is warranted at work sites where such exposures occur.

- In 1990, NIOSH set as a national goal the elimination of lead exposures that result in workers having blood lead concentrations greater than 25 ug/100 grams of whole blood.

- In October 1992, Congress passed Sections 1031 and 1032 of Title X of the Housing and Community Development Act of 1992 (Public Law 102-550). The Act specifically required the Secretary of Labor to issue an interim final lead standard covering the construction industry.
- In May 1993, OSHA issued the Interim Final Rule for Lead in Construction, 29 CFR 1926.62.
- In March 1996, OSHA issued CPL 2.105, Special Emphasis Program, Lead in Construction.
- In July 2001, OSHA issued CPL 2-0.130, National Emphasis Program: Lead. This replaced the original SEP for Lead in Construction, and expanded it to include General Industry, Longshoring, and Marine Terminals.
- In August 2008, OSHA issued CPL 03-00-009, National Emphasis Program: Lead. This replaced CPL 2-0.130 listed above.
- In North Carolina, doctors and laboratories are required and hospitals are encouraged to report elevated blood lead levels in adults. This information is communicated to the Health Hazards Control Unit of the North Carolina Department of Health and Human Services (NCDHHS), Division of Public Health. NCDHHS in turn reports this information to NCDOL.

## 2. Crystalline Silica.

Crystalline Silica is silicon dioxide ( $\text{SiO}_2$ ) a ubiquitous substance which is the basic compound of sand, quartz, and granite rock. In pure, natural form,  $\text{SiO}_2$  crystals are minute, very hard, and translucent. Occupational exposure to crystalline silica dust has long been known to produce silicosis, pneumoconiosis or dust disease of the lung. The three most common crystalline forms of silica encountered in industry are: quartz, tridymite, and cristobalite.

Silica is present in almost every process where natural minerals are handled. It is prevalent in foundries, in the manufacture and use of abrasives, in the construction industry in construction materials and/or byproduct of activities, and in the manufacture of glass and pottery.

Silicosis is one of the world's oldest known occupational diseases. Although silicosis is preventable, silicosis continues to be a major health threat in the workplace. Annually, more than 250 silica-related deaths occur and greater than one million workers are exposed to silica nationwide. In North Carolina, doctors and laboratories are required to report and hospitals are encouraged to report suspected silicosis in adults.

This information is communicated to the NCDHHS, Public Health Division, Epidemiology Section, Occupational & Environmental Epidemiology Branch. NCDHHS in turn reports this information to NCDOL.

3. Asbestos.

Asbestos is a generic name given to a fibrous variety of six naturally occurring minerals that have been used for decades in the development of thousands of commercial products. The term “asbestos” is not a mineralogical definition but a commercial name given to a group of minerals that possess high tensile strength, flexibility, resistance to chemical and thermal degradation, and electrical resistance. The asbestos minerals have a tendency to separate into microscopic size particles that can remain in the air and are easily inhaled.

Although the use of asbestos and asbestos products has dramatically decreased, they are still found in many residential and commercial settings and continue to pose a health risk to workers. An estimated 1.3 million employees in construction and general industry face significant asbestos exposure on the job. Heaviest exposures occur in the construction industry, particularly during the removal of asbestos during renovation or demolition. Employees are also likely to be exposed during the manufacture of asbestos products (such as textiles, friction products, insulation, and other building materials) and during automotive brake and clutch work.

Since 1972, OSHA has regulated asbestos exposure in general industry thereby causing a significant decline in the use of asbestos-containing materials. The revised standard continues to protect workers, in general, who are exposed to asbestos-containing materials but now include provisions that apply to workers performing brake and clutch repair and to those doing housekeeping in buildings and facilities where asbestos-containing materials exists.

The final Occupational Exposure to Asbestos Standards, 29 CFR 1910.1001, 1926.1101, and 1915.1001, were published in the *Federal Register* on August 10, 1994 and became effective October 11, 1994. These final standards amend the Occupational Safety and Health Administration's (OSHA's) Asbestos Standards issued on June 17, 1986 (51 FR 22612, 29 CFR 1910.1001, June 20, 1986) for occupational exposure to asbestos in general industry, and the construction industry, 29 CFR 1926.1101 (previously 1926.58).

The final standards, 29 CFR 1910.1001, 1926.1101, and 1915.1001, apply to all activities (except agriculture) covered by the act. The construction standard, 29 CFR 1926.1101, covers (but is not limited to) activities

involving asbestos: demolition, removal, alteration, repair, maintenance, installation, clean-up, disposal, and storage.

4. Isocyanates.

Diisocyanates, commonly referred to as isocyanates, are a group of low molecular weight aromatic and aliphatic compounds. The most common of these are toluene diisocyanate (TDI), methylene biphenyl isocyanate (MDI), and hexamethylene diisocyanate (HDI). Isocyanates are widely used in the manufacture of flexible and rigid foams, fiber coatings, such as paints and varnishes, and elastomers. The compounds are increasingly used in the automotive industry, autobody repair, and building insulation materials.

