

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

1.0 INTRODUCTION

As part of the Weill Cornell Medical College’s (WCMC) Environmental Health and Safety (EHS) Program Manual, this Lead Protection Program has been established to outline the types of lead-dust generating activities that may occur at the College, the applicable methods for protection and the responsibilities of the different personnel involved. This manual is in accordance with the Occupational Safety and Health Administration (OSHA) lead standard 29 CFR 1910.1025.

2.0 TABLE OF CONTENTS

Section Heading	Page #
1.0 – Introduction	1
2.0 – Table of Contents	1
3.0 – Objective	2
4.0 – Applicability	2
5.0 – Roles and Responsibilities	2
6.0 – Potential Lead Sources	3
7.0 – Exposure Assessments	4
8.0 – Exposure Levels	4
9.0 – Exposure Controls	5
10.0 – Classification of lead generating work	6
11.0 – Waste Disposal	8
12.0 – Training	9
13.0 – Record Retention, Availability, Revisions	9
14.0 – Definitions	10
15.0 – References	10
Appendix A – OSHA Substance Data Sheet for Occupational Exposure to Lead	
Appendix B – OSHA Employee standard summary - 1910.1025	

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 1 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

3.0 OBJECTIVE

By adhering to the requirements outlined in this manual, WCMC Supervisors and Employees will be able to perform the most common types of lead work in a manner that protects their health and safety as well as the health of WCMC students, staff, the public and environment.

4.0 APPLICABILITY

The following program applies to all WCMC employees who have an occupational exposure to airborne lead dust and/or fumes as well as to employees who plan, design or supervise work that may generate lead dust or result in lead contamination. Contractors who perform work on WCMC property or on behalf of WCMC are also required to abide by the requirements of this program.

This program does not apply to Child Occupied Facilities which are covered under the New York City Childhood Lead Poisoning Prevention Act of 2003. The use of lead and lead compounds in laboratory experiments is covered by EHS Program Manual 4.1 – Laboratory Chemical Hygiene Plan.

5.0 ROLES AND RESPONSIBILITIES

5.1 ENVIRONMENTAL HEALTH AND SAFETY (EHS)

- Serve as technical resource for WCMC employees.
- Determine the presence of lead in the work environment.
- Perform exposure monitoring for employees exposed to lead.
- Perform Personal Protective Equipment (PPE) assessments for employees with lead exposure.
- Review and approve proposed lead abatement procedures.
- Provide training for WCMC employees with occupational lead exposure.
- Manage, review and update the Lead Protection Program.

5.2 ENGINEERING & MAINTNENCE

- Notify EHS of work which may affect materials containing lead.
- Utilize all engineering, administrative and Personal Protective Equipment (PPE) controls required under this program.
- Ensure that all employees who are identified as having a potential exposure to lead are trained, medically tested and provided with PPE in accordance with this program.

5.3 CAPITAL PLANNING

- Identify and notify EHS of potential lead generating activities when developing, reviewing or assessing construction plans and/or activities.

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 2 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

- Ensure that all work is performed in a manner that does not result in overexposures of lead to WCMC personnel or the public.
- Include in all applicable scopes of work and/or contract documents language regarding the safe handling and disposal of lead and lead contaminated materials.
- Ensure that contractors who perform lead related work on behalf of WCMC are provided with a copy of this program and adhere to the requirements within.

5.4 CONTRACTORS/ABATEMENT COMPANIES

- Must perform all work which disturbs materials listed in Section 6 in accordance with this Manual and all local, state and federal regulations.
- Must submit proposed Lead Abatement Procedures to EHS for review prior to the commencement of any lead dust generating work.

5.5 SUPERVISORS

- Assess work tasks prior to assignment to employees to determine if there is a potential for lead exposure.
- Contact EHS for assistance where a definitive assessment can not be made of the potential for lead exposure.
- Ensure that employees assigned to perform lead work are trained, medically tested and provided with PPE in accordance with this program.
- Ensure the implementation and use of engineering and/or administrative controls.

5.6 EMPLOYEES

- Perform all assigned work in a manner consistent with this Manual.
- Utilize engineering, administrative and PPE controls required for the job.
- Notify immediate supervisor or EHS of previously unidentified lead generating activities.
- Practice good housekeeping and personal hygiene controls to reduce or eliminate the spreading of lead dust contamination.

5.7 WORKFORCE HEALTH AND SAFETY

- Provide medical clearance for the use of respirators in compliance with EHS Program Manual 7.1 – Respiratory Protection.
- Provide a program of biological monitoring and medical surveillance for all employees exposed to levels of inorganic lead above the action level of 30 ug/m(3) (TWA) for more than 30 days per year in compliance with 29 CFR 1910.1025.

