

Minnesota OSHA lead in general industry draft standard

August 2025

1910.1025(a) Scope and application.

1910.1025(a)(1) This section applies to all occupational exposure to lead, except as provided in paragraph subsection (a)(2).

1910.1025(a)(2) This section does not apply to the construction industry or to agricultural operations covered by 29 CFR part 1928.

1910.1025(b) Definitions.

Action level means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of ~~30~~ 10 micrograms per cubic meter of air (~~30~~ 10 µg/m³) averaged over an 8-hour period.

Altering or disturbing. Subjecting to a process that may result in the release of lead dust, lead mist, lead fume, or other lead particles. Such processes include, but are not limited to, welding, torch cutting, brazing, torch soldering, melting, pouring, spraying, cutting, shredding, crushing, baling, grinding, polishing, machining, drilling, scraping, sanding, abrading, sweeping, raking and shoveling.

~~Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.~~

Blood lead level. The concentration of lead measured in whole blood, expressed as micrograms per deciliter (µg/dl) of whole blood.

Commissioner means the Commissioner of the Minnesota Department of Labor and Industry.

Director means the Director, National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health, Education, and Welfare, or designee.

High-efficiency particulate air (HEPA) filter. A filter that is at least 99.97 percent efficient in removing particles 0.3 micrometers in diameter.

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

Physician or other licensed health care professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification)

allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by this section.

Presumed significant lead work (PSLW).

(1) Altering or disturbing material that is:

(A) known to contain lead at a concentration equal to or greater than 0.5% by weight, as a result of material testing or as content listed in a safety data sheet or similar specification sheet; or

(B) reasonably anticipated to contain lead at a concentration equal to or greater than 0.5% by weight. Such materials include, but are not limited to, scrap lead, lead solder, lead bullet fragments and dust, lead sheeting, lead cable housing, and lead billets.

(2) Torch cutting any scrap metal.

Exception: Altering or disturbing material, as specified in this subsection, or torch cutting any scrap metal, does not constitute PSLW when the total combined duration of lead exposure resulting from altering, disturbing, and torch cutting is less than 8 hours during any 30-day period.

1910.1025(c) Permissible Exposure Limit (PEL).

1910.1025(c)(1) The employer shall ~~assure~~ ensure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 µg/m³) averaged over an 8-hour period.

1910.1025(c)(2) If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that day, shall be reduced according to the following formula:

Maximum permissible limit (in µg/m³) = 400 ÷ hours worked in the day.

~~1910.1025(c)(3) When respirators are used to supplement engineering and work practice controls to comply with the PEL and all the requirements of paragraph (f) have been met, employee exposure, for the purpose of determining whether the employer has complied with the PEL, 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.~~

1910.1025(d) Exposure Monitoring.

1910.1025(d)(1) General.

- 1910.1025(d)(1)(i) For the purposes of paragraph (d), employee exposure is that exposure which would occur if the employee were not using a respirator.
- 1910.1025(d)(1)(ii) With the exception of monitoring under paragraph (d)(3), the employer shall collect full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.
- 1910.1025(d)(1)(iii) Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.
- 1910.1025(d)(2) Protection of Employees Prior to Assessment of Exposure. Until the employer performs an employee exposure assessment as required under subsection (d) and determines actual employee exposure, the employer shall provide employees performing PSLW with interim protection as follows:
- 1910.1025(d)(2)(i) Appropriate respiratory protection consisting of, at a minimum, a half-mask respirator with N100, R100, or P100 filters, in accordance with subsection (f).
- Note: A respirator that provides greater protection, such as a full-face respirator, may be appropriate when employees perform tasks such as welding, grinding, torch burning, torch cutting, and cleaning or emptying bullet traps.
- 1910.1025(d)(2)(ii) Appropriate protective work clothing and equipment, in a clean and dry condition at least weekly, in accordance with subsection (g).
- 1910.1025(d)(2)(iii) Medical surveillance in accordance with subsection (j).
- 1910.1025(d)(2)(iv) Training in accordance with subsection (l).
- 1910.1025(d)(2)(v) Posted signs in accordance with subsection (m)(2).
- 1910.1025(d)(2)(3) Initial Determination. Each employer who has a workplace or work operation covered by this standard shall determine if any employee may be exposed to lead at or above the action level.
- 1910.1025(d)(3)(4) Basis of Initial Determination.
- 1910.1025(d)(3)(4)(i) The employer shall monitor employee exposures and shall base initial determinations on the employee exposure monitoring results and any of the following, relevant considerations:
- 1910.1025(d)(3)(4)(i)(A) Any information, observations, or calculations which would indicate employee exposure to lead;
- 1910.1025(d)(3)(4)(i)(B) Any previous measurements of airborne lead; and
- 1910.1025(d)(3)(4)(i)(C) Any employee complaints of symptoms which may be attributable to exposure to lead.

- 1910.1025(d)(~~3~~)(4)(ii) Monitoring for the initial determination may be limited to a representative sample of the exposed employees who the employer reasonably believes are exposed to the greatest airborne concentrations of lead in the workplace.
- 1910.1025(d)(~~3~~)(4)(iii) Measurements of airborne lead made in the preceding 12 months may be used to satisfy the requirement to monitor under paragraph (d)(~~34~~)(i) if the sampling and analytical methods used meet the accuracy and confidence levels of paragraph (d)(~~9~~10) of this section.
- 1910.1025(d)(4)(5) Positive Initial Determination and Initial Monitoring.
- 1910.1025(d)(4)(5)(i) Where a determination conducted under paragraphs (d)(~~23~~) and (~~34~~) of this section shows the possibility of any employee exposure at or above the action level, the employer shall conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.
- 1910.1025(d)(4)(5)(ii) Measurements of airborne lead made in the preceding 12 months may be used to satisfy this requirement if the sampling and analytical methods used meet the accuracy and confidence levels of paragraph (d)(~~9~~10) of this section.
- 1910.1025(d)(5)(6) Negative Initial Determination. Where a determination, conducted under paragraphs (d)(~~23~~) and (~~34~~) of this section is made that no employee is exposed to airborne concentrations of lead at or above the action level, the employer shall make a written record of such determination. The record shall include at least the information specified in paragraph (d)(~~34~~) of this section and shall also include the date of determination, location within the worksite, and the name and another unique employee identifier (such as date of birth or employee identification number) ~~number~~ of each employee monitored.
- 1910.1025(d)(~~6~~)(7) Frequency.
- 1910.1025(d)(~~6~~)(7)(i) If the initial ~~monitoring determination~~ reveals employee exposure to be below the action level the measurements need not be repeated except as otherwise provided in paragraph (d)(~~78~~) of this section.
- 1910.1025(d)(~~6~~)(7)(ii) If the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit the employer shall repeat monitoring in accordance with this paragraph at least every 6 months. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time the employer may discontinue monitoring for that employee except as otherwise provided in paragraph (d)(~~78~~) of this section.
- 1910.1025(d)(~~6~~)(7)(iii) If the initial monitoring reveals that employee exposure is above the permissible exposure limit the employer shall repeat monitoring quarterly. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action

level at which time the employer shall repeat monitoring for that employee at the frequency specified in paragraph (d)(6)(ii), except as otherwise provided in paragraph (d)(78) of this section.

