

This is a draft of possible amendments to the existing regulation regarding exposure to lead in construction operations. This draft is for discussion purposes only, and is not a rulemaking proposal.

§1532.1. Lead.

(a) Scope. * * * * *

(b) Definitions.

Action level means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of ~~230~~ micrograms per cubic meter of air (~~230~~µg/m³) calculated as an 8-hour time-weighted average (TWA).

Chief means the Chief of the Division of Occupational Safety and Health or designee.

Lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

NIOSH means the National Institute of Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services or designee.

Presumed lead containing coating means any untested coating on a metal structural member or any untested coating in or on a residential structure built before January 1, 1978.

Supervisor means one who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them. Supervisors shall be trained, as required by this section, and, when required, be certified consistent with section (l)(3).

(c) Permissible exposure limit.

(1) The employer shall assure that no employee is exposed to lead at concentrations greater than ~~ten fifty~~ micrograms per cubic meter of air (~~10 50~~µg/m³) averaged over an 8-hour period.

(2) If an employee is exposed to lead for more than 8 hours in any work day the employees' allowable exposure, as a time weighted average (TWA) for that day, shall be reduced according to the following formula:

Allowable employee exposure (in µg/m³)= ~~80400~~ divided by hours worked in the day.

(3) When respirators are used to supplement engineering and work practice controls to comply with the PEL, employee exposure, for the purposes of determining whether the employer has

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~~complied with the PEL, limit employee exposure as required under subsection (c) and all the requirements of subsections (e)(1) and (f) have been met, employee exposure may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.~~

(d) Exposure assessment.

(1) General.

(A) Each employer who has a workplace or operation covered by this standard shall initially determine if any employee may be exposed to lead at or above the action level.

(B) For the purposes of subsection (d), employee exposure is that exposure which would occur if the employee were not using a respirator.

(C) With the exception of monitoring under subsection (d)(3), where monitoring is required under this section, the employer shall collect personal samples representative of a full shift including at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level.

(D) Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.

(2) Protection of employees during assessment of exposure.

(A) With respect to the lead related tasks listed in subsection (d)(2)(A), where lead; or lead containing coatings or paint; or presumed lead containing coatings are is present, until the employer performs an employee exposure assessment as required in subsection (d) and documents that the employee performing any of the listed tasks is not exposed above the PEL *
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(e) Methods of compliance. * * * * *

(f) Respiratory protection. * * * * *

(g) Protective work clothing and equipment. * * * * *

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(h) Housekeeping. * * * * *

(i) Hygiene facilities, practices and regulated areas. * * * * *

(j) Medical surveillance.

(1) General.

(A) The employer shall make available initial medical surveillance to employees occupationally exposed on any day to lead at or above the action level and to employees conducting tasks as listed in subsection (d)(2). Initial medical surveillance consists of biological monitoring in the form of blood sampling and analysis for lead ~~and zinc protoporphyrin~~ levels.

(B) The employer shall institute a medical surveillance program in accordance with subsections (j)(2) and (j)(3) for all employees who are or may be exposed by the employer at or above the action level for more than 10 30 days in any consecutive 12 months; and for all employees who have conducted or may conduct tasks as listed in subsection (d)(2) for more than 10 days in any consecutive 12 months.

(C) The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.

(D) The employer shall make available the required medical surveillance including multiple physician review under subsection (j)(3)(C) without cost to employees and at a reasonable time and place.

(2) Biological monitoring.

(A) Blood lead and ZPP level sampling and analysis. The employer shall make available biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels to each employee covered under subsections (j)(1)(A) and (B) on the following schedule:

1. For each employee covered under subsection (j)(1)(B), at least every 2 months for the first 6 months of placement, or upon change in task to higher exposure, and then every 6 months thereafter;

2. For each employee covered under subsections (j)(1)(A) or (B) whose last blood sampling and analysis indicated a blood lead level at or above 10 40 µg/dl but below 20 µg/dl of whole blood, at least every two months. This frequency shall continue until three two consecutive blood

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samples and analyses, taken at least 30 days apart, all indicate a blood lead level below 10 40 µg/dl; and

3. At least monthly ~~For~~ each employee whose last blood sampling and analysis indicated a blood lead level at or above 20 µg/dL of whole blood and during the removal period of each employee who is removed from exposure to lead due to an elevated blood lead level at least monthly during the removal period.

4. ZPP determinations shall be made available for each employee whose last blood lead level was at or above 20 µg/dL.

~~(B) Follow-up blood sampling tests. Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds the numerical criterion for medical removal under subsection (k)(1)(A), the employer shall provide a second (follow-up) blood sampling test within two weeks after the employer receives the results of the first blood sampling test.~~

~~(B) Accuracy of blood lead level sampling and analysis. Blood lead level sampling and analysis provided pursuant to this section shall be analyzed by a laboratory which meets Federal OSHA accuracy requirements in blood lead proficiency testing (PT) and is on the OSHA List of Laboratories Approved for Blood Lead Analysis have an accuracy (to a confidence level of 95 percent) within plus or minus 15 percent or 6 µg/dl, whichever is greater, and shall be conducted by a laboratory approved by OSHA.~~

~~(C) Employee notification.~~

1. Within five working days after the receipt of biological monitoring results, the employer shall notify each employee in writing of his or her blood lead level; and
2. The employer shall notify each employee whose blood lead level exceeds 10 40 µg/dl that the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level exceeds the numerical criterion for medical removal under subsection (k)(1)(A).

(3) Medical examinations and consultations.