6.0 POTENTIAL LEAD SOURCES

Lead is a soft, heavy and toxic metal. Environmental and occupational exposures to airborne lead can result in adverse short-term and long-term health effects. The primary routes of

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 3 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

exposure to lead are the inhalation and/or ingestion of lead dust or fumes. Examples of building material that may contain lead are:

- Interior and exterior paint applied prior to 1978
- Lead piping
- Radiation shielding
- Steel and iron primer
- Industrial paint
- Industrial electrical jacketing
- Roof flashing
- Tank linings
- Soft solder
- Glazed ceramics

7.0 EXPOSURE ASSESSMENTS

It is the role of the Manager/Supervisor to review all work procedures to determine if there is any potential for lead exposure or contamination. In making this determination, the Manager/Supervisor must consider whether the materials may contain lead and if so, can the work activities involving those materials generate dusts or fumes. EHS will perform, or coordinate, exposure assessments of all employees who are identified as being potentially exposed to significant amounts of lead in order to determine their exposure levels. The assessment will be performed at the start of all new projects and when there are significant changes to the work process of existing activities that may affect employee exposure levels. Exposure assessments will include some or all of the following techniques:

- Review of work activities
- Review of work location
- Sampling of materials for lead content
- Personal exposure monitoring

Where personal exposure monitoring is determined to be necessary, it will be conducted in accordance with the National Institute for Occupational Safety and Health (NIOSH) Manual of Analytical Methods and will be full-shift samples wherever possible.

8.0 EXPOSURE LEVELS

OSHA has set a lead Permissible Exposure Level (PEL) of 50 micrograms per cubic meter of air (ug/m³) calculated as an 8-hour Time Weighted Average (TWA). In addition, OSHA has set an Action Level (AL) of 30 ug/m³ TWA. Employees exposed above the AL for more than 30 days in any calendar year must be included in the medical monitoring portion of this program.

In order to assure that employees receive the appropriate protection required for the type of work they perform, the following actions must be followed based on an employee's actual or anticipated exposure level:

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 4 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

8.1 EXPOSURE BELOW THE ACTION LEVEL (AL)

Any employee who may have exposure to lead, but whose exposure is below the AL, shall receive a copy of Appendix A – OSHA Substance Data Sheet for Occupational Exposure to Lead and Appendix B – OSHA Employee Standard Summary.

8.2 EXPOSURE ABOVE THE ACTION LEVEL (AL)

All employees who are determined to be exposed above the AL, or for whom the possibility of skin or eye irritation exists, must receive training prior to initial job assignment. No employee shall be exposed to lead above the AL for more than 30 days per year without being included in a medical monitoring program which complies with the OSHA lead standard 29 CFR 1910.1025 as well as an EHS approved Lead Work Program.

8.3 EXPOSURE ABOVE THE PERMISSABLE EXPOSURE LEVEL (PEL)

No tasks at WCMC have been identified that routinely expose employees to concentrations of lead above the PEL. If a task is identified that exposes staff above the PEL and it can be demonstrated that engineering and administrative controls are not effective in reducing an employee’s exposure to below the PEL, an Exposure Control Program (ECP) specific to the type of work being performed must be developed and implemented prior to the start of work. The ECP must provision for each of the controls mandated by the OSHA lead standard 29 CFR 1910.1025 and must be approved by the Director of EHS. Where engineering and administrative controls are not sufficient in reducing exposures to below the PEL, they must still be utilized to reduce exposures to as low a level as possible.

9.0 EXPOSURE CONTROLS

9.1 ENGINEERING CONTROLS

Engineering controls must be the primary means of reducing employee exposures below the PEL. Examples of engineering controls include:

- Ventilation
- Encapsulation
- Air filtration
- Source capture
- Chemical peels and strippers

9.2 ADMINISTRATIVE CONTROLS

If it is determined that engineering controls alone are not sufficient to reduce exposures below the PEL, a program to reduce the exposure through Administrative Controls must be implemented in addition to the engineering controls.

Administrative Controls may include:

- Job rotation schedule

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 5 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

- Reduced work shifts
- Restricted work site access

9.3 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Where employees are exposed above the PEL, or if the employee requests one, the employer must provide and assure the use of respirators in compliance EHS Program Manual 7.1 – Respiratory Protection. In addition, employees must be provided with sufficient PPE to prevent skin or eye irritation and to prevent gross contamination of work clothes. EHS will be responsible for completing a PPE assessment for any employee exposed above the AL.