Exposures to isocyanates can have adverse health effects for workers. TDI and other isocyanates are powerful irritants to the mucous membranes of the eyes, gastrointestinal and respiratory tracts [Swensson et al. 1955; Upjohn Company 1970]. Direct skin contact with TDI can also cause marked inflammation [Fisher 1967]. Respiratory irritation may progress to a chemical bronchitis with severe bronchospasm [Williamson 1965]. Hypersensitivity pneumonitis has been reported in isocyanate-exposed workers. Symptoms are known to continue for months or years after exposure has ceased and there are reports of deaths due to isocyanate induced hypersensitivity pneumonitis. Respiratory disease among workers exposed to isocyanate compounds has been recognized since the 1950's.

Isocyanates are also allergic sensitizers and are known to cause respiratory sensitization, an allergic, asthma-type reaction. There is evidence of cross-sensitization in which a worker is exposed to one isocyanate but reacts adversely to others as well. There is also evidence that dermal exposures are a primary cause of respiratory sensitization. Workers may have skin contact with isocyanates, which causes their immune systems to become sensitized, making them susceptible to respiratory sensitivity reactions upon future exposures. Dermal sensitization may result in rash, itching, hives and swelling of the extremities. Because they are not water soluble, they cannot be easily washed off of skin or clothing.

The current OSHA permissible exposure limit (PEL) for TDI is 0.02 parts per million parts of air (0.02 ppm), or 0.14 milligrams per cubic meter of air (0.14 mg/m<sup>3</sup>) as a ceiling limit [29 CFR 1910.1000]. The OSHA PEL for MDI is 0.02 ppm (0.2 mg/m<sup>3</sup>) as a ceiling limit.

5. Chromium (VI).

Chromium (VI) or Cr(VI) means chromium with a valence of positive six, in any form or chemical compound in which it occurs. This term includes Cr(VI) in all states of matter, in any solution or other mixture, even if encapsulated by other substances. OSHA considers all Cr(VI) compounds

to be carcinogenic. The primary intent of the OSHA standard is to protect employees from lung cancer resulting from inhalation of Cr(VI).

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.

Typical industries/operations with potential Cr(VI) exposures include electroplating, manufacturing of pigments and dyes, welding, foundry operations, spray painting, and paint removal (abrasive blasting, grinding, needle gun, etc.). As chromium compounds were used in dyes and paints and in the tanning of leather (although Cr(VI) is no longer typically used in the leather tanning industry), these compounds are often found in soil and groundwater at former or abandoned industrial sites, and may be targeted contaminants for environmental remediation at Brownfield and Superfund sites. Primer paint containing Cr(VI) is still widely used for aerospace and automobile refinishing applications.

In welding, a welder's exposure to Cr(VI) may occur from inhalation of fumes when performing "hot work" such as welding, brazing, or torch cutting stainless steel or other chromium-containing metals. 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 in the fume. Stainless steels, in general, have 12-30% chromium content.

The current OSHA PEL for Cr(VI) is  $5 \text{ ug/m}^3$  calculated as an 8 hour time-weighted average. The action level is  $2.5 \text{ ug/m}^3$  calculated as an 8 hour time-weighted average.

G. **Program Procedures.**

Health Hazards SEP inspections will be generated through accidents, complaints, referrals, and general industry programmed criteria in both construction and general industry. Sources of assignments may include the following:

1. **Imminent Danger, Fatality, Referrals and Complaints.**
  - a. Reports of imminent danger, fatality/ catastrophe reports, formal and non-formal complaints, and safety and health referrals from other federal, state, county and city agencies, media reports, reports from physicians, hospitals, or other medical clinics and reports from the general public will be investigated by the field office.
  - b. The discovery of worksites may be the result of a specific search to find this type of operation at the discretion of the compliance bureau chief. Although sightings will be those that normally occur during the

course of travel during duty or non-duty hours, policy may provide that the district supervisor may also investigate areas of high construction activity to identify potential work sites.

- c. In case of denial of entry, the field office will maintain documentation of the event leading up to the observation.
- d. Sources for contractors involved in lead, crystalline silica, or asbestos related work may also be obtained from a variety of sources including the following:
  - Federal or state departments of transportation contacts (bridge contracts).
  - Construction reports.
  - State and local building permits.