- 1910.1025(d)(7)(8) Additional Monitoring. Whenever there has been a production, process, control or personnel change which may result in new or additional exposure to lead, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to lead, additional monitoring in accordance with this paragraph shall be conducted.
- 1910.1025(d)(8)(9) Employee Notification.
- 1910.1025(d)(8)(9)(i) The employer must, within 15 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.
- 1910.1025(d)(8)(9)(ii) Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the employer shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.
- 1910.1025(d)(9)(10) Accuracy of measurement. The employer shall use a method of monitoring and analysis which has an accuracy (to a confidence level of 95%) of not less than plus or minus 20 percent for airborne concentrations of lead equal to or greater than ~~30~~10 µg/m³.
- 1910.1025(e) Methods of Compliance.
- 1910.1025(e)(1) Engineering and Work Practice Controls.
- 1910.1025(e)(1)(i) Where any employee is exposed to lead above the permissible exposure limit (PEL), ~~for more than 30 days per year,~~ the employer shall implement engineering and work practice controls, ~~(including administrative controls,)~~ to reduce and maintain employee exposure to lead in accordance with the implementation schedule in Table I below, at or below the PEL, except to the extent that the employer can demonstrate that such controls are not feasible. ~~Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the employer shall nonetheless use them to reduce exposures to the lowest feasible level and shall supplement them by the use of respiratory protection which complies with the requirements of paragraph (f) of this section. Where engineering and work practice controls are not sufficient to reduce and maintain employee exposure to lead at or below the PEL, the employer shall implement such controls to reduce exposure to the lowest level feasible.~~

1910.1025(e)(1)(ii) Where any employee is exposed to lead above the permissible exposure limit, but for 30 days or less per year, the employer shall implement engineering controls to reduce exposures to 200 µg/m³, but thereafter may implement any combination of engineering, work practice (including administrative controls), and respiratory controls to reduce and maintain employee exposure to lead to or below 50 µg/m³.

Table I

Industry	Compliance dates: ¹ (50 µg/m ³)
Lead chemicals, secondary copper smelting.	July 19, 1996.
Nonferrous foundries.	July 19, 1996. ²
Brass and bronze ingot manufacture.	6 years. ³

1 Calculated by counting from the date the stay on implementation of paragraph (e)(1) was lifted by the U.S. Court of Appeals for the District of Columbia, the number of years specified in the 1978 lead standard and subsequent amendments for compliance with the PEL of 50 µg/m³ for exposure to airborne concentrations of lead levels for the particular industry.

2 Large nonferrous foundries (20 or more employees) are required to achieve the PEL of 50 µg/m³ by means of engineering and work practice controls. Small nonferrous foundries (fewer than 20 employees) are required to achieve an 8-hour TWA of 75 µg/m³ by such controls.

3 Expressed as the number of years from the date on which the Court lifts the stay on the implementation of paragraph (e)(1) for this industry for employers to achieve a lead in air concentration of 75 µg/m³. Compliance with paragraph (e) in this industry is determined by a compliance directive that incorporates elements from the settlement agreement between OSHA and representatives of the industry.

1910.1025(e)(2) Respiratory Protection. Where engineering and work practice controls, including administrative controls, do not reduce employee exposure to or below the 5010 µg/m³ permissible exposure limit action level, the employer shall supplement these controls with respirators in accordance with paragraph (f).

1910.1025(e)(3) Compliance Program.

1910.1025(e)(3)(i) Each employer shall establish and implement a written compliance program to reduce exposures to or below the permissible exposure limit, and interim levels if applicable, solely by means of engineering and work practice controls in accordance with the implementation schedule in paragraph (e)(1).

- 1910.1025(e)(3)(ii) Written plans for these compliance programs shall include at least the following:
- 1910.1025(e)(3)(ii)(A) A description of each operation in which lead is emitted; e.g. machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;
- 1910.1025(e)(3)(ii)(B) A description of the specific means that will be employed to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to lead;
- 1910.1025(e)(3)(ii)(C) ~~A report of the technology considered in meeting the permissible exposure limit;~~ A report of any engineering and work practice controls considered in meeting the PEL but not implemented due to infeasibility, that includes an explanation of how each was determined to be infeasible;
- 1910.1025 (e)(3)(ii)(D) Air monitoring data which documents the source of lead emissions;
- 1910.1025(e)(3)(ii)(E) A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;
- 1910.1025(e)(3)(ii)(F) A work practice program which includes items required under paragraphs (g), (h) and (i) of this regulation;
- 1910.1025(e)(3)(ii)(G) An administrative control schedule required by paragraph (e)(5) of this section, if applicable;
- 1910.1025(e)(3)(ii)(H) Other relevant information.
- 1910.1025(e)(3)(iii) Written programs shall be submitted upon request to the ~~Assistant Secretary~~ Commissioner and the Director, and shall be available at the worksite for examination and copying by the ~~Assistant Secretary~~ Commissioner, Director, and any affected employee or authorized employee representatives.
- 1910.1025(e)(3)(iv) Written programs must be revised and updated at least annually to reflect the current status of the program.
- 1910.1025(e)(4) Mechanical Ventilation.
- 1910.1025(e)(4)(i) When ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure shall be made at least every 3 months. Measurements of the system's effectiveness in controlling exposure shall be made within 5 days of any change in production, process, or control which might result in a change in employee exposure to lead.
- 1910.1025(e)(4)(ii) Recirculation of air. If air from exhaust ventilation is recirculated into the workplace, the employer shall ~~assure~~ ensure that:

- 1910.1025(e)(4)(ii)(A) the system has a high efficiency filter with reliable back-up filter; and
- 1910.1025(e)(4)(ii)(B) controls to monitor the concentration of lead in the return air and to bypass the recirculation system automatically if it fails are installed, operating, and maintained.
- 1910.1025(e)(5) Administrative Controls. If administrative controls are used as a means of reducing employees TWA exposure to lead, the employer shall establish and implement a job rotation schedule which includes:
- 1910.1025(e)(5)(i) Name or identification number of each affected employee;
- 1910.1025(e)(5)(ii) Duration and exposure levels at each job or work station where each affected employee is located; and
- 1910.1025(e)(5)(iii) Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.
- 1910.1025(f) Respiratory Protection
- 1910.1025(f)(1) General. For employees who use respirators required by this section, the employer must provide each employee an appropriate respirator that complies with the requirements of this paragraph. Respirators must be used during:
- 1910.1025(f)(1)(i) Periods necessary to install or implement engineering or work-practice controls.
- 1910.1025(f)(1)(ii) Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the ~~permissible exposure limit~~ action level.
- 1910.1025(f)(1)(iii) Periods when an employee requests a respirator.
- 1910.1025(f)(1)(iv) Periods when an employee performs PSLW, as interim protection in accordance with subsection (d)(2).
- 1910.1025(f)(2) Respirator Program.
- 1910.1025(f)(2)(i) The employer must implement a respiratory protection program in accordance with § 29 CFR 1910.134(b) through (d) (except (d)(1)(iii)), and (f) through (m), which covers each employee required by this section to use a respirator.
- 1910.1025(f)(2)(ii) If an employee has breathing difficulty during fit testing or respirator use, the employer must provide the employee with a medical examination in accordance with paragraph (j)(3)(i)(C) of this section to determine whether or not the employee can use a respirator while performing the required duty.
- 1910.1025(f)(3) Respirator Selection.
- 1910.1025(f)(3)(i) Employers must:

- 1910.1025(f)(3)(i)(A) Select, and provide to employees, the appropriate respirators specified in paragraph (d)(3)(i)(A) of 29 CFR 1910.134.
- 1910.1025(f)(3)(i)(B) Provide employees with full facepiece respirators instead of half mask respirators for protection against lead aerosols that cause eye or skin irritation at the use concentrations.
- 1910.1025(f)(3)(i)(C) Provide HEPA filters for powered and non-powered air-purifying respirators.
- 1910.1025(f)(3)(ii) Employers must provide employees with a powered air-purifying respirator (PAPR) instead of a negative pressure respirator selected according to paragraph (f)(3)(i) of this standard when an employee chooses to use a PAPR and it provides adequate protection to the employee as specified by paragraph (f)(3)(i) of this standard.
- 1910.1025(g) Protective Work Clothing and Equipment.
- 1910.1025(g)(1) ~~Provision and Use. If an employee is exposed to lead above the PEL, without regard to the use of respirators or where the possibility of skin or eye irritation exists, the employer shall provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:~~
- 1910.1025(g)(1)(i) The employer shall provide at no cost to the employee and ensure that the employee uses appropriate protective work clothing and equipment:
- 1910.1025(g)(1)(i)(A) To employees exposed to lead above the action level without regard to the use of respirators;
- 1910.1025(g)(1)(i)(B) As interim protection, in accordance with subsection (d)(2), to employees who perform PSLW; and
- 1910.1025(g)(1)(i)(C) To employees for whom the possibility exists of skin or eye irritation from exposure to lead (e.g. lead arsenate, lead azide).
- 1910.1025(g)(1)(ii) Appropriate protective work clothing and equipment includes, but is not limited to:
- 1910.1025(g)(1)(i)(ii)(A) Coveralls or similar full-body work clothing;
- 1910.1025(g)(1)(i)(ii)(B) Gloves, hats, and shoes or disposable shoe coverlets; and
- 1910.1025(g)(1)(i)(ii)(C) Face shields, vented goggles, or other appropriate protective equipment which complies with 29 CFR § 1910.133 of this Part.
- 1910.1025(g)(2) Cleaning and Replacement.
- 1910.1025(g)(2)(i) The employer shall provide the protective clothing required in paragraph (g)(1) of this section in a clean and dry condition at least weekly, and daily to employees whose