10.0 CLASSIFICATION OF LEAD GENERATING WORK

Because lead does not biodegrade, any amount of lead released into the work place becomes a source of environmental contamination. In addition, lead released in significant concentrations may result in adverse health effects to employees or other susceptible individuals. Therefore, all lead work must be performed in a manner consistent with this program.

Lead work will be placed in one of three classifications based on the exposure potential of the work. The exposure potential is the combined effect of the amount of lead dust or fumes a type of work may create and the duration of the work. The levels range from Level 1 (lowest) to Level 3 (highest). Examples of engineering controls and work practices that can reduce the amount of, or help contain, lead dust are included in each section. Employees must consider all available methods and implement the necessary controls to reduce contamination to as low a level as reasonably achievable. Any employee who is uncertain of the proper classification for a given assignment must notify EHS for assistance in making the determination.

10.1 LEVEL 1

Level 1 work is that which has the potential to generate negligible amounts of lead dust fumes or debris. This level of work is not expected to result in exposures above the Action Level. Such work includes but is not limited to the following work activities:

- Drilling small holes in building materials
- Hanging or removing objects from walls, ceilings or floors
- Minor disturbances, such as cutting or scraping, of building materials with less than 1 square foot total surface area
- Plumbing or electrical activities such as lead joint work on cast iron soil pipes or cable splicing
- Wet wiping or mopping of areas contaminated with lead dust

10.1.1 Control Procedures

- Use vacuums with a HEPA filter to capture lead dust at the source or to clean contaminated surfaces.
- Use drop cloths to capture debris and plastic sheeting to contain dust.

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 6 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

- Do not dry-sweep dust possibly contaminated with lead. Use either a wet mop/rag or HEPA vacuum.
- Utilize good personal hygiene practices, including keeping the work area clean, no smoking, eating or drinking in the work area and washing your hands after handling any lead materials.
- Use disposable gloves and eye protection where appropriate.

10.2 LEVEL 2

Level 2 work is that which is likely to generate moderate amounts of lead and may result in lead exposures over the Action Level but for which the scope of work is of limited size and/or duration such that exposures can be controlled through common engineering controls. Examples of Level 2 work include:

- Sawing, sanding, scraping or otherwise disturbing building materials which are known or assumed to be coated with lead based paint with a total surface area of between 1 and 10 square feet
- “Hot Work” such as burning, cutting or welding metals coated with lead based paint, and sweeping or otherwise disturbing dust which contains lead
- Removing or replacing window and door frames
- The handling, removal or installation of bulk lead metal for the purpose of radiation shielding

10.2.1 Control Procedures

- Use of vacuums with a HEPA filters to capture lead dust at the source or to clean contaminated surfaces.
- Contain the work area to prevent the spread of lead.
- Limit access to work areas to employees engaged in lead work only.
- Remove lead based paint from work surfaces by means other than heating or scraping (e.g. Chemical peels or strippers).
- Use PPE such as respirators or disposable gloves and suits.

10.3 LEVEL 3

Level 3 work includes that which has the potential to generate significant amounts of lead dust or fumes. Examples of level 3 work include:

- Sawing, sanding, scraping or otherwise disturbing building materials which are known or assumed to be coated with lead based paint with a total surface area of greater than 10 square feet.
- Extended “Hot Work” such as burning, cutting or welding metals containing lead or coated with lead based paint.
- Removing or replacing multiple window and/or door frames.
- Demolition of building material coated with lead based paint.

10.3.1 Control Procedures

Prior to beginning any level 3 lead work by employees, Management must submit a lead work plan to EHS for approval. The lead work plan must include a description of the type of work to be performed and the controls to

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 7 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

be utilized. Additionally, the plan must utilize all practical control measures necessary to reduce employee exposures to as low a level as possible. No employee shall be exposed to lead above the AL for more than 30 days per year without being included in a medical monitoring program which complies with the OSHA lead standard 29 CFR 1910.1025.