2. Referrals by Compliance Safety and Health Officers (CSHOs).

- a. An effort will be made to determine when activities involve worker exposure to hazards associated with health hazards including lead, Cr(VI), crystalline silica, asbestos, and isocyanates. All compliance personnel will be instructed to look for activities where lead, crystalline silica, asbestos, and isocyanates may be present.
- b. Any observation of an operation where the potential for lead, Cr(VI), crystalline silica, asbestos, and isocyanate exposures exists will be handled as follows:
  - i. When a CSHO observes or receives information about potential lead, Cr(VI), crystalline silica, asbestos, and isocyanate exposure, regardless of whether or not a violation is observed, through complaints, referrals, or reports from members of the general public, the CSHO will:
    - A. Document the status and condition of the work operation, noting any serious hazards.
    - B. Document the name, address and location of the worksite and the employer(s) performing the operation.
    - C. Provide the appropriate district supervisor with the information.
  - ii. Based upon the information provided, all potential lead, Cr(VI), crystalline silica, asbestos, and isocyanate work sites brought to the attention of the district office will be inspected as follows:

- A. If the worksite has been inspected within the last 30 days, the results of the inspection will be considered along with the current worksite observations in determining whether or not an inspection is to be conducted.
    - B. If work involving exposure to lead, Cr(VI), crystalline silica, asbestos, or isocyanate-related was not in progress during the previous visit to the site but are currently in progress, an inspection will be opened.
    - C. If work involving exposure to lead, Cr(VI), crystalline silica, asbestos, or isocyanate-related was in progress and evaluated during the previous inspection, a new inspection will be opened only if apparent serious violations are present or can reasonably be expected at the site.
  - iii. If the worksite has not been inspected within the previous 30 days, an inspection will be conducted unless it is apparent that workers are not exposed to lead, Cr(VI), crystalline silica, asbestos, or isocyanates.
3. Referrals by North Carolina Department of Health and Human Services.
- a. Through a Memorandum of Understanding (MOU) with the NCDHHS Occupational Health Surveillance Program, the OSH Division will receive information related to elevated blood lead levels in adults from the Adult Blood Lead Epidemiology and Surveillance (ABLES) Program. Where occupational exposure is a potential reason for a worker having blood lead levels above 25 ug/100 grams of whole blood, the employer of that worker may be placed on an inspection assignment list.
  - b. Through an MOU with the NCDHHS, Public Health Division, Epidemiology Section, Occupational & Environmental Epidemiology Branch, Health Hazards Control Unit, the OSH Division will receive information related to asbestos exposure. This information may be used for targeted inspections. The Health Hazards Control Unit will make referrals to the OSH Division for employers who have been granted an Asbestos Removal Permit for asbestos removals jobs that are projected to last 30 days or longer and for short duration projects with serious safety and health hazards. After reviewing the referral, the district supervisor will make a determination to assign the referral to a Health Compliance Officer.
4. North Carolina Department of Transportation (NCDOT). Per a settlement agreement, the OSH Division may receive bridge repair contract

information from the NCDOT. This information will be used to assign lead-related inspections.

5. North Carolina Department of Environment and Natural Resources (NCDENR). The OSH Division will periodically receive a list of permits for renovation of elevated water tanks from the NCDENR, Division of Water Resources, Public Water Supply Section. Because of the high potential exposure to lead and silica during paint removal and prepping operations on elevated tanks, the sites listed on the permits may be targeted for inspection.
6. Programmed Inspections.
  - a. The Planning, Statistics and Information Management Bureau (PSIM) will search available databases to develop lists of general industry and construction employers likely to be involved in lead, Cr(VI), crystalline silica, asbestos, and isocyanate related activities. As the lists in general industry and construction become viable, inspection sites can be randomly selected for inspection from the list compiled from the above sources using a random numbers table. (This selection process sets forth administratively neutral criteria to identify establishments for inspection.) PSIM will ensure that the lists are proportioned so that the majority of the programmed planned inspections are selected from the Class I group and/or are among the NAICS codes that likely have lead, crystalline silica, asbestos, Cr(VI) and isocyanate related activities. As new sites are added, they should be randomized for inspection.
  - b. The NAICS codes for this SEP may include, but are not limited to, the NAICS codes listed in Appendix A.
  - c. PSIM will review the generated lists to remove inactive and duplicate sites. PSIM will also review the lists to determine and remove those sites that have received a comprehensive health inspection within the last three years. Employers that have received a comprehensive safety inspection within the last three years may still be included on the lists. The health general industry programmed lists will identify employers meeting the Health Hazards SEP criteria. The district supervisor will then assign the Health Hazard SEP inspections first and by the highest hazard sites. The safety general industry programmed lists will also identify any employers meeting the Health Hazards SEP criteria. Once identified, the district supervisor will ensure the Health Hazards SEP inspections are assigned first and conducted as joint health and safety inspections.

H. **Inspection Procedures.**

1. **General Industry Programmed Inspections.**

General Industry Programmed Inspections conducted under this SEP will be **comprehensive** health inspections.

- a. Health compliance officers (HCOs) will indicate during the opening conference that a general industry programmed inspection is being conducted along with the fact that there is a Health Hazards SEP for lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate exposure. Once assigned the Health Hazards SEP inspection, the HCO will cross-reference the employer's NAICS code to Appendix A and determine the targeted chemical. The HCO will proceed with inspection guidelines as outlined in the FOM.
- b. Worksite operation that create exposure to lead, Cr(VI), crystalline silica, asbestos, and/or isocyanates will be evaluated along with any other health hazards including, but not limited to, noise, and other chemicals. All aspects of exposure, including a review of all related written documents (i.e., recordkeeping, air monitoring, dermal exposure surveys, personal protective equipment hazard assessments, medical monitoring, respiratory protection program, hazard communication and relevant training documentation) will be addressed. The inspection will be noted on the OSHA-1 as a "programmed planned" inspection and the scope will be marked as "comprehensive."
- c. The HCO conducting these inspections should, when necessary, consult with safety compliance officers (SCOs) and will submit referrals to the SCO where appropriate.