(A) Frequency. The employer shall make available medical examinations and consultations to each employee covered under subsection (j)(1)(B) on the following schedule:

1. Within a month of being covered by subsection (j)(1)(B) and aAt least annually thereafter for each employee for whom a blood sampling test conducted at any time during the preceding 12 months indicated a blood lead level at or above 20 40 µg/dL ~~100 g~~; and
2. As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee

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desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, that the employee is pregnant, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and

3. As medically appropriate for each employee either removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise limited pursuant to a final medical determination.

(B) Content. The content of medical examinations made available pursuant to subsection (j)(3)(A)2. - 3. shall be determined by an examining physician and, if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility. Medical examinations made available pursuant to subsection (j)(3)(A)1. shall include the following elements:

1. A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene), and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems;
2. A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated if respiratory protection will be used;
3. A blood pressure measurement;
4. A blood sample and analysis which determines:
 - a. Blood lead level;
 - b. Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;
 - c. Zinc protoporphyrin for employees with a blood lead level at or above 20 µg/dl;
 - d. Blood urea nitrogen; and,
 - e. Serum creatinine;
5. A routine urinalysis with microscopic examination; and
6. Any laboratory or other test relevant to lead exposure which the examining physician deems necessary by sound medical practice.

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(k) Medical removal protection.

(1) Temporary medical removal and return of an employee.

(A) Temporary removal due to elevated blood lead level. The employer shall remove an employee from work having an exposure to lead ~~at or above the action level~~ on each occasion that either:

1. ~~A periodic and a follow-up~~ blood sampling test conducted pursuant to this section indicates that the employee's blood lead level is at or above 30 50 µg/dl or
2. The last two monthly blood sampling tests conducted pursuant to this section are at or above 20 µg/dl; and,

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(B) Temporary removal due to a final medical determination.

1. The employer shall remove an employee from work having an exposure to ~~lead at or above the action level~~ on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

2. For the purposes of this section, the phrase “final medical determination” means the written medical opinion on the employees' health status by the examining physician or, where relevant, the outcome of the multiple physician review mechanism or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section.

3. Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, the employer shall implement and act consistent with the recommendation.

(C) Return of the employee to former job status.

1. The employer shall return an employee to his or her former job status:

a. For an employee removed under the provisions of subsection (k)(1)(A) due to a blood lead level at or above 50 µg/dl when two consecutive blood sampling tests, taken at least 15 days apart, both indicate that the employee's blood lead level is at or below 15 40 µg/dl; and

b. For an employee removed due to a final medical determination, when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

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(I) Communication of hazards.

(1) General.

(A) Hazard communication. The employer shall include lead in the program established to comply with the Hazard Communication Standard (HCS) (Section 5194). The employer shall ensure that each employee has access to labels on containers of lead and safety data sheets, and is trained in accordance with the provisions of HCS and subsection (I) of this section. The employer shall ensure that at least the following hazards are addressed:

1. Reproductive/developmental toxicity;

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2. Central nervous system effects;
3. Kidney effects;
4. Blood effects; and
5. Acute toxicity effects.

(B) For all employees who are subject to exposure to lead at or above the action level on any day or who are subject to exposure to lead compounds which may cause skin or eye irritation (e.g. lead arsenate, lead azide), and to employees conducting tasks as listed in subsection (d)(2) the employer shall provide a training program in accordance with subsection (l)(2) and assure employee participation.

(C) The employer shall provide the training program as initial training prior to the time of job assignment ~~or prior to the start up date for this requirement, whichever comes last.~~

(D) The employer shall also provide the training program at least annually for each employee who is subject to lead exposure as specified in (l)(1)(B) ~~at or above the action level on any day.~~

(E) Where the certification of employee and supervisor training is required, as described in subsection (l)(3), the training shall be conducted by a training provider accredited by the California Department of Public Health Services, in accordance with Title 17, California Code of Regulations, Division 1, Chapter 8.

(2) Training program.

This subsection requires the employer to provide effective training to employees. The training must be comprehensive, understandable, and recur at least annually, and more often as necessary, making appropriate use of "toolbox" or "tailgate" safety meetings as required by subsection 1509(e) . The employer shall ensure that each employee is trained so as to be able to demonstrate knowledge of at least the following:

~~The employer shall assure that each employee is trained in the following:~~

- (A) The content of this standard and its appendices;

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(B) The specific nature of the operations which could result in exposure to lead above the action level;

(C) The purpose, proper selection, fitting, use, and limitations of respirators;

(D) The purpose and a description of the medical surveillance program, and the medical removal protection program;

(E) ~~including~~ information concerning the adverse health effects associated with excessive exposure to lead ~~(with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant),~~ and the health damage associated with chronic low-level exposure;

(F) Information on the adverse reproduction effects on both males and females of low-level lead exposure, associated with blood lead levels even under 5 ug/dl. And of the employer's duty, as required by subsection (j)(3)(A), to make available medical examination and consultations to each employee desiring medical advice concerning the employee's ability to procreate a healthy child.

(GE) That lead contamination brought into personal vehicles and home on clothes, shoes, and body can endanger the health of a worker's household members, especially young children and pregnant women;

(HF) That showering is recommended for employees immediately upon returning home from work to avoid take home lead exposure where provision of workplace shower facilities by the employer is not feasible.

(IG) The engineering controls and work practices associated with the employee's job assignment including training of employees to follow relevant good work practices described in Appendix B of this section;

(JF) The contents of any compliance plan and the location of regulated areas in effect;

(KG) Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician; and

(LH) The employee's right of access to records under section 3204.

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(m) Signs. * * * * *

(n) Recordkeeping. * * * * *

(o) Observation of monitoring. * * * * *

(p) Lead-Work Pre-Job Notification. * * * * *

(q) Appendices. * * * * *

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