11.0 WASTE DISPOSAL

There are several Federal, State and Local regulations that control the handling, storage, labeling and disposal of hazardous waste. Generators must determine if waste streams that include lead contaminated materials, such as paint chips or building materials coated with lead paint, must be tested to determine if the waste is regulated. Examples of these waste streams are waste from abatements activities, and construction and demolitions, including all parts of the waste stream, not just the lead containing materials (e.g. paint). Employees should contact EHS for assistance in determining what waste is regulated. The handling of waste will be based on the following criteria:

11.1 SCRAP LEAD

The disposal and/or recycling procedures for scrap lead are outlined in Appendix N of EHS Program Manual 5.2 – Waste Disposal Procedures. Scrap lead that is recycled is exempt from testing under the Scrap Metal Exemption presented under 6NYCRR Part 371.1(c) (7).87

11.2 LEAD WASTE

Lead waste generated from WCMC work activities must be collected and stored in accordance with EHS Program Manual 5.2 – Waste Disposal Procedures. Examples of wastes include paint chips and contaminated equipment such as Personal Protective Equipment (PPE), tools, tarps or other materials that cannot be properly decontaminated. EHS will determine the classification of the waste and arrange for disposal at no cost.

11.3 WHOLE BUILDING DEMOLITION

Every effort must be made to remove all hazardous materials from buildings prior to demolition (e.g. mercury containing light bulbs or asbestos containing materials). Subsequently, all other debris resulting from large scale or whole building demolitions should be treated as a single waste stream. Typically, if the only remaining source of lead in this waste stream is lead based paint on building materials, debris from this type of activity would not be classified as hazardous waste when subjected to laboratory analysis, due to the relatively small ratio of lead to all other building materials, and can potentially be disposed of as construction and demolition waste.

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 8 of 10
---	---	--------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
---	-----------------------------	---

12.0 TRAINING

12.1 EMPLOYEES PERFORMING LEVEL 1 WORK

Any employee with a potential exposure to airborne lead must be provided with a copy Appendix A and B of the Weill Cornell Medical College Lead Protection Manual.

12.2 EMPLOYEES PERFORMING LEVEL 2 OR 3 WORK

Employees who are exposed to lead at or above the AL must receive a lead awareness training prior to their working with lead and annually thereafter as part of the employee's annual Right-to-Know instruction. This training will include information on the:

- Requirements of the OSHA standard
- Specific hazards associated with the employee's work environment
- Proper use of PPE
- Protective measures which can be taken
- Danger of lead to their bodies (including their reproductive systems)
- Employee rights under the OSHA standard

13.0 RECORD RETENTION, AVAILABILITY, AND REVISIONS

All records will be maintained in accordance with the requirements of the Occupational Safety & Health Administration (OSHA) lead standard 29 CFR 1910.1025. Records will be maintained in the following manner:

13.1 EXPOSURE MONITORING RECORDS

Exposure monitoring records and results shall be maintained in each employee's personnel file for a period of forty years or for the duration of employment plus 20 years, whichever is longer. Exposure monitoring records must include: 1) 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, 2) A description of the sampling and analytical methods used and evidence of their accuracy, 3) The type of respiratory protective devices worn, if any, 3) Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent, 4) The environmental variables that could affect the measurement of employee exposure.

13.2 TRAINING RECORDS

EHS will maintain all training records for at least 3 years after the date at which the training occurred. The training records shall include the dates of the training sessions, summary of the material covered in the training sessions, names and qualifications of

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 9 of 10
--------------------------------------	--	-------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

persons conducting the training and names and job titles of persons attending the training sessions.

13.3 MEDICAL SURVAILENCE RECORDS

Medical records of WCMC faculty and staff will be maintained by New York-Presbyterian Hospital Workforce Health and Safety. The records will document all results of exposure monitoring, medical examinations and tests performed in compliance with 29 CFR 1910.1025. Copies of healthcare professionals' written opinions and employee complaints regarding lead exposure incidents will be kept in the medical record. Medical records will be kept confidential and disclosed only with the employee's written permission except as required by 29 CFR 1910.105 or by law. Medical records shall be maintained for at least 40 years or the duration of employment plus 20 years, whichever is longer.

14.0 DEFINITIONS

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

Lead Based Paint: Paint that contains 0.5 % or more of lead.

Lead Work: Work which generates lead dust or fumes.

HEPA (High Efficiency Particle Air) Filter: Filters rated to remove at least 99.97% of airborne particles 0.3 micrometers (μm) in diameter.

15.0 REFERENCES

Occupational Safety & Health Administration (OSHA) lead standard 29 CFR 1910.1025

The New York City Childhood Lead Poisoning Prevention Act of 2003

Environmental Protection Agency (EPA) 40 CFR Part 745 Lead; Identification of Dangerous Levels of Lead

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> 10 of 10
---	---	---------------------------------

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

APPENDIX A

OSHA Substance Data Sheet for Occupational Exposure to Lead

(Refer to next page)

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> Appendix A
---	---	-----------------------------------



Regulations (Standards - 29 CFR)

Substance data sheet for occupational exposure to lead - 1910.1025 App A

[← Regulations \(Standards - 29 CFR\) - Table of Contents](#)

• Part Number:	1910
• Part Title:	Occupational Safety and Health Standards
• Subpart:	Z
• Subpart Title:	Toxic and Hazardous Substances
• Standard Number:	1910.1025 App A
• Title:	Substance data sheet for occupational exposure to lead

I. SUBSTANCE IDENTIFICATION

A. Substance: Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds.

B. Compounds Covered by the Standard: The word "lead" when used in this standard means elemental lead, all inorganic lead compounds and a class of organic lead compounds called lead soaps. This standard does not apply to other organic lead compounds.