2. **Unprogrammed Inspections.**

Unprogrammed inspections including, fatality/accidents, referrals, and complaints will be limited scope inspections that will focus on the hazards of, exposures to, and proper work practices for working with lead, Cr(VI), crystalline silica, asbestos, and/or isocyanates.

- a. The HCO will indicate during the opening conference the purpose and scope of the inspection. The HCO will address the fatality/accident, referral or complaint items. If during the inspection lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate exposure producing operations are observed or determined to be present then the HCO will note any hazards

present at the work site. These SEP inspections may be expanded in accordance with the guidelines established in the FOM.

- b. If lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate-producing operations are present, the HCO will continue with the inspection and evaluate for employee exposure(s) to lead, Cr(VI), crystalline silica, asbestos, and/or isocyanates. All aspects of lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate related work or exposure, including a review of all related written documents and training (i.e., recordkeeping, air monitoring, dermal exposure surveys, personal protective equipment hazard assessments, medical monitoring, respiratory protection program, hazard communication and relevant training documentation) will be addressed. During the inspection, the HCO will note any other hazards associated with lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate-producing operations and applicable citations will be issued. Based on the type of unprogrammed activity the inspection will be noted on the OSHA-1 as a complaint, referral, or fatality/catastrophe and the scope will be marked as partial.
3. *Follow-up Inspections. Follow-up inspections will be conducted for each Health Hazards SEP inspection where employee exposure monitoring revealed employee exposures greater than the permissible exposure limit(s) (PEL) for the sampled contaminant(s).*
  - a. *Sampling. The HCO will follow the follow-up sampling procedures outlines in FOM Chapter III, paragraph G.3.*

I. **Citation Guidance.**

1. Refer to the FOM and other appropriate OSHA reference documents (such as CPL's) prior to proceeding with citation issuance.
2. There is no exposure limit for dermal exposures to isocyanates, but potential skin contact with isocyanates should be considered a hazard. The relevant standards to address potential violations of skin contact, contamination of work surfaces, inadequate training of employees and improper selection and use of personal protective equipment (PPE) include the following:
  - a. 29 CFR 1910.132(d)(1) - The employer shall assess the workplace to determine if hazards are present, which necessitate the use of PPE.
  - b. 29 CFR 1910.132(f) - The employer shall provide training to each employee who is required to use PPE.
  - c. 29 CFR 1910.138 - The employer shall provide hand protection to employees.

- d. 29 CFR 1910.141(a)(3)(i) - All places of employment shall be kept clean to the extent that the nature of the work allows.
  - e. 29 CFR 1910.141(g)(2) - Employees shall not be allowed to consume food or beverages in a toilet room or in any area exposed to toxic materials.
  - f. 29 CFR 1910.1200(h) - Employees shall be trained in the measures they can take to protect themselves from these hazards.
3. *Unregulated Substances. Per the FOM Chapter XV, where toxicity information exists for a substance with no PEL and a serious hazard exists; CSHOs will conduct employee exposure monitoring. Employee protective limits recommended by other agencies (i.e., ACGIH TLVs, NIOSH RELs, AIHA WEELs, EPA, IARC, etc.) will be reviewed. If a recommended limit is set, a citation under NCGS 95-129(1) for general duty should be considered. The employer will be required to reduce employee exposures to appropriate levels.*

J. **Compliance Officers.**

- 1. Sampling for surface contamination and air contaminants for any health hazards may require the HCO to wear personal protective equipment. Each HCO who is expected to use PPE will be trained in the proper care, use, and limitations of the PPE. In instances where respiratory protection is required, the HCO will utilize the unit specific procedures for the use of respiratory protection by CSHOs contained in the NCDOLs written Respiratory Protection Program. HCOs that are required to wear respiratory protection will be medically cleared, fit tested and trained per the NCDOL Safety and Health Program Policies.
- 2. While evaluating worker exposures to lead and Cr(VI), HCO's will also need to be aware of and evaluate potential exposures to other metals, including but not limited to, arsenic, manganese, cadmium, copper, and magnesium.
- 3. HCOs on the asbestos team will receive additional training prior to conducting inspections inside regulated areas. For inspections that involve Class I, II, and III asbestos removal, only properly trained HCOs will perform the on-site asbestos evaluation.
  - a. HCOs required to enter a regulated area or negative pressure enclosure (containment area) will wear personal protective equipment, such as but not limited to, disposable coveralls, head coverings, foot coverings, gloves, and appropriate respiratory protection.
  - b. HCOs will not enter a negative pressure enclosure unless it is absolutely necessary. Prior to entry into a containment area, the HCO will determine if decontamination facilities exist and if the

facilities are adequate. If the CSHO decides that decontamination cannot be adequately provided the supervisor will be contacted for guidance.