exposure levels without regard to a respirator are over ~~200~~ 30 $\mu\text{g}/\text{m}^3$ of lead as an 8-hour TWA.

- 1910.1025(g)(2)(ii) The employer shall provide for the cleaning, laundering, or disposal of protective clothing and equipment required by paragraph (g)(1) of this section.
- 1910.1025(g)(2)(iii) The employer shall repair or replace required protective clothing and equipment as needed to maintain their effectiveness.
- 1910.1025(g)(2)(iv) The employer shall ensure ~~assure~~ that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose as prescribed in paragraph (i)(2) of this section.
- 1910.1025(g)(2)(v) The employer shall ensure ~~assure~~ that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room which prevents dispersion of lead outside the container.
- 1910.1025(g)(2)(vi) The employer shall inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.
- 1910.1025(g)(2)(vii) Labeling of Contaminated Protective Clothing and Equipment.
- 1910.1025(g)(2)(vii)(A) The employer shall ensure that labels of bags or containers of contaminated protective clothing and equipment include the following information:
- DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.
- 1910.1025(g)(2)(vii)(B) ~~Prior to June 1, 2015, employers may include the following information on bags or containers of contaminated protective clothing and equipment in lieu of the labeling requirements in paragraphs (g)(2)(vii)(A) of this section:~~
- ~~CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.~~
- 1910.1025(g)(2)(viii) The employer shall prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.
- 1910.1025(h) Housekeeping.
- 1910.1025(h)(1) Surfaces. All surfaces shall be maintained as free as practicable of accumulations of lead.
- 1910.1025(h)(2) Cleaning Methods. ~~Cleaning floors.~~

- 1910.1025(h)(2)(i) Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.
- 1910.1025(h)(2)(ii) Floors and other surfaces where lead accumulates shall be cleaned, wherever possible, by vacuuming or by other methods that minimize the likelihood of lead becoming airborne.
- 1910.1025(h)(2)(iii) Shoveling, dry or wet sweeping, and brushing may be used only where vacuuming or other equally effective methods have been tried and found not to be effective.
- 1910.1025(h)(3) Vacuuming. Where vacuuming methods are selected, the vacuums shall be used and emptied in a manner which minimizes the re-entry of lead into the workplace. Those vacuum systems which exhaust air into the workplace shall be equipped with air filters at least as effective as HEPA filters.
- 1910.1025(i) Hygiene Facilities and Practices.
- 1910.1025(i)(1) General Hygiene
- 1910.1025(i)(1)(i) The employer shall ~~assure~~ ensure that in areas where employees are exposed to lead ~~above the PEL, without regard to the use of respirators,~~ food or beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied, ~~except in change rooms, lunchrooms, and showers required under paragraphs (i)(2) through (i)(4) of this section.~~
- Exception: In areas where employees are exposed to lead at or below 50 µg/m³ without regard to the use of respirators, the employer may provide employees with access to potable drinking water. The employer must implement, provide training on and ensure compliance with written safe hydration procedures. The employer must be able to demonstrate that employees following these procedures are not exposed to lead above the PEL, and that water is consumed in a manner that prevents the ingestion of lead.
- 1910.1025(i)(1)(ii) The employer shall provide an adequate number of washing facilities, or lavatories, in compliance with the provisions of 29 CFR 1910.141(d)(2).
- 1910.1025(i)(1)(iii) Where necessary to effect lead removal, the employer shall make available special cleansing compounds designed specifically for the removal of lead from skin surfaces.
- 1910.1025(i)(1)(iv) The employer shall ensure that employees exposed to lead wash their hands, exposed arms, and face prior to entering eating areas, eating, drinking, smoking or applying cosmetics, and at the end of their shift.
- 1910.1025(i)(2) Change Rooms.
- 1910.1025(i)(2)(i) The employer shall provide clean change rooms for employees who work in areas where their airborne exposure to lead is above the PEL action level, without regard to the use of respirators. Where employee exposures are above the action level, but not above the

PEL without regard to the use of respirators, this requirement shall become effective [insert one year from effective date here].

- 1910.1025(i)(2)(ii) The employer shall ~~assure~~ ensure that change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross- contamination.
- Exception: Separate storage facilities are not required where clean protective clothing and equipment are provided on a daily basis.
- 1910.1025(i)(2)(iii) The employer shall ensure that employees do not enter personal vehicles or leave the workplace with any protective clothing or equipment that is required to be worn during the work shift.
- 1910.1025(i)(3) Showers.
- 1910.1025(i)(3)(i) The employer shall ~~assure~~ ensure that employees who work in areas where their airborne exposure to lead is above the PEL action level, without regard to the use of respirators, shower at the end of the work shift. Where employee exposures are above the action level, but not above the PEL without regard to the use of respirators, this requirement shall become effective [insert one year from effective date here].
- 1910.1025(i)(3)(ii) The employer shall provide shower facilities in accordance with \$29 CFR 1910.141 (d)(3) of this part.
- 1910.1025(i)(3)(iii) The employer shall ~~assure~~ ensure that employees who are required to shower pursuant to paragraph (i)(3)(i) do not leave the workplace wearing any clothing or equipment worn during the work shift.
- 1910.1025(i)(4) Lunchrooms.
- 1910.1025(i)(4)(i) The employer shall provide readily accessible lunchroom facilities, in accordance with 29 CFR 1910.141(g), for employees who work in areas where their airborne exposure to airborne lead is above the PEL action level, without regard to the use of respirators. Where employee exposures are above the action level, but not above the PEL without regard to the use of respirators, this requirement shall become effective [insert one year from effective date here].
- 1910.1025(i)(4)(ii) ~~The employer shall assure that lunchroom facilities have a temperature controlled, positive pressure, filtered air supply, and are readily accessible to employees.~~ Lunchroom facilities shall have a temperature controlled, positive pressure, filtered air supply except that such facilities need not be under positive pressure if workplace operations produce no contamination by airborne lead.