C. Uses: Exposure to lead occurs in at least 120 different occupations, including primary and secondary lead smelting, lead storage battery manufacturing, lead pigment manufacturing and use, solder manufacturing and use, shipbuilding and ship repairing, auto manufacturing, and printing.

D. Permissible Exposure: The Permissible Exposure Limit (PEL) set by the standard is 50 micrograms of lead per cubic meter of air (50 ug/m³), averaged over an 8-hour workday.

E. Action Level: The standard establishes an action level of 30 micrograms per cubic meter of air (30 ug/m³), time weighted average, based on an 8-hour work-day. The action level initiates several requirements of the standard, such as exposure monitoring, medical surveillance, and training and education.

II. HEALTH HAZARD DATA

A. Ways in which lead enters your body. When absorbed into your body in certain doses lead is a toxic substance. The object of the lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed.

Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin. When lead is scattered in the air as a dust, fume or mist it can be inhaled and absorbed through your lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion.

A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole body systems.

B. Effects of overexposure to lead - (1) Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

(2) Long-term (chronic) overexposure. Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain.

Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy.

Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible.

Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and stillbirth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women. The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood.

Overexposure to lead also disrupts the blood-forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased

oxygen carrying capacity in the blood.

(3) Health protection goals of the standard. Prevention of adverse health effects for most workers from exposure to lead throughout a working lifetime requires that worker blood lead (PbB) levels be maintained at or below forty micrograms per one hundred grams of whole blood (40 ug/100g). The blood lead levels of workers (both male and female workers) who intend to have children should be maintained below 30 ug/100g to minimize adverse reproductive health effects to the parents and to the developing fetus.

The measurement of your blood lead level is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels (PbB) are most often reported in units of milligrams (mg) or micrograms (ug) of lead (1 mg=1000 ug) per 100 grams (100g), 100 milliliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime PbB's are expressed in the form of mg% or ug%. This is a shorthand notation for 100g, 100 ml, or dl.

PbB measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. PbB measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead-related diseases, however, has focused heavily on associations between PbBs and various diseases. As a result, your PbB is an important indicator of the likelihood that you will gradually acquire a lead-related health impairment or disease.

Once your blood lead level climbs above 40 ug/100g, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular PbB in a given person will cause a particular effect. Studies have associated fatal encephalopathy with PbBs as low as 150 ug/100g. Other studies have shown other forms of diseases in some workers with PbBs well below 80 ug/100g. Your PbB is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated PbBs. The longer you have an elevated PbB, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage.

The best way to prevent all forms of lead-related impairments and diseases-both short term and long term- is to maintain your PbB below 40 ug/100g. The provisions of the standard are designed with this end in mind. Your employer has prime responsibility to assure that the provisions of the standard are complied with both by the company and by individual workers. You as a worker, however, also have a responsibility to assist your employer in complying with the standard. You can play a key role in protecting your own health by learning about the lead hazards and their control, learning what the standard requires, following the standard where it governs your own actions, and seeing that your employer complies with provisions governing his actions.

(4) Reporting signs and symptoms of health problems. You should immediately notify your employer if you develop signs or symptoms associated with lead poisoning or if you desire medical advice concerning the effects of current or past exposure to lead on your ability to have a healthy child. You should also notify your employer if you have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases your employer must make available to you appropriate medical examinations or consultations. These must be provided at no cost to you and at a reasonable time and place.

The standard contains a procedure whereby you can obtain a second opinion by a physician of your choice if the employer selected the initial physician.