- c. Prior to entering a containment area, HCOs will closely review and examine the asbestos sampling data on-site concerning the exposures or potential exposures. If the employer does not have sampling data or cannot supply adequate data to support the selection of the types of respirators that are in use, the HCO will not enter the areas where respirators are in use or the HCO must don a self-contained breathing apparatus (SCBA) to enter the containment area. If the hazard determination performed by the employer has been completed in accordance with the standard, the HCO may downgrade to a powered air purifying respirator (PAPR), at a minimum, prior to entering the containment area. The HCO must obtain supervisor approval, prior to downgrading from a SCBA to a PAPR. The HCO must conduct personal air sampling on them self while inside the containment and provide results of the sampling to their supervisor for inclusion in their personnel file.

K. **Application.**

1. CSHOs will establish the presence of lead, Cr(VI), crystalline silica, asbestos, and/or isocyanates by using material safety data sheets, material inventories, and material purchase orders regarding materials used during the process. Interviews with management officials and employees associated with the lead, Cr(VI), crystalline silica, asbestos, and/or isocyanate-producing operations may also be needed to determine if the SEP chemical is present.
2. If the company headquarters are located in another state, the CSHO will attempt to obtain the above information. The CSHO will document each attempt to obtain information and the information obtained.
3. If a site turns out to be located within the jurisdiction of another field office, a referral will be made to that field office according to current procedures. Information obtained from the employer's headquarters will be shared with any other field office having an active site.
4. The assistant director and the bureau chiefs of compliance in consideration of site information will determine the number of inspections conducted under this SEP.
5. CSHOs will conduct personal monitoring and collect wipe samples as appropriate to document exposures. See OSHA Instruction TED 1-0.15A. (TED 01-00-015) on the OSHA website.

L. **Recording in the Integrated Management Information System (IMIS).**

Current instructions for completing the OSHA-1, OSHA-7 and OSHA-90 will be applied when recording inspections conducted under this SEP as follows:

1. For any programmed inspection covered under this SEP the OSHA-1 form must be marked "program planned" in "Inspection Type"(item 24h) and "manufacturing or construction" (item 25a/b, as appropriate) must be marked under "Industrial Type."
2. For all unprogrammed inspections conducted in conjunction with a Health Hazards SEP inspection, the OSHA-1 form must be marked "unprogrammed" in "Inspection Type" with the appropriate unprogrammed activity identified (accident, complaint, referral, etc).
3. Other codes that must be marked on the OSHA-1 for all program planned inspections and any unprogrammed inspections covered under this SEP.
  - a. National Emphasis Box (25d) must be marked with the appropriate value.
    - "Lead" for inspections involving lead.
    - "Silica" for inspections involving silica.
    - "Chrome6" for inspections involving Cr(VI).
    - *"ISOCYAN8 for inspections involving isocyanates.*
  - b. Strategic Plan box (25f) must be marked with the appropriate value.
    - "Lead Exposure" for inspections involving lead.
    - "Silica Exposure" for inspections involving silica.
    - "Asbestos Exposure" for inspections involving asbestos.
    - "Isocyanate Exposure" for inspections involving isocyanates.
    - "Chromium Exposure" for inspections involving Cr(VI).
4. Optional Information, item 42 must be marked with the appropriate value.
  - S 12 Health Hazards PROG IMPROVEMENT.
5. OSHA 90 - Referrals
  - a. Strategic Plan Activity (item 32) must be marked with the appropriate value.
    - "Lead Exposure" for inspections involving lead.
    - "Silica Exposure" for inspections involving silica.
    - "Asbestos Exposure" for inspections involving asbestos.

- “Isocyanate Exposure” for inspections involving isocyanates.
- “Chromium Exposure” for inspections involving Cr(VI).

6. Health Hazards Program Improvements Guidelines.

a. As stated above under “Optional Information”, inspections covered under this SEP that result in a program improvement (specifically associated with the employer’s lead, silica, asbestos, Cr(VI), and isocyanate program) must be coded as a Health Hazards Program Improvement. Below are examples of when to code an inspection as Health Hazards Program Improvements:

- Asbestos inspections - when there is a citation issued from 29 CFR 1910.1001 or 29 CFR 1926.1101.
- Lead inspections - when there is a citation issued from 29 CFR 1910.1025 or 29 CFR 1926.62.
- Chromium (VI) inspections – when there is a citation issued from 29 CFR 1910.1026 or 29 CFR 1926.1126
- Lead, silica, asbestos, Cr(VI), and isocyanate inspections - when any of the following citations are issued: 29 CFR 1910.134 - Respiratory Protection; 29 CFR 1910.132 - PPE Hazard Assessment (including specific PPE standard); 29 CFR 1910.1200 - Hazard Communication; 29 CFR 1910.94 - Ventilation; and 29 CFR 1910.107 - Spray Operations.

b. Additional program improvements (i.e., hearing conservation, lock-out/tag-out, frequent inspections) will not be coded as Health Hazards Program Improvement, but will be coded as “Program Improvements” under “Hazards” in “Strategic Plan Activity” (item 25f).