- ~~1910.1025(i)(4)(iii)~~ The employer shall assure that employees who work in areas where their airborne exposure to lead is above the PEL without regard to the use of a respirator wash their hands and face prior to eating, drinking, smoking or applying cosmetics.
- 1910.1025(i)(4)(~~iv~~)(iii) The employer shall ~~assure~~ ensure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning method.
- 1910.1025(i)(5) ~~Lavatories~~ The employer shall provide an adequate number of lavatory facilities which ~~comply with 5 1910.141(d) (1) and (2) of this part.~~ Cleaning of Hygiene Facilities. The employer shall establish, implement, and maintain written methods and schedules to maintain the cleanliness of drinking and washing facilities, change rooms, showers, and lunchrooms required by this subsection.
- 1910.1025(j) Medical Surveillance.
- 1910.1025(j)(1) General.
- 1910.1025(j)(1)(i) The employer shall institute a medical surveillance program ~~for all employees who are or may be exposed at or above the action level for more than 30 days per year.:~~
- 1910.1025(j)(1)(i)(A) For all employees who are or may be exposed at or above the action level; and
- 1910.1025(j)(1)(i)(B) As interim protection, in accordance with subsection (d)(2), for all employees who perform PSLW.
- 1910.1025(j)(1)(ii) The employer shall ~~assure~~ ensure that all medical examinations and procedures are performed by ~~or under the supervision of a licensed physician~~ a PLHCP.
- 1910.1025(j)(1)(iii) The employer shall provide the required medical surveillance including multiple PLHCP ~~physician~~ review under paragraph (j)(3)(iii) without cost to employees and at a reasonable time and place.
- 1910.1025(j)(1)(iv) The employer shall provide complete employee identification information to the PLHCP who performs any services covered under subsections (j)(1), (j)(2) and (j)(3). The employer shall instruct the PLHCP ordering blood lead tests to provide the analyzing laboratory with the employee identification information. Identification information includes:
- 1910.1025(j)(1)(iv)(A) Employee name, date of birth, address, and phone number; and
- 1910.1025(j)(1)(iv)(B) Employer name, address, and phone number.
- 1910.1025(j)(2) ~~Biological monitoring~~ Blood Lead Testing.
- 1910.1025(j)(2)(i) Blood Lead Testing Schedule. ~~Blood lead and ZPP level sampling and analysis.~~ The employer shall make available ~~biological monitoring~~ blood lead testing in the form of

~~blood sampling and analysis for lead and zinc protoporphyrin levels to each employee covered under paragraph subsection (j)(1)(i) of this section on the following schedule:~~

- 1910.1025(j)(2)(i)(A) ~~At least every 6 months to each employee covered under paragraph (j)(1)(i) of this section; Prior to assignment for work covered by subsection (j)(1)(i) or as soon as possible when work is first determined to be covered by subsection (j)(1)(i);~~
- Exception: Blood lead testing is not required prior to assignment to work covered by subsection (j)(1)(i) or when work is first determined to be covered by subsection (j)(1)(i) for an employee who has had a blood lead test in the preceding two months.
- 1910.1025(j)(2)(i)(B) ~~At least every two months for the first 6 months and every 6 months thereafter; each employee whose last blood sampling and analysis indicated a blood lead level at or above 40 µg/100 g of whole blood. This frequency shall continue until two consecutive blood samples and analyses indicate a blood lead level below 40 µg/100 g of whole blood; and~~
- 1910.1025(j)(2)(i)(C) ~~At least monthly during the removal period of each employee removed from exposure to lead due to an elevated blood lead level. At least every 2 months for the first 6 months and every 6 months thereafter, following a change in work task or process resulting in or likely to result in higher exposure to lead;~~
- 1910.1025(j)(2)(i)(D) At least every two months for each employee whose last blood lead level was at or above 10 µg/dl but below 20 µg/dl. This frequency shall continue until two consecutive blood lead levels, taken at least 30 days apart, are below 10 µg/dl; and
- 1910.1025(j)(2)(i)(E) At least monthly for each employee whose last blood lead level was at or above 20 µg/dl, and during the removal period of each employee removed from exposure to lead due to an elevated blood lead level.
- 1910.1025(j)(2)(ii) ~~Follow up blood sampling tests. Whenever the results of a blood lead level test indicate that an employee's blood lead level is at or above the numerical criterion for medical removal under paragraph (k)(1)(i)(A) of this section, 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.~~
- 1910.1025(j)(2)(iii)(ii) ~~Accuracy of blood lead level sampling and analysis. Blood lead level sampling and analysis provided pursuant to this section shall have an accuracy (to a confidence level of 95 percent) within plus or minus 15 percent or 6 µg/100ml, whichever is greater, and shall be conducted by a laboratory licensed by the Center for Disease Control, United States Department of Health, Education and Welfare (CDC) or which has received a satisfactory grade in blood lead proficiency testing from CDC in the prior twelve months.~~
- Accuracy of Blood Lead Testing. Blood lead testing provided pursuant to this section shall include analysis by a Clinical Laboratory Improvement Amendments (CLIA)-approved laboratory (under the federal CLIA regulations, 42 CFR Part 493).

- 1910.1025(j)(2)(iv)(iii) ~~Employee notification. Within five working days after the receipt of biological monitoring results, the employer shall notify in writing each employee whose blood lead level is at or above 40 µg/100 g: Employer Notification to the Employee. Within five working days after the receipt of blood lead test results, the employer shall notify in writing each employee:~~
- 1910.1025(j)(2)(iv)(iii)(A) Of that employee's blood lead level; and
- 1910.1025(j)(2)(iii)(B) That the standard requires the employer to make medical examinations and consultations available to employees exposed at or above the action level, and as interim protection to employees performing PSLW. When they are required, the employer must make medical examinations and consultations available 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 desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty breathing during a respirator fit test or during use; and
- 1910.1025(j)(2)(iv)(B)(iii)(C) ~~That the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level is at or above the numerical criterion for medical removal under paragraph (k)(1)(i) of this section. 30 µg/dl, the last two monthly blood lead levels are at or above 20 µg/dl, or the average of the results of all blood lead tests conducted in the last 6 months is at or above 20 µg/dl, as provided for in subsection (k)(1).~~
- 1910.1025(j)(2)(iv) PLHCP's Notification to the Employee. The employer shall ensure that the PLHCP who orders the blood test explains the findings of the blood lead test and notifies the employee of the following:
- 1910.1025(j)(2)(iv)(A) The results of the blood lead test;
- 1910.1025(j)(2)(iv)(B) Any recommended follow-up blood lead testing in accordance with subsection (j)(2)(i) and the timing of that recommended blood lead testing; and
- 1910.1025(j)(2)(iv)(C) If the employee's blood lead level is 20 µg/dl or greater, the recommendation that the employee undergo a medical examination by a PLHCP if the employee has not had a lead-specific medical exam in the preceding 12 months.
- 1910.1025(j)(2)(v) Elevated Blood Lead Level Response.
- 1910.1025(j)(2)(v)(A) Whenever an employee has a blood lead level at or above 10 µg/dl, the employer shall establish and implement a written elevated blood lead level response plan for that employee which describes specific means that will be used to reduce and maintain the employee's blood lead level below 10 µg/dl.

1910.1025(j)(2)(v)(B) Training and instruction shall be provided as needed for an employee who has a blood lead level at or above 10 µg/dl, to correct any employee work practices identified in the elevated blood lead level response plan established for that employee under subsection (j)(2)(v)(A).

Exception: A written elevated blood lead level response plan, training and instruction, as specified in subsection (j)(2)(v), are not required when a blood lead level at or above 10 µg/dl is detected only in an employee's blood lead test done prior to their first assignment to work covered under subsection (j)(1)(i).

1910.1025(j)(3) Medical Examinations and Consultations.

1910.1025(j)(3)(i) Frequency. The employer shall make available medical examinations and consultations to each employee covered under paragraph (j)(1)(i) of this section on the following schedule:

1910.1025(j)(3)(i)(A) ~~At least annually 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 40 µg/100 g;~~ As soon as possible for each employee for whom a blood lead test result of 20 µg/dl or greater is received, if no lead-specific medical examination was done for that employee in the preceding 12 months, and at least annually thereafter, until the employee's blood lead level is below 20 µg/dl;

1910.1025(j)(3)(i)(B) Prior to assignment for each employee being assigned for the first time to an area in which 8-hour time-weighted average airborne concentrations of airborne lead are at or above the action level;

1910.1025(j)(3)(i)(C) 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 desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and

1910.1025(j)(3)(i)(D) ~~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.~~ As soon as possible, and then as medically appropriate for each employee removed from exposure to lead due to elevated blood lead levels in compliance with the provisions of subsection (k)(1), or whose exposure to lead is otherwise limited pursuant to a final medical determination in compliance with the provisions of subsection (k)(2).