[56 FR 24686, May 31, 1991]

[← Next Standard \(1910.1025 App B\)](#)

[← Regulations \(Standards - 29 CFR\) - Table of Contents](#)

[⬆ Back to Top](#)

www.osha.gov

www.dol.gov

[Contact Us](#) | [Freedom of Information Act](#) | [Customer Survey](#)
[Privacy and Security Statement](#) | [Disclaimers](#)

Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210

<u>Program Title</u> Lead Management	<u>Program No.</u> 7.6.1	<u>Classification</u> General Safety
--	------------------------------------	--

APPENDIX B

OSHA Employee standard summary - 1910.1025

(Refer to next page)

<u>Date Issued:</u> March 7, 2008	<u>Supersedes:</u> All Programs Prior to the Date Issued	<u>Page:</u> Appendix B
---	---	-----------------------------------



U.S. Department of Labor
Occupational Safety & Health Administration

www.osha.gov



Search



Advanced Search | [A-Z Index](#)

[Regulations \(Standards - 29 CFR\)](#)

Employee standard summary - 1910.1025 App B

[← Regulations \(Standards - 29 CFR\) - Table of Contents](#)

• Part Number:	1910
• Part Title:	Occupational Safety and Health Standards
• Subpart:	Z
• Subpart Title:	Toxic and Hazardous Substances
• Standard Number:	1910.1025 App B
• Title:	Employee standard summary

This appendix summarizes key provisions of the standard that you as a worker should become familiar with.

I. PERMISSIBLE EXPOSURE LIMIT (PEL) - PARAGRAPH (C)

The standard sets a permissible exposure limit (PEL) of fifty micrograms of lead per cubic meter of air (50 ug/m³), averaged over an 8-hour work-day. This is the highest level of lead in air to which you may be permissibly exposed over an 8-hour workday. Since it is an 8-hour average it permits short exposures above the PEL so long as for each 8-hour work day your average exposure does not exceed the PEL.

This standard recognizes that your daily exposure to lead can extend beyond a typical 8-hour workday as the result of overtime or other alterations in your work schedule. To deal with this, the standard contains a formula which reduces your permissible exposure when you are exposed more than 8 hours. For example, if you are exposed to lead for 10 hours a day, the maximum permitted average exposure would be 40 ug/m³.

II. EXPOSURE MONITORING - PARAGRAPH (D)

If lead is present in the workplace where you work in any quantity, your employer is required to make an initial determination of whether the action level is exceeded for any employee. This initial determination must include instrument monitoring of the air for the presence of lead and must cover the exposure of a representative number of employees who are reasonably believed to have the highest exposure levels. If your employer has conducted appropriate air sampling for lead in the past year he may use these results. If there have been any employee complaints of symptoms which may be attributable to exposure to lead or if there is any other information or observations which would indicate employee exposure to lead, this must also be considered as part of the initial determination. This initial determination must have been completed by March 31, 1979. If this initial determination shows that a reasonable possibility exists that any employee may be exposed, without regard to respirators, over the action level (30 ug/m³) your employer must set up an air monitoring program to determine the exposure level of every employee exposed to lead at your workplace.

In carrying out this air monitoring program, your employer is not required to monitor the exposure of every employee, but he must monitor a representative number of employees and job types. Enough sampling must be done to enable each employee's exposure level to be reasonably represented by at least one full shift (at least 7 hours) air sample. In addition, these air samples must be taken under conditions which represent each employee's regular, daily exposure to lead. All initial exposure monitoring must have been completed by May 30, 1979.

If you are exposed to lead and air sampling is performed, your employer is required to quickly notify you in writing of air monitoring results which represent your exposure. If the results indicate your exposure exceeds the PEL (without regard to your use of respirators),

then your employer must also notify you of this in writing, and provide you with a description of the corrective action that will be taken to reduce your exposure.

Your exposure must be rechecked by monitoring every six months if your exposure is over the action level but below the PEL. Air monitoring must be repeated every 3 months if you are exposed over the PEL. Your employer may discontinue monitoring for you if 2 consecutive measurements, taken at least two weeks apart, are below the action level. However, whenever there is a production, process, control, or personnel change at your workplace which may result in new or additional exposure to lead, or whenever there is any other reason to suspect a change which may result in new or additional exposure to lead, your employer must perform additional monitoring.

III. METHODS OF COMPLIANCE - PARAGRAPH (E)

Your employer is required to assure that no employee is exposed to lead in excess of the PEL. The standard establishes a priority of methods to be used to meet the PEL.

IV. RESPIRATORY PROTECTION - PARAGRAPH (F)

Your employer is required to provide and assure your use of respirators when your exposure to lead is not controlled below the PEL by other means. The employer must pay the cost of the respirator. Whenever you request one, your employer is also required to provide you a respirator even if your air exposure level does not exceed the PEL. You might desire a respirator when, for example, you have received medical advice that your lead absorption should be decreased. Or, you may intend to have children in the near future, and want to reduce the level of lead in your body to minimize adverse reproductive effects. While respirators are the least satisfactory means of controlling your exposure, they are capable of providing significant protection if properly chosen, fitted, worn, cleaned, maintained, and replaced when they stop providing adequate protection.