M. **Other Division Activity.**

The Education, Training and Technical Assistance (ETTA) Bureau, and the Consultative Services Bureau will provide outreach programs, which support the enforcement effort. Such outreach may include mailings to employers, local safety councils, local hospitals and occupational health clinics, and/or employer organizations that engage in health hazard activities. Speeches through the local safety councils or industrial hygiene organizations may provide another avenue for dissemination of information.

The Consultative Services Bureau, upon request, will provide on-site consultation for qualified small employers. The SEP team leader(s) will provide similar information to the Communications Division for inclusion in the Labor Ledger, for press releases and for posting on the department’s website.

OPN 135G cont'd.

Using the NAICS codes listed in the Health Hazards SEP and/or the targeting list, PSIM will develop a mailing list or lists of affected employers and provide the list(s) electronically to ETTA. ETTA will contact each employer in writing and provide a letter that explains the Health Hazards SEP.

N. **Expiration.**

OPN 135F is canceled. This OPN is effective on the date of signature. It will remain in effect until revised or canceled by the director.

Signed on Original  
John Koneski  
SEP Team Leader

Signed on Original  
Allen McNeely  
Director

2/04/2014  
Date of Signature

**Appendix A: Industry Type and NAICS Tables****Lead Inspections**

| <b>NAICS</b> | <b>Industry Type</b>                                                                        |
|--------------|---------------------------------------------------------------------------------------------|
| 237310       | Highway, Street, and Bridge Construction                                                    |
| 237990       | Other Heavy and Civil Engineering Construction                                              |
| 237110       | Water and Sewer Line and Related Structures Construction                                    |
| 236210       | Industrial Building Construction                                                            |
| 238320       | Painting and Wall Covering Contractors                                                      |
| 238120       | Structural Steel and Precast Concrete Contractors                                           |
| 237130       | Power and Communication Line and Related Structures Construction                            |
| 238910       | Site Preparation Contractors                                                                |
| 238150       | Glass and Glazing Contractors                                                               |
| 325182       | Carbon Black Manufacturing                                                                  |
| 325131       | Inorganic Dye and Pigment Manufacturing                                                     |
| 325510       | Paint and Coating Manufacturing                                                             |
| 325320       | Pesticide and Other Agricultural Chemical Manufacturing                                     |
| 327211       | Flat Glass Manufacturing                                                                    |
| 327212       | Other Pressed and Blown Glass and Glassware Manufacturing                                   |
| 327215       | Glass Product Manufacturing Made of Purchased Glass                                         |
| 212325       | Clay and Ceramic and Refractory Minerals Mining                                             |
| 327992       | Ground or Treated Mineral and Earth Manufacturing                                           |
| 331419       | Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)              |
| 331314       | Secondary Smelting and Alloying of Aluminum                                                 |
| 331423       | Secondary Smelting, Refining, and Alloying of Copper                                        |
| 331492       | Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum) |
| 331491       | Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding               |
| 331522       | Nonferrous (except Aluminum) Die-Casting Foundries                                          |
| 331525       | Copper Foundries (except Die-Casting)                                                       |
| 332992       | Small Arms Ammunition Manufacturing                                                         |
| 332993       | Ammunition (except Small Arms) Manufacturing                                                |
| 332994       | Small Arms Manufacturing                                                                    |
| 322225       | Laminated Aluminum Foil Manufacturing for                                                   |

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                                           |
|--------------|---------------------------------------------------------------------------------------|
|              | Flexible Packaging Uses                                                               |
| 332999       | All Other Miscellaneous Fabricated Metal Product Manufacturing                        |
| 334412       | Bare Printed Circuit Board Manufacturing                                              |
| 334413       | Semiconductor and Related Device Manufacturing                                        |
| 334414       | Electronic Capacitor Manufacturing                                                    |
| 334416       | Electronic Coil, Transformer, and Other Inductor Manufacturing                        |
| 334220       | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing |
| 334310       | Audio and Video Equipment Manufacturing                                               |
| 334418       | Printed Circuit Assembly (Electronic Assembly) Manufacturing                          |
| 334419       | Other Electronic Component Manufacturing                                              |
| 335911       | Storage Battery Manufacturing                                                         |
| 335912       | Primary Battery Manufacturing                                                         |
| 336322       | Other Motor Vehicle Electrical and Electronic Equipment Manufacturing                 |
| 339942       | Lead Pencil and Art Good Manufacturing                                                |
| 221111       | Hydroelectric Power Generation                                                        |
| 221112       | Fossil Fuel Electric Power Generation                                                 |
| 221121       | Electric Bulk Power Transmission and Control                                          |
| 221122       | Electric Power Distribution                                                           |
| 423930       | Recyclable Material Merchant Wholesalers                                              |
| 425110       | Business to Business Electronic Markets                                               |
| 561611       | Investigation Services                                                                |
| 561612       | Security Guards and Patrol Services                                                   |
| 561613       | Armored Car Services                                                                  |
| 443111       | Household Appliance Stores                                                            |
| 811211       | Consumer Electronics Repair and Maintenance                                           |
| 811212       | Computer and Office Machine Repair and Maintenance                                    |
| 811213       | Communication Equipment Repair and Maintenance                                        |
| 811219       | Other Electronic and Precision Equipment Repair and Maintenance                       |
| 713990       | All Other Amusement and Recreation Industries                                         |
| 922120       | Police Protection                                                                     |

**Silica Inspections**

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------|
| 237310       | Highway, Street, and Bridge Construction                                                                            |
| 237990       | Other Heavy and Civil Engineering Construction                                                                      |
| 236210       | Industrial Building Construction                                                                                    |
| 237130       | Power and Communication Line and Related Structures Construction                                                    |
| 237110       | Water and Sewer Line and Related Structures Construction                                                            |
| 238190       | Other Foundation, Structure, and Building Exterior Contractors                                                      |
| 238910       | Site Preparation Contractors                                                                                        |
| 327123       | Other Structural Clay Product Manufacturing                                                                         |
| 327124       | Clay Refractory Manufacturing                                                                                       |
| 327332       | Concrete Pipe Manufacturing                                                                                         |
| 327390       | Other Concrete Product Manufacturing                                                                                |
| 327320       | Ready-Mix Concrete Manufacturing                                                                                    |
| 327991       | Cut Stone and Stone Product Manufacturing                                                                           |
| 327910       | Abrasive Product Manufacturing                                                                                      |
| 212325       | Clay and Ceramic and Refractory Minerals Mining                                                                     |
| 212399       | All Other Nonmetallic Mineral Mining                                                                                |
| 327112       | Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing                                           |
| 331511       | Iron Foundries                                                                                                      |
| 331513       | Steel Foundries (except Investment)                                                                                 |
| 331521       | Aluminum Die-Casting Foundries                                                                                      |
| 331522       | Nonferrous (except Aluminum) Die-Casting Foundries                                                                  |
| 331524       | Aluminum Foundries (except Die-Casting)                                                                             |
| 331525       | Aluminum Foundries (except Die-Casting)                                                                             |
| 331528       | Other Nonferrous Foundries (except Die-Casting)                                                                     |
| 332312       | Fabricated Structural Metal Manufacturing                                                                           |
| 332313       | Plate Work Manufacturing                                                                                            |
| 332410       | Power Boiler and Heat Exchanger Manufacturing                                                                       |
| 332420       | Metal Tank (Heavy Gauge) Manufacturing                                                                              |
| 333415       | Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing |
| 332812       | Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers                      |
| 332997       | Industrial Pattern Manufacturing                                                                                    |
| 336611       | Ship Building and Repairing                                                                                         |
| 337110       | Wood Kitchen Cabinet and Countertop Manufacturing                                                                   |

**Asbestos Inspections**

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                    |
|--------------|----------------------------------------------------------------|
| 562910       | Remediation Services                                           |
| 336340       | Motor Vehicle Brake System Manufacturing                       |
| 336350       | Motor Vehicle Transmission and Power Train Parts Manufacturing |

**Isocyanate Inspections**

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                                      |
|--------------|----------------------------------------------------------------------------------|
| 221119       | Other Electric Power Generation                                                  |
| 221210       | Natural Gas Distribution                                                         |
| 238150       | <i>Glass and Glazing Contractors</i>                                             |
| 238210       | Electrical Contractors                                                           |
| 238230       | <i>Painting and Wall Covering Contractors</i>                                    |
| 238310       | <i>Drywall and Insulation Contractors</i>                                        |
| 238330       | Flooring Contractors                                                             |
| 313230       | <i>Nonwoven Fabric Mills</i>                                                     |
| 314992       | Tire Cord & Tire Fabric Mills                                                    |
| 321211       | <i>Hardwood Veneer and Plywood Mfg.</i>                                          |
| 321212       | <i>Softwood Veneer and Plywood Mfg.</i>                                          |
| 321219       | Reconstituted Wood product mfg.                                                  |
| 321911       | Wood Window and Door Mfg.                                                        |
| 323112       | Commercial Flexographic Printing                                                 |
| 325212       | Synthetic Rubber Mfg.                                                            |
| 325510       | Paint & Coating Mfg.                                                             |
| 326130       | Laminated Plastics Plate, Sheet & Shape Mfg.                                     |
| 326140       | Polystyrene Foam Product Mfg                                                     |
| 326150       | Urethane & Other Foam Product Mfg.                                               |
| 326191       | Plastics Plumbing Fixture Mfg.                                                   |
| 326199       | All Other Plastics Product Mfg.                                                  |
| 326220       | Rubber & Plastic Hoses & Belting Mfg.                                            |
| 326291       | Rubber Product Mfg. for Mechanical Use                                           |
| 326299       | All Other Rubber Mfg.                                                            |
| 327991       | <i>Cut Stone and Stone Product Mfg.</i>                                          |
| 331511       | Iron Foundries                                                                   |
| 331525       | Copper Foundries (except Die-Casting)                                            |
| 332812       | Metal Coating Engraving (except Jewelry & Silverware) & Allied Services to Mfrs. |
| 332911       | Industrial Valve Mfg.                                                            |
| 332999       | <i>All Other Misc. Fabricated Metal Product Mfg.</i>                             |
| 333415       | A/C & Heating Equipment & Commercial & Industrial Refrigeration Equipment        |
| 333618       | Other Engine Equipment Mfg.                                                      |
| 334416       | Electronic Coil, Transformer & Other Inductor Mfg.                               |

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                              |
|--------------|--------------------------------------------------------------------------|
| 335222       | Household Refrigerator & Home Freezer Mfg.                               |
| 336214       | <i>Travel Trailer and Camper Mfg.</i>                                    |
| 336322       | Other Motor Vehicle Electrical & Electronic Equipment Mfg.               |
| 336360       | Motor Vehicle Seating & Interior Trim Mfg.                               |
| 336399       | All Other Motor Vehicle Parts Mfg.                                       |
| 336411       | Aircraft Mfg.                                                            |
| 336612*      | Boat Building                                                            |
| 337215       | Showcase, Partition, Shelving & Locker Mfg.                              |
| 337920       | Blind & Shade Mfg.                                                       |
| 339911       | Jewelry (except Costume) Mfg.                                            |
| 339950       | <i>Sign Mfg.</i>                                                         |
| 339999       | Other Misc. Mfg.                                                         |
| 483211       | Inland Water Freight Transportation                                      |
| 488410       | <i>Motor Vehicle Towing</i>                                              |
| 488999       | All Other Activities for Transportation                                  |
| 811111       | <i>General Automotive Repair</i>                                         |
| 811118       | <i>Other Automotive Mechanical and Electrical Repair and Maintenance</i> |
| 811121       | Automotive Body, Paint, and Interior Repair and Maintenance              |
| 811122       | <i>Automotive Glass Replacement Shops</i>                                |
| 811191       | <i>Automotive Oil Change and Lubrication Shops</i>                       |
| 811198       | <i>All Other Automotive Repair and Maintenance</i>                       |

\* - In some cases, this NAICS code may fall under federal jurisdiction if the facility is on or adjacent to the navigable waters.

### **Hexavalent Chromium Inspections**

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                                                 |
|--------------|---------------------------------------------------------------------------------------------|
| 316110       | Leather and Hide Tanning and Finishing                                                      |
| 325131       | Inorganic Dye and Pigment Manufacturing                                                     |
| 325188       | Industrial Inorganic Chemicals, NOC.                                                        |
| 325211       | Plastics Materials and Resin Manufacturing                                                  |
| 325510       | Truck Trailer Manufacturing                                                                 |
| 327125       | Non-clay Refractory Manufacturing                                                           |
| 327213       | Glass Container Manufacturing                                                               |
| 331111       | Iron and Steel Mills                                                                        |
| 331112       | Electrometallurgical Ferroalloy Product Manufacturing                                       |
| 331210       | Iron and Steel Pipe and Tube Manufacturing from Purchased Steel                             |
| 331492       | Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except copper and aluminum) |
| 331510       | Ferrous Metal Foundries                                                                     |

| <b>NAICS</b> | <b><i>Industry Type</i></b>                                   |
|--------------|---------------------------------------------------------------|
| 332111       | Iron and Steel Forging                                        |
| 332117       | Powder Metallurgy Part Manufacturing                          |
| 332313       | Welding and Soldering Equipment Manufacturing                 |
| 332322       | Sheet Metal Work Manufacturing                                |
| 332420       | Welding Repair                                                |
| 332439       | Other Metal Container Manufacturing                           |
| 332813       | Electroplating, Plating, Polishing, Anodizing, and Coloring   |
| 333319       | Other Commercial and Service Industry Machinery Manufacturing |
| 336211       | Motor Vehicle Body Manufacturing                              |
| 336411       | Aircraft Manufacturing                                        |
| 336413       | Other Aircraft Parts and Auxiliary Equipment Manufacturing    |
| 336510       | Railroad Rolling Stock Manufacturing                          |
| 336611       | Ship Building and Repairing                                   |
| 336612*      | Boat Building                                                 |
| 336991       | Motorcycle, Bicycle, and Parts Manufacturing                  |
| 339112       | Surgical and Medical Instrument Manufacturing                 |
| 339113       | Surgical Appliance and Supplies Manufacturing                 |

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