1910.1025(j)(3)(ii) Content. Medical examinations made available pursuant to paragraph (j)(3)(i) ~~(A) through (B)~~ of this section shall include the following elements:

1910.1025(j)(3)(ii)(A) 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;

1910.1025(j)(3)(ii)(B) A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. If requested by an employee, pregnancy testing or laboratory evaluation of male fertility shall be included. Pulmonary status should be evaluated if respiratory protection will be used;

1910.1025(j)(3)(ii)(C) A blood pressure measurement;

1910.1025(j)(3)(ii)(D) A blood sample and analysis which determines:

1910.1025(j)(3)(ii)(D)(1) Blood lead level;

1910.1025(j)(3)(ii)(D)(2) Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;

1910.1025(j)(3)(ii)(D)(3) Zinc protoporphyrin for each employee whose last blood lead level was at or above 20 µg/dl;

1910.1025 (j)(3)(ii)(D)(4) Blood urea nitrogen; and,

1910.1025(j)(3)(ii)(D)(5) Serum creatinine;

1910.1025(j)(3)(ii)(E) A routine urinalysis with microscopic examination; and

1910.1025(j)(3)(ii)(F) Any laboratory or other test relevant to lead exposure that ~~which~~ the examining physician PLHCP deems necessary by sound medical practice.

~~The content of medical examinations made available pursuant to paragraph (j)(3)(i) (C) through (D) of this section shall be determined by an examining physician and, if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility.~~

1910.1025(j)(3)(iii) Multiple ~~physician~~ PLHCP Review Mechanism.

1910.1025(j)(3)(iii)(A) If the employer selects the initial ~~physician~~ PLHCP who conducts any medical examination or consultation provided to an employee under this section, the employee may designate a second ~~physician~~ PLHCP; ~~T~~ to review any findings, determinations or recommendations of the initial ~~physician~~; PLHCP, and ~~T~~ to conduct such examinations, consultations, and laboratory tests as the second ~~physician~~ PLHCP deems necessary to facilitate this review.

~~1910.1025(j)(3)(iii)(A)(1)~~

~~1910.1025(j)(3)(iii)(A)(2)~~

1910.1025(j)(3)(iii)(B) The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial ~~physician~~ PLHCP conducts a medical examination or consultation pursuant to this section. The employer may condition its participation in, and payment for, the multiple ~~physician~~ PLHCP review mechanism upon the employee ~~doing the following within fifteen (15) days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:~~ the employee informing the employer that he or she the employee intends to seek a second medical opinion, and The employee initiating steps to make an appointment with a second ~~physician~~ PLHCP within 15 days after receipt of the foregoing notification or receipt of the initial PLHCP's written medical opinion, whichever is later.

~~1910.1025(j)(3)(iii)(B)(1)~~

~~1910.1025(j)(3)(iii)(B)(2)~~

1910.1025(j)(3)(iii)(C) If the findings, determinations or recommendations of the second ~~physician~~ PLHCP differ from those of the initial ~~physician~~ PLHCP, then the employer and the employee shall ~~assure~~ ensure that efforts are made for the two ~~physicians~~ PLHCPs to resolve any disagreement.

1910.1025(j)(3)(iii)(D) If the two ~~physicians~~ PLHCPs ~~have been~~ are unable to ~~quickly~~ resolve their disagreement ~~quickly~~, then the employer and the employee through their respective ~~physicians~~ PLHCPs shall designate a third ~~physician~~ PLHCP to review any findings, determinations or recommendations of the prior ~~physicians~~ PLHCPs; and to conduct such examinations, consultations, laboratory tests and discussions with the prior ~~physicians~~ PLHCPs ~~as that~~ the third ~~physician~~ PLHCP deems necessary to resolve the disagreement of the prior ~~physicians~~ PLHCPs.

~~1910.1025(j)(3)(iii)(D)(1)~~

~~1910.1025(j)(3)(iii)(D)(2)~~

1910.1025(j)(3)(iii)(E) The employer shall act consistent with the findings, determinations and recommendations of the third ~~physician~~ PLHCP, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three ~~physicians~~ PLHCPs.

1910.1025(j)(3)(iv) Alternate PLHCP Determination Mechanisms. The employer and an employee or authorized employee representative may agree upon the use of any expeditious alternate PLHCP determination mechanism in lieu of the multiple PLHCP review mechanism provided by this section so long as the alternate mechanism otherwise satisfies the requirements contained in this section.

~~1910.1025(j)(3)(iv)(4)~~ Information Provided to Examining and Consulting ~~physicians~~ PLHCPs.

- 1910.1025(j)(3)(iv)(A)(4)(i) The employer shall provide the following information to an initial ~~physician~~ PLHCP conducting a medical examination or consultation under the provisions of this section with the following information:
- 1910.1025(j)(3)(iv)(A)(1)(4)(i)(A) A copy of this regulation ~~for lead including all Appendices and its appendices;~~
- 1910.1025(j)(3)(iv)(A)(2)(4)(i)(B) A description of the affected employee's duties as they relate to the employee's exposure;
- 1910.1025(j)(3)(iv)(A)(3)(4)(i)(C) The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);
- 1910.1025(j)(3)(iv)(A)(4)(4)(i)(D) A description of any personal protective equipment used or to be used;
- 1910.1025(j)(3)(iv)(A)(5)(4)(i)(E) Prior blood lead ~~determinations~~ test results; and
- 1910.1025(j)(3)(iv)(A)(6)(4)(i)(F) All prior written medical opinions concerning the employee in the employer's possession or control.; and
- 1910.1025(J)(4)(i)(G) A copy of the written elevated blood lead level response plan for that employee as required by subsection (j)(2)(v)(A).
- 1910.1025(j)(3)(iv)(B)(4)(ii) The employer shall provide the foregoing information to a second or third ~~physician~~ PLHCP conducting a medical examination or consultation under this section upon request either by the second or third ~~physician~~ PLHCP, or by the employee.
- 1910.1025(j)(3)(v)(5) ~~Written medical opinions.~~ PLHCP's Written Medical Report for the Employee.
- 1910.1025(j)(3)(v)(A) The employer shall obtain and furnish the employee with a copy of a written medical opinion from each examining or consulting physician which contains the following information: ensure that the examining PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:
- 1910.1025(j)(3)(v)(A)(1)(5)(i) The ~~physician's~~ PLHCP's opinion as to whether the employee has any detected medical-health-related condition which that would place the employee's health, including the ability to procreate a healthy child, at increased risk of material impairment of the employee's health from exposure to lead;
- 1910.1025(j)(3)(v)(A)(2)(5)(ii) Any recommended special protective measures to be provided to the employee, or recommended limitations to be placed upon the employee's exposure to lead;
- 1910.1025(j)(3)(v)(A)(3)(5)(iii) Any recommended limitations upon the employee's use of respirators, including a determination of whether the employee ~~can~~ should wear a powered air-

purifying respirator instead of a non-powered air-purifying respirator; if a physician determines that the employee cannot wear a negative pressure respirator; and

- 1910.1025(j)(3)(v)(A)(4)(5)(iv) ~~The results of the blood lead determinations.~~ The employee's blood lead test results;
- 1910.1025(j)(5)(v) Any recommended follow-up blood lead testing and medical examinations and the timing of each; and
- 1910.1025(j)(5)(vi) The PLHCP's opinion as to whether the employee has any health-related condition, occupational or non-occupational, that dictates further medical examination or treatment.
- 1910.1025(j)(6) PLHCP's Written Medical Opinion for the Employer.
- 1910.1025(j)(3)(v)(B)(6)(i) ~~The employer shall instruct each examining and consulting physician to:~~ The employer shall obtain a written medical opinion from the examining PLHCP within 30 days of the medical examination. The written opinion shall contain the information required by subsections (j)(5)(i) through (j)(5)(v), except as specified in subsection (j)(6)(ii).
- 1910.1025(j)(3)(v)(B)(4)(6)(ii) ~~The employer shall instruct the examining PLHCP to not include~~ Not reveal either in the written opinion ~~to the employer,~~ or in any other means of communication with the employer, findings, including laboratory results, or diagnoses unrelated to ~~an~~ the employee's occupational exposure to lead.;~~and~~
- 1910.1025(j)(3)(v)(B)(2) ~~Advise the employee of any medical condition, occupational or nonoccupational, which dictates further medical examination or treatment.~~
- 1910.1025(j)(3)(vi) ~~Alternate Physician Determination Mechanisms. The employer and an employee or authorized employee representative may agree upon the use of any expeditious alternate physician determination mechanism in lieu of the multiple physician review mechanism provided by this paragraph so long as the alternate mechanism otherwise satisfies the requirements contained in this paragraph.~~
- 1910.1025(j)(4)(7) Chelation.
- 1910.1025(j)(4)(7)(i) The employer shall ~~assure~~ ensure that any person whom he retains, employs, supervises or controls does not engage in prophylactic chelation of any employee at any time.
- 1910.1025(j)(4)(7)(ii) If therapeutic or diagnostic chelation is to be performed by any person in paragraph (j)(4)(7)(i), the employer shall ~~assure~~ ensure that it be done under the supervision of a PLHCP ~~licensed physician~~ in a clinical setting with thorough and appropriate medical monitoring and that the employee is notified in writing prior to its occurrence.
- 1910.1025(k) Medical Removal Protection.

- ~~1910.1025(k)(1)~~ Temporary medical removal and return of an employee.
- 1910.1025(k)(1)(i) Temporary Removal Due to Elevated Blood Lead Levels. The employer shall remove an employee from work having an exposure to lead at or above the action level, altering or disturbing any material containing lead at a concentration equal to or greater than 0.5% by weight, or torch cutting any scrap metal, on each occasion that:
- 1910.1025(k)(1)(i)(A) ~~The employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 60 µg/100 g of whole blood; and~~ The last blood lead test indicates that the employee's blood lead level is at or above 30 µg/dl;
- 1910.1025(k)(1)(i)(B)(ii) ~~The employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that the average of the last three blood sampling tests conducted pursuant to this section (or the average of all blood sampling tests conducted over the previous six (6) months, whichever is longer) indicates that the employee's blood lead level is at or above 50 µg/100 g of whole blood; provided, however, that an employee need not be removed if the last blood sampling test indicates a blood lead level below 40 µg/100 g of whole blood. Effective [insert one year from effective date], the employee's last two blood lead test results are at or above 20 µg/dl; or~~
- 1910.1025(k)(1)(iii) Effective [insert one year from effective date], the average of the results of all blood lead tests conducted for the employee in the last 6 months is at or above 20 µg/dl; however, an employee need not be removed if the last blood lead test indicates a blood lead level below 15 µg/dl.
- 1910.1025(k)(1)(ii)(2) Temporary Removal Due to a Final Medical Determination.
- 1910.1025(k)(1)(ii)(A)(2)(i) The employer shall remove an employee from work having an exposure to lead at or above the action level, altering or disturbing any material containing lead at a concentration equal to or greater than 0.5% by weight, or torch cutting any scrap metal, on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected health-related condition which places the employee's health, including the ability to procreate a healthy child, at increased risk of material impairment ~~to health~~ from exposure to lead.
- 1910.1025(k)(1)(ii)(B)(2)(ii) ~~For the purposes of this section, The phrase "final medical determination" shall mean~~ means the written medical opinion on the employee's health status by the examining PLHCP or, where relevant, the outcome of the multiple physician PLHCP review mechanism or alternate medical PLHCP determination mechanism used pursuant to the medical surveillance provisions of this section.

- 1910.1025(k)(1)(ii)(C)(2)(iii) 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.
- 1910.1025(k)(1)(iii)(3) ~~Return of the employee to former job status.~~ Return of the Employee to Former Job Status.
- 1910.1025(k)(1)(iii)(A)(3)(i) The employer shall return an employee to ~~his or her~~ their former job status:
- 1910.1025(k)(1)(iii)(A)(1)(3)(i)(A) ~~For an employee removed due to a blood lead level at or above 60 µg/100 g, or due to an average blood lead level at or above 50 µg/100 g, when two consecutive blood sampling tests indicate that the employee's blood lead level is below 40 µg/100 g of whole blood~~ For an employee removed under subsection (k)(1), when two consecutive blood lead tests, taken at least 30 days apart, both indicate that the employee's blood lead level is below 15 µg/dl; and
- 1910.1025(k)(1)(iii)(A)(2)(3)(i)(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~~ health-related condition which places the employee's ~~health~~, including the ability to procreate a healthy child, at increased risk of material impairment ~~to health~~ from exposure to lead.
- 1910.1025(k)(1)(iii)(B)(3)(ii) For the purposes of this section, the requirement that an employer return an employee to ~~his or her~~ their former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.
- 1910.1025(k)(1)(iv)(4) ~~Removal of other employee special protective measure or limitations.~~ Removal of Other Employee Special Protective Measures or Limitations. The employer shall remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.
- 1910.1025(k)(1)(v)(5) ~~Employer options pending a final medical determination.~~ Employer Options Pending a Final Medical Determination. Where the multiple ~~physician~~ PLHCP review mechanism, or alternate ~~medical~~ PLHCP determination mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, the employer shall act as follows:

1910.1025(k)(1)(v)(A)(5)(i) Removal. The employer may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the ~~physicians~~ PLHCPs who have reviewed the employee's health status.

1910.1025(k)(1)(v)(B)(5)(ii) Return. The employer may return the employee to his or her their former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians PLHCPs who have reviewed the employee's health status, with two exceptions. If

~~1910.1025(k)(1)(v)(B)(1)~~

~~1910.1025(k)(1)(v)(B)(2)~~

Exception 1: If the initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician PLHCP., or

Exception 2: If the employee has been on removal status for the preceding eighteen months due to an elevated blood lead level, then the employer shall await a final medical determination.

1910.1025(k)(2)(6) Medical Removal Protection Benefits.

1910.1025(k)(2)(6)(i) Provision of Medical Removal Protection Benefits. The employer shall provide to an employee up to eighteen (18) months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this section.

1910.1025(k)(2)(6)(ii) Definition of Medical Removal Protection Benefits. For the purposes of this section, the requirement that an employer provide medical removal protection benefits means that the employer shall maintain the earnings, seniority and other employment rights and benefits of an employee, including the employee's right to their former job status, as though the employee had not been medically removed from the employee's job ~~normal exposure to lead~~ or otherwise medically limited.

1910.1025(k)(2)(6)(iii) Follow-Up Medical Surveillance During the Period of Employee Removal or Limitation. During the period of time that an employee is medically removed from the employee's job, ~~normal exposure to lead~~ or otherwise medically limited, the employer may

condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this section.

- 1910.1025(k)(2)(6)(iv) Workers' Compensation Claims. If a removed employee files a claim for workers' compensation payments for a lead-related disability, then the employer shall continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by such amount. The employer shall receive no credit for workers' compensation payments received by the employee for treatment related expenses.
- 1910.1025(k)(2)(6)(v) Other Credits. The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from employment with another employer made possible by virtue of the employee's removal.
- 1910.1025(k)(2)(6)(vi) Employees Whose Blood Lead Levels Do Not Adequately Decline Within 18 Months of Removal. The employer shall take the following measures with respect to any employee removed from exposure to lead due to an elevated blood lead level whose blood lead level has not declined within the past eighteen (18) months of removal so that the employee has been returned to his or her former job status:
- 1910.1025(k)(2)(6)(vi)(A) The employer shall make available to the employee a medical examination pursuant to this section to obtain a final medical determination with respect to the employee;
- 1910.1025(k)(2)(6)(vi)(B) The employer shall ~~assure~~ ensure that the final medical determination obtained indicates whether or not the employee may be returned to ~~his or her~~ their former job status, and if not, what steps should be taken to protect the employee's health;
- 1910.1025(k)(2)(6)(vi)(C) Where the final medical determination has not yet been obtained, or once obtained indicates that the employee may not yet be returned to ~~his or her~~ their former job status, the employer shall continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to ~~his or her~~ their former job status.
- 1910.1025(k)(2)(6)(vi)(D) Where the employer acts pursuant to a final medical determination which permits the return of the employee to ~~his or her~~ their former job status despite what would otherwise be an unacceptable blood lead level, later questions concerning removing the employee again shall be decided by a final medical determination. The employer need not automatically remove such an employee pursuant to the blood lead level removal criteria provided by this section.

1910.1025(k)(2)(6)(vii)	Voluntary Removal or Restriction of An Employee. Where an employer, although not required by this section to do so, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's <u>medical health-related</u> condition, the employer shall provide medical removal protection benefits to the employee equal to that required by paragraph (k)(2)(i) <u>and (ii)</u> of this section.
1910.1025(l)	Employee Information and Training.
1910.1025(l)(1)	Training Program.
1910.1025(l)(1)(i)	Each employer who has a workplace in which there is a potential exposure to airborne lead at any level falls within the scope of this section shall inform employees <u>with occupational exposure to lead</u> of the content of Appendices A and B of this regulation.
1910.1025(l)(1)(ii)	The employer shall train each employee who is subject to exposure to lead at or above the action level, or for whom the possibility of skin or eye irritation exists, in accordance with the requirements of this section. The employer shall institute a training program and ensure employee participation in the program. For all employees occupationally exposed to lead, the employer shall provide training covering the purpose and content of, and methods used to comply with, the housekeeping and hygiene requirements specified in subsections (h), (i)(1) and (i)(5). Where applicable, this training shall include how to follow written safe hydration procedures implemented in accordance with the exception to subsection (i)(1)(i). This training shall be provided prior to the time of initial job assignment, and at least annually thereafter.
1910.1025(l)(1)(iii)	The employer shall provide initial training by 180 days from the effective date for those employees covered by paragraph (l)(1) (ii) on the standard's effective date and prior to the time of initial job assignment for those employees subsequently covered by this paragraph.
1910.1025(l)(1)(iv)	The training program shall be repeated at least annually for each employee.
1910.1025(l)(1)(v)	The employer shall assure that each employee is informed of the following:
<u>1910.1025(l)(1)(iii)</u>	<u>For the employees listed below, the employer shall provide a training program:</u>
<u>1910.1025(l)(1)(iii)(A)</u>	<u>For employees who are exposed to lead at or above the action level on any day;</u>
<u>1910.1025(l)(1)(iii)(B)</u>	<u>For employees for whom the possibility exists of skin or eye irritation from exposure to lead (e.g. lead arsenate, lead azide); and</u>
<u>1910.1025(l)(1)(iii)(C)</u>	<u>As interim protection, in accordance with subsection (d)(2), for employees who perform PSLW.</u>

<u>1910.1025(l)(1)(iv)</u>	<u>The employer shall ensure that all employees covered under subsection (l)(1)(iii) participate in the training program, and that the training, and any training materials used, are appropriate to the educational level, literacy level, and language of these employees.</u>
<u>1910.1025(l)(1)(v)</u>	<u>For each employee covered by subsection (l)(1)(iii), the employer shall provide initial training covering all content in subsection (l)(1)(vi) prior to the time of initial job assignment, and at least annually thereafter.</u>
<u>1910.1025(l)(1)(vi)</u>	<u>The employer shall ensure that effective training on the following topics is provided for each employee covered by subsection (l)(1)(iii):</u>
<u>1910.1025(l)(1)(v)(A)(vi)(A)</u>	The content of this standard and its appendices;
<u>1910.1025(l)(1)(v)(B)(vi)(B)</u>	The specific nature of the operations that could result in exposure to lead <u>at or above the action level, or that constitute PSLW;</u>
<u>1910.1025(l)(1)(vi)(C)</u>	<u>The purpose and content of, and methods used to comply with, the hygiene requirements specified in subsections (i)(2) through (i)(4);</u>
<u>1910.1025(l)(1)(v)(C)(vi)(D)</u>	The purpose, proper selection, fitting, use, and limitations of respirators;
<u>1910.1025(l)(1)(v)(D)(vi)(E)</u>	The purpose and a description of the medical surveillance program, and the medical removal protection program; <u>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);</u>
<u>1910.1025(l)(1)(vi)(F)</u>	<u>The health effects of exposure to lead (with particular attention to cardiovascular effects), including low-level chronic exposure;</u>
<u>1910.1025(l)(1)(vi)(G)</u>	<u>The damage caused to both male and female reproductive health by low-level lead exposure, including damage associated with blood lead levels under 5 µg/dl;</u>
<u>1910.1025(l)(1)(vi)(H)</u>	<u>The employer's duty, as required by subsection (j)(3)(A), to make medical examinations and consultations available to each employee who notifies the employer that they desire medical advice concerning their ability to procreate a healthy child, when the employee is exposed at or above the action level, and as interim protection to an employee who performs PSLW;</u>
<u>1910.1025(l)(1)(vi)(I)</u>	<u>The routes of exposure to lead, including inhalation of airborne lead and ingestion of lead from contaminated hands and other surfaces;</u>
<u>1910.1025(l)(1)(vi)(J)</u>	<u>The possibility that lead contamination brought into personal vehicles or the home on an employee's clothes, shoes, and body will endanger the health of household members, especially that of young children and pregnant people;</u>

<u>1910.1025(l)(1)(vi)(K)</u>	<u>The recommendation to shower immediately upon returning home from work to minimize take-home lead exposure;</u>
	<u>Note: When employees are exposed above the action level, the employer must provide shower facilities and ensure that employees shower at the end of the work shift, in accordance with subsection (i)(3).</u>
1910.1025(l)(1)(v)(E)(vi)(L)	The engineering controls and work practices associated with the employee's job assignment;
1910.1025(l)(1)(v)(F)(vi)(M)	The contents of any compliance plan in effect; and
1910.1025(l)(1)(v)(G)(vi)(N)	Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies <u>the body</u> and should not be used at all except under the direction of a licensed physician by a PLHCP; and
<u>1910.1025(l)(1)(vi)(O)</u>	<u>The employee's right of access to their exposure and medical records under 29 CFR 1910.1020.</u>
1910.1025(l)(2)	Access to information and training materials.
1910.1025(l)(2)(i)	The employer shall make readily available to all affected employees a copy of this standard and its appendices. <u>The employer shall make a copy of this standard and its appendices readily available to all affected employees including employees exposed below the action level.</u>
1910.1025(l)(2)(ii)	The employer shall provide, upon request, all materials relating to the employee information and training program to the Assistant Secretary <u>Commissioner</u> and the Director.
1910.1025(l)(2)(iii)	In addition to the information required by paragraph (l)(1)(v), the employer shall include as part of the training program, and shall distribute to employees, any materials pertaining to the Occupational Safety and Health Act, the regulations issued pursuant to that Act, and this lead standard, which are made available to the employer by the Assistant Secretary.
1910.1025(m)	Communication of Hazards.
1910.1025(m)(1)	Hazard Communication - General.
1910.1025(m)(1)(i)	Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (§ 1910.1200) for lead.

- 1910.1025(m)(1)(ii) In classifying the hazards of lead at least the following hazards are to be addressed: cardiovascular effects; reproductive/developmental toxicity; central nervous system effects; kidney effects; blood effects; and acute toxicity effects.
- 1910.1025(m)(1)(iii) Employers shall include lead in the hazard communication program established to comply with the HCS (\$29 CFR 1910.1200). Employers shall ensure that each employee has access to labels on containers of lead and to safety data sheets, and is trained in accordance with the requirements of HCS and paragraph (l) of this section.
- 1910.1025(m)(2) Signs.
- 1910.1025(m)(2)(i) ~~The employer shall post the following warning signs in each work area where the PEL is exceeded:~~
- ~~DANGER
LEAD
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA~~
- The employer shall post a warning sign:
- 1910.1025(m)(2)(i)(A) in each work area where employee exposures are at or above the action level; and
- 1910.1025(m)(2)(i)(B) as interim protection, in accordance with subsection (d)(2), in each work area where PSLW is performed.
- 1910.1025(m)(2)(ii) The sign shall bear the following legend:
- DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA
- 1910.1025(m)(2)(~~iii~~)(iii) The employer shall ensure that no statement appears on or near any sign required by this ~~paragraph~~ subsection (m)(2) which contradicts or detracts from the meaning of the required sign.
- 1910.1025(m)(2)(~~iii~~)(iv) The employer shall ensure that signs required by this paragraph subsection (m)(2) are illuminated and cleaned as necessary so that the legend is readily visible.

1910.1025(m)(2)(iv)(v)	<p>The employer may use signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs required by this paragraph <u>subsection (m)(2)</u>.</p> <p><u>Exception: The employer is not required to post the specified warning sign in a work area where employees are exposed to lead at or below 50 µg/m³ without regard to the use of respirators where the employer has implemented written safe hydration procedures in accordance with the exception to subsection (i)(1)(i).</u></p>
1910.1025(m)(2)(v)	<p>Prior to June 1, 2016, employers may use the following legend in lieu of that specified in paragraph (m)(2)(ii) of this section:</p> <p>WARNING LEAD WORK AREA POISON NO SMOKING OR EATING</p>
<u>1910.1025(m)(2)(vi)</u>	<u>The employer shall ensure that warning signs required by subsection (m)(2) are in a language understandable to employees.</u>
1910.1025(n)	Recordkeeping.
1910.1025(n)(1)	Exposure Monitoring.
1910.1025(n)(1)(i)	The employer shall establish and maintain an accurate record of all monitoring required in paragraph (d) of this section.
1910.1025(n)(1)(ii)	This record shall include:
1910.1025(n)(1)(ii)(A)	The date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;
1910.1025(n)(1)(ii)(B)	A description of the sampling and analytical methods used and evidence of their accuracy;
1910.1025(n)(1)(ii)(C)	The type of respiratory protective devices worn, if any;
1910.1025(n)(1)(ii)(D)	<u>The name, another unique identifier (such as date of birth or employee identification number), and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and</u>
1910.1025(n)(1)(ii)(E)	<u>The environmental variables that could affect the measurement of employee exposure. The work operations performed by the monitored employees and the workplace conditions under which they were performed, including the</u>

	<u>processes, types of material, control methods, and work practices used, as well as the environmental conditions prevailing during the monitored operations.</u>
1910.1025(n)(1)(iii)	The employer shall maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever is longer.
<u>1910.1025(n)(2)</u>	<u>Written Compliance Program Review. Records of the annual revision and update of the employer's written compliance program, required under subsection (e)(3)(iv), shall include the name of the person(s) who reviewed the program, the date the review was completed, and a summary of the revisions and updates to the program. The records shall be retained for three years.</u>
1910.1025(n)(2)(3)	Medical Surveillance.
1910.1025(n)(2)(3)(i)	The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by paragraph (j) of this section.
1910.1025(n)(2)(3)(ii)	This record shall include:
1910.1025(n)(2)(3)(ii)(A)	The name, <u>another unique identifier (such as date of birth or employee identification number)</u> , and description of the duties of the employee;
1910.1025(n)(2)(3)(ii)(B)	A copy of the physician's <u>PLHCP's</u> written opinions;
1910.1025(n)(2)(3)(ii)(C)	Results of any airborne exposure <u>monitoring of exposure to airborne lead</u> done for that employee and the representative exposure levels supplied to the physician <u>PLHCP</u> ; and
1910.1025(n)(2)(3)(ii)(D)	Any employee medical complaints related to exposure to lead.
1910.1025(n)(2)(3)(iii)	The employer shall keep, or assure <u>ensure</u> that the examining physician <u>PLHCP</u> keeps, the following medical records:
1910.1025(n)(2)(3)(iii)(A)	A copy of the medical examination results including medical and work history required under paragraph (j) of this section;
1910.1025(n)(2)(3)(iii)(B)	A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;
1910.1025(n)(2)(3)(iii)(C)	A copy of the results of biological monitoring <u>blood lead testing</u> .
1910.1025(n)(2)(3)(iv)	The employer shall maintain or assure <u>ensure</u> that the physician maintains those medical records for at least 40 years, or for the duration of employment plus 20 years, whichever is longer.
<u>1910.1025(n)(4)</u>	<u>Written Elevated Blood Lead Level Response Plans. Written elevated blood lead level response plans, required under subsection (j)(2)(v), shall be retained for three years.</u>

1910.1025(n)(3)(5)	Medical Removals.
1910.1025(n)(3)(5)(i)	The employer shall establish and maintain an accurate record for each employee removed from current exposure to lead pursuant to paragraph (k) of this section.
1910.1025(n)(3)(5)(ii)	Each record shall include:
1910.1025(n)(3)(5)(ii)(A)	The name <u>and another unique identifier (such as date of birth or employee identification number)</u> of the employee;
1910.1025(n)(3)(5)(ii)(B)	The date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her <u>their</u> former job status;
1910.1025(n)(3)(5)(ii)(C)	A brief explanation of how each removal was or is being accomplished; and
1910.1025(n)(3)(5)(ii)(D)	A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.
1910.1025(n)(3)(5)(iii)	The employer shall maintain each medical removal record for at least the duration of an employee's employment.
<u>1910.1025(n)(6)</u>	<u>Training.</u>
<u>1910.1025(n)(6)(i)</u>	<u>After conducting any training required by this section, the employer shall prepare a record that indicates the name and job classification of each employee trained, the date of the training, the name of the person(s) who conducted the training, and the topic(s) of the training.</u>
<u>1910.1025(n)(6)(ii)</u>	<u>Training records shall be maintained for three years.</u>
1910.1025(n)(4)(7)	Availability.
1910.1025(n)(4)(7)(i)	The employer shall make available upon request all records required to be maintained by paragraph (n) of this section to the Assistant Secretary <u>Commissioner</u> and the Director for examination and copying.
1910.1025(n)(4)(7)(ii)	Environmental monitoring, medical removal, and medical records required by this paragraph <u>section</u> shall be provided upon request to employees, designated representatives, <u>and authorized representatives</u> , and the Assistant Secretary <u>Commissioner</u> in accordance with 29 CFR 1910.1020 (a) (e) and (2) (i) . Medical removal records shall be provided in the same manner <u>as prescribed by 29 CFR 1910.1020</u> for environmental monitoring records.

1910.1025(n)(5)(8)	Transfer of Records.
1910.1025(n)(5)(8)(i)	Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by paragraph (n) of this section.
1910.1025(n)(5)(8)(ii)	The employer shall also comply with any additional requirements involving transfer of records set forth in 29 CFR 1910.1020(h).
1910.1025(o)	Observation of Monitoring.
1910.1025(o)(1)	Employee observation. The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead conducted pursuant to paragraph (d) of this section.
1910.1025(o)(2)	Observation Procedures.
1910.1025(o)(2)(i)	Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, the employer shall provide the observer with and assure <u>ensure</u> the use of such respirators, clothing and such equipment, and shall require the observer to comply with all other applicable safety and health procedures.
1910.1025(o)(2)(ii)	Without interfering with the monitoring, observers shall be entitled to:
1910.1025(o)(2)(ii)(A)	Receive an explanation of the measurement procedures;
1910.1025(o)(2)(ii)(B)	Observe all steps related to the monitoring of lead performed at the place of exposure; and
1910.1025(o)(2)(ii)(C)	Record the results obtained or receive copies of the results when returned by the laboratory.
1910.1025(p)	Appendices. The information contained in the appendices to this section is not intended by itself, to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation.