

# DOSH DIRECTIVE

Department of Labor and Industries  
Division of Occupational Safety and Health  
*Keeping Washington safe and working*

## 24.30

## Primary Metal Industries NEP

**Updated: April 1, 2019**

### I. Purpose

This DOSH Directive implements OSHA's National Emphasis Program (NEP) for the Primary Metal Industries for the state of Washington.

### II. Scope and Application

This DOSH Directive applies statewide to DOSH Consultation and Compliance (see Section VIII in this directive). DOSH has reviewed this Directive for applicability, and it remains effective with a new issue date of April 1, 2019. It replaces all previous instructions on this issue, whether formal or informal.

### III. References

- [OSHA Directive CPL 03-00-018, National Emphasis Program – Primary Metal Industries](#)
- [Control of Silica Exposure in Foundries](#)
- [Controlling Silica Dust from Foundry Casting-Cleaning](#)
- [Establishing a Foundry Heat Stress Management Program](#)
- [OSHA Alliance with American Foundry Society \(AFS\)](#)
- [DOSH Compliance Manual](#)
- [L&I Internal Safety and Health Policies, including:](#)
  - 8.14, Prohibited Work Practices
  - 8.15, Personal Protective Equipment
  - 8.22, Respiratory Protection
  - 8.25, Heat –Related Illness Prevention

#### IV. **Background**

The federal Occupational Safety and Health Administration (OSHA) issued CPL 03-00-018, effective October 20, 2014, which describes policies and procedures for implementing a National Emphasis Program (NEP) to identify and reduce or eliminate workplace *health hazards* associated with the Primary Metal Industries. These industries include smelting and foundry operations. DOSH adopts the OSHA emphasis through this Directive, and tailors inspection procedures and enforcement policy to DOSH.

OSHA and DOSH inspection history has shown that individuals employed in the Primary Metal Industries are exposed to serious safety and health hazards on a daily basis. Previous health inspections of primary metal establishments have resulted in citations for exposures to a wide variety of health hazards including airborne contaminants, noise, heat, and confined spaces. This Directive has the primary objective to prevent occupational illnesses and injuries that can arise from the known health hazards in the Primary Metal Industries. The potential for serious safety hazards is also high for these industries and coordinated (safety and health) inspections will be done wherever feasible and warranted.

The NEP will also heighten health and safety awareness within the affected industries of the potential for worker exposure to harmful chemical and physical hazards, so that employers may voluntarily take steps to correct hazards and comply with current safety and health regulations and practices.

#### V. **CSHO Safety and Training**

- A. CSHOs assigned to perform an inspection under this directive should have experience inspecting primary metal or foundry work, or be accompanied by an inspector with experience inspecting primary metal or foundry work. All assigned inspectors must be informed of the potential safety and health hazards prior to exposure.
- B. Preparation by CSHOs will include reviewing this Directive, references listed in the Directive, and other references that may be selected by the CSHO.
- C. Prior to opening an inspection, a review will be done by the supervisor with the assigned CSHOs with regards to safe work practices and needed PPE, which may include steel toed safety shoes, foundry boots with metatarsal guards, safety glasses, goggles, face shield, hard hat, high visibility vest, hearing protection, and/or a respirator with cartridges/filters selected for potential air contaminants.
  - 1. Where molten ferrous metal operations must be viewed for a significant length of time, #3-#5 green goggles (or #3-#5 safety glasses under goggles) should be worn.
  - 2. Protective clothing may consist of cotton coveralls or other secondary protective clothing (ASTM F1002-06).
  - 3. CSHOs should not wear polyester, nylon or other manmade fabrics that can melt or readily ignite.

4. In foundry areas with the potential for splashes or emitted particles of hot metal, long sleeve cotton coveralls, which have no outside pockets or cuffs, should be worn. Pant legs must cover the top of the boot edge.
  5. When inspecting melting and pouring operations, CSHOs should avoid the use of urethane foam earplugs, which may be combustible.
- D.** Safe work practices will include staying safe distances from operating equipment and activities involving molten metal, including melting and pouring operations (>20 ft), and adhering to applicable sections of the internal safety and health manual, including prohibited practices.