Your employer is required to select respirators from the seven types listed in Table II of the Respiratory Protection section of the standard (Sec. 1910.1025(f)). Any respirator chosen must be approved by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 42 CFR part 84. This respirator selection table will enable your employer to choose a type of respirator that will give you a proper amount of protection based on your airborne lead exposure. Your employer may select a type of respirator that provides greater protection than that required by the standard; that is, one recommended for a higher concentration of lead than is present in your workplace. For example, a powered air-purifying respirator (PAPR) is much more protective than a typical negative pressure respirator, and may also be more comfortable to wear. A PAPR has a filter, cartridge, or canister to clean the air, and a power source that continuously blows filtered air into your breathing zone. Your employer might make a PAPR available to you to ease the burden of having to wear a respirator for long periods of time. The standard provides that you can obtain a PAPR upon request.

Your employer must also start a Respiratory Protection Program. This program must include written procedures for the proper selection, use, cleaning, storage, and maintenance of respirators.

Your employer must ensure that your respirator facepiece fits properly. Proper fit of a respirator facepiece is critical to your protection from airborne lead. Obtaining a proper fit on each employee may require your employer to make available several different types of respirator masks. To ensure that your respirator fits properly and that facepiece leakage is minimal, your employer must give you either a qualitative or quantitative fit test as specified in Appendix A of the Respiratory Protection standard located at 29 CFR 1910.134.

You must also receive from your employer proper training in the use of respirators. Your employer is required to teach you how to wear a respirator, to know why it is needed, and to understand its limitations.

The standard provides that if your respirator uses filter elements, you must be given an opportunity to change the filter elements whenever an increase in breathing resistance is detected. You also must be permitted to periodically leave your work area to wash your face and respirator facepiece whenever necessary to prevent skin irritation. If you ever have difficulty in breathing during a fit test or while using a respirator, your employer must make a medical examination available to you to determine whether you can safely wear a respirator. The result of this examination may be to give you a positive pressure respirator

(which reduces breathing resistance) or to provide alternative means of protection.

V. PROTECTIVE WORK CLOTHING AND EQUIPMENT - PARAGRAPH (G)

If you are exposed to lead above the PEL, or if you are exposed to lead compounds such as lead arsenate or lead azide which can cause skin and eye irritation, your employer must provide you with protective work clothing and equipment appropriate for the hazard. If work clothing is provided, it must be provided in a clean and dry condition at least weekly, and daily if your airborne exposure to lead is greater than 200 ug/m³. Appropriate protective work clothing and equipment can include coveralls or similar full-body work clothing, gloves, hats, shoes or disposable shoe coverlets, and face shields or vented goggles. Your employer is required to provide all such equipment at no cost to you. He is responsible for providing repairs and replacement as necessary, and also is responsible for the cleaning, laundering or disposal of protective clothing and equipment. Contaminated work clothing or equipment must be removed in change rooms and not worn home or you will extend your exposure and expose your family since lead from your clothing can accumulate in your house, car, etc. Contaminated clothing which is to be cleaned, laundered or disposed of must be placed in closed containers in the change room. At no time may lead be removed from protective clothing or equipment by any means which disperses lead into the workroom air.

VI. HOUSEKEEPING - PARAGRAPH (H)

Your employer must establish a housekeeping program sufficient to maintain all surfaces as free as practicable of accumulations of lead dust. Vacuuming is the preferred method of meeting this requirement, and the use of compressed air to clean floors and other surfaces is absolutely prohibited. Dry or wet sweeping, shoveling, or brushing may not be used except where vacuuming or other equally effective methods have been tried and do not work. Vacuums must be used and emptied in a manner which minimizes the reentry of lead into the workplace.

VII. HYGIENE FACILITIES AND PRACTICES - PARAGRAPH (I)

The standard requires that change rooms, showers, and filtered air lunchrooms be constructed and made available to workers exposed to lead above the PEL. When the PEL is exceeded the employer must assure that food and beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied, except in these facilities. Change rooms, showers, and lunchrooms, must be used by workers exposed in excess of the PEL. After showering, no clothing or equipment worn during the shift may be worn home, and this includes shoes and underwear. Your own clothing worn during the shift should be carried home and cleaned carefully so that it does not contaminate your home. Lunchrooms may not be entered with protective clothing or equipment unless surface dust has been removed by vacuuming, downdraft booth, or other cleaning method. Finally, workers exposed above the PEL must wash both their hands and faces prior to eating, drinking, smoking or applying cosmetics.

All of the facilities and hygiene practices just discussed are essential to minimize additional sources of lead absorption from inhalation or ingestion of lead that may accumulate on you, your clothes, or your possessions. Strict compliance with these provisions can virtually eliminate several sources of lead exposure which significantly contribute to excessive lead absorption.

VIII. MEDICAL SURVEILLANCE - PARAGRAPH (J)

The medical surveillance program is part of the standard's comprehensive approach to the prevention of lead-related disease. Its purpose is to supplement the main thrust of the standard which is aimed at minimizing airborne concentrations of lead and sources of ingestion. Only medical surveillance can determine if the other provisions of the standard have affectively protected you as an individual. Compliance with the standard's provision to protect most workers from the adverse effects of lead exposure, but may not be satisfactory to protect individual workers (1) who have high body burdens of lead acquired over past years, (2) who have additional uncontrolled sources of non-occupational lead exposure, (3) who exhibit unusual variations in lead absorption rates, or (4) who have specific non-work related medical conditions which could be aggravated by lead exposure (e.g., renal disease, anemia). In addition, control systems may fail, or hygiene and respirator programs may be inadequate. Periodic medical surveillance of individual workers will help detect those failures. Medical surveillance will also be important to protect your reproductive ability-regardless of whether you are a man or woman.

All medical surveillance required by the standard must be performed by or under the supervision of a licensed physician. The employer must provide required medical surveillance without cost to employees and at a reasonable time and place. The standard's medical surveillance program has two parts-periodic biological monitoring and medical examinations.

Your employer's obligation to offer you medical surveillance is triggered by the results of the air monitoring program. Medical surveillance must be made available to all employees who are exposed in excess of the action level for more than 30 days a year. The initial phase of the medical surveillance program, which includes blood lead level tests and medical examinations, must be completed for all covered employees no later than August 28, 1979. Priority within this first round of medical surveillance must be given to employees whom the employer believes to be at greatest risk from continued exposure (for example, those with the longest prior exposure to lead, or those with the highest current exposure). Thereafter, the employer must periodically make medical surveillance-both biological monitoring and medical examinations-available to all covered employees.

Biological monitoring under the standard consists of blood lead level (PbB) and zinc protoporphyrin tests at least every 6 months after the initial PbB test. A zinc protoporphyrin (ZPP) test is a very useful blood test which measures an effect of lead on your body. Thus biological monitoring under the standard is currently limited to PbB testing. If a worker's PbB exceeds 40 ug/100g the monitoring frequency must be increased from every 6 months to at least every 2 months and not reduced until two consecutive PbBs indicate a blood lead level below 40 ug/100g. Each time your PbB is determined to be over 40 ug/100g, your employer must notify you of this in writing within five working days of his receipt of the test results. The employer must also inform you that the standard requires temporary medical removal with economic protection when your PbB exceeds certain criteria. (See Discussion of Medical Removal Protection-Paragraph (k).) During the first year of the standard, this removal criterion is 80 ug/100g. Anytime your PbB exceeds 80 ug/100g your employer must make available to you a prompt follow-up PbB test to ascertain your PbB. If the two tests both exceed 80 ug/100g and you are temporarily removed, then your employer must make successive PbB tests available to you on a monthly basis during the period of your removal.

Medical examinations beyond the initial one must be made available on an annual basis if your blood lead level exceeds 40 ug/100g at any time during the preceding year. The initial examination will provide information to establish a baseline to which subsequent data can be compared. An initial medical examination must also be made available (prior to assignment) for each employee being assigned for the first time to an area where the airborne concentration of lead equals or exceeds the action level. In addition, a medical examination or consultation must be made available as soon as possible if you notify your employer that you are experiencing signs or symptoms commonly associated with lead poisoning or that you have difficulty breathing while wearing a respirator or during a respirator fit test. You must also be provided a medical examination or consultation if you notify your employer that you desire medical advice concerning the effects of current or past exposure to lead on your ability to procreate a healthy child.

Finally, appropriate follow-up medical examinations or consultations may also be provided for employees who have been temporarily removed from exposure under the medical removal protection provisions of the standard. (See Part IX, below.)

The standard specifies the minimum content of pre-assignment and annual medical examinations. The content of other types of medical examinations and consultations is left up to the sound discretion of the examining physician. Pre-assignment and annual medical examinations must include (1) a detailed work history and medical history, (2) a thorough physical examination, and (3) a series of laboratory tests designed to check your blood chemistry and your