## **VI. Enforcement Policies**

- A.** The DOSH Compliance Manual applies to all inspections conducted under this state-initiated NEP. The scope of these inspections will normally be comprehensive.
- B.** During the opening conference, CSHOs shall explain to the employer the basis for the emphasis and the goals of the NEP.
1. OSHA and DOSH inspection history indicates that individuals employed in the Primary Metal Industries are exposed to serious health hazards on a daily basis. Previous inspections of primary metal establishments have resulted in citations for overexposures to a wide variety of health hazards including chemical exposures as well as physical stressors such as noise and heat. Chemical exposures found in these facilities include carbon monoxide, lead, silica, metal dusts and fumes, and various other chemical substances. A more extensive list is provided in [Appendix A](#) of this directive.
  2. The Primary Metal Industries were also identified by OSHA as a concern during a review of data from the Bureau of Labor Statistics' Census of Fatal Occupational Injuries. The BLS report showed that five of the top 20 industries with non-fatal occupational injuries and illness cases were within these SICs/NAICs. State of Washington claims data also indicates an elevated risk of injuries for the selected industries.
  3. The goals of the NEP are to prevent occupational illnesses and injuries that can arise from the known hazards in the Primary Metal Industries.
- C.** Inspections conducted from this NEP must be coded in the WIN entry for "National Emphasis Program" using the drop down box and selecting "PRIMARY METALS".

Whenever a consultation visit is made in response to this NEP, Consultation Visit forms are to be completed with the NEP code "PRIMARY METALS" from the drop down box titled "Emphasis Information".

- D. Information entered into the WISHA Information System (WIN) transfers to the OSHA Information System (OIS).
- E. During the initial portion of the inspection, the CSHO should verify that the worksite meets one of the covered NAICS primary metal definitions (see [Appendix B](#)). If the worksite is not covered but is on the LINIIS Hygiene Fixed Industry list, a comprehensive will normally still be completed. If the worksite is not covered by either programmed inspection schedules, then the inspection will normally be curtailed with program and other violations identified up to that time cited, unless other potential serious hazards are found that warrant expansion or referral of the inspection in accordance with the DOSH Compliance Manual.
- F. The Regional Compliance Manager may designate that a safety inspector be assigned for a coordinated inspection based on known serious safety hazards associated with the industry, and the lack of a comprehensive safety inspection for more than 24 months.
- G. Employers participating in the VPP, START, or an active consultation (in accordance with DOSH Compliance Manual policies) are exempt from this NEP.
- H. Compliance with the comprehensive chemical substance standards shall be evaluated as exposure to the chemical substances is found, e.g., lead, cadmium.
- I. Follow up inspections will normally be conducted at inspected locations where overexposures to an air contaminant were documented, or significant deficiencies in noise control, hearing conservation, or confined spaces were found. Follow ups are otherwise assigned in accordance with the DOSH Compliance Manual.

## **VII. Inspection Scheduling**

- A. DOSH Regional Offices will determine number of inspections as CSHO's inspect industries with appropriate Primary Metals NAICS codes through the complaint, referral, and programmed inspection processes.
- B. Inactive worksites may be excluded through local knowledge or as otherwise reliably determined. If the inspection was assigned and the worksite was visited, but an inspection was not initiated due to lack of activity at that location, a no inspection report will normally be completed. If the employer with the inactive worksite has the operation active at another location, that site shall be inspected. If the active worksite is in another region, the Regional Compliance Manager should coordinate re-assignment with the Compliance Operations Manager.
- C. Those businesses that have received either a DOSH health compliance inspection or health consultation visit in the last two years addressing the hazards covered by this NEP, will not be inspected as part of this effort.

- D. If regional staff through local knowledge identifies a covered worksite not on the Primary Metals employer list, the Regional Compliance Manager will notify the Compliance Operations Manager who may add the worksite to the list.
- E. Worksites assigned or pending assignment for another reason may be coordinated with an NEP emphasis assignment. Complaints and referrals received *during* an NEP programmed inspection will be evaluated in accordance with the DOSH Compliance Manual, and if inspected, incorporated into the programmed inspection report and file. Complaints or referrals *received prior* to initiation of an NEP programmed inspection may also be assigned and conducted in accordance with this directive as determined by the Regional Compliance Manager. Other programmed inspections may be coordinated as well, such as, Hexavalent Chromium, or OSHA 300.

### VIII. Outreach

Outreach will develop information about the NEP, hazards, and prevention resources and distribute the information to affected Washington State employers, business, and labor associations. If an employer on the NEP list requests and schedules a comprehensive health consult prior to initiation of an inspection, the worksite will be excluded from a health compliance inspection through the NEP program. Resources for compliance assistance are provided in [Appendix C](#).

### IX. Technical Support

If questions, problems or concerns arise, compliance officers should contact their respective supervisors first, and then their regional managers, as appropriate.

For further technical information or assistance with this Directive, please contact the Primary Metals Specialist in DOSH Technical Services.

### X. Review and Cancellation

DOSH will review this Directive within two years from the issue date, and it will remain effective until superseded or canceled.

Approved:

  
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Anne F. Soiza  
L. & I Assistant Director  
Division of Occupational Safety and Health

**APPENDIX A**  
**Chemical Exposure Hazards Found in Major Group 33 of the SIC Manual**

<b>List of Chemical Exposure Hazards</b>	
Acrolein	Nitric acid
Ammonia	Nitrogen
Antimony	Nuisance dust
Arsenic	Ozone
Asbestos	Phenol
Benzene	Polycyclic aromatic hydrocarbons
2-butoxyethanol	Propane
Carbon dioxide	Silica
Carbon monoxide	Sulfuric acid
Chlorine	Sulfur dioxide
Chromium	Tetraethyl lead
Coal tar pitch volatiles	Toluene
Copper fume	Vanadium
Dimethylamine	Wood dust
Dimethyl ethylamine	Xylene
Formaldehyde	zinc oxide
Furfuryl alcohol	<b>Metal dusts including:</b> <ul style="list-style-type: none"> <li>• Iron</li> <li>• Aluminum</li> <li>• Manganese</li> <li>• Beryllium</li> <li>• Cadmium</li> <li>• Tin</li> <li>• Copper</li> <li>• Silver</li> <li>• Nickel</li> <li>• Lead</li> </ul>
Hydrogen chloride	
Hydrogen sulfide	
Iron oxide	
Isocyanates	
Isopropyl alcohol	
Lead	
Methane	
Methyl alcohol	
Methyl formate	
Methylene bisphenyl isocyanate	
Molybdenum	
Naphthalene	

## APPENDIX B

### Primary Metal Industries NAICS Codes Covered by NEP

The Primary Metal Industries are a group of establishments engaged in the smelting and refining of both ferrous and nonferrous metals. These metals are refined from ore, pig, and scrap, during rolling, drawing, casting, and alloying metal operations. Some of the products they manufacture include nails, spikes, insulated wires and cables, steel piping, sheets and bars, copper and aluminum products, and coke. These NAICS codes include:

NAICS Code	NAICS Code Description
324199	All Other Petroleum and Coal Products Manufacturing
331111	Iron and Steel Mills
331112	Electrometallurgical Ferroalloy Product Manufacturing
331210	Iron And Steel Pipe and Tube Manufacturing From Purchase
331221	Rolled Steel Shape Manufacturing
331312	Primary Aluminum Production
331314	Secondary Smelting and Alloying of Aluminum
331315	Aluminum Sheet, Plate, and Foil Manufacturing
331316	Aluminum Extruded Product Manufacturing
331319	Other Aluminum Rolling and Drawing
331411	Primary Smelting and Refining of Copper
331419	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)
331421	Copper Rolling, Drawing, and Extruding
331422	Copper Wire (except Mechanical) Drawing
331423	Secondary Smelting, Refining, and Alloying of Copper
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, D
331492	Secondary Smelting, Refining, and Alloying of Nonferrous
331511	Iron Foundries
331512	Steel Investment 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	Copper Foundries (except Die-Casting)
331528	Other Nonferrous Foundries (except Die-Casting)

## APPENDIX C

**Resources for Compliance Assistance**

- [Secondary Lead Smelter](#)
- [Establishing a Foundry Heat Stress Management Program](#)
- [OSHA Alliance with American Foundry Society \(AFS\)](#)
- [ASTM Standards:](#)
  - [ASTM E2349 – 09](#). Standard Practice for Safety Requirements in Metal Casting Operations: Sand Preparation, Molding, and Core Making; Melting and Pouring; and Cleaning and Finishing
  - [ASTM F1002 – 06](#). Standard Performance Specification for Protective Clothing for Use by Workers Exposed to Specific Molten Substances and Related Thermal Hazards
- [Noise and Hearing Conservation](#)
- [Chemical Hazard Communication](#)
- [Respiratory Protection Program](#)
- [Lead](#)
- [Hexavalent Chromium \(e.g., in stainless steel\)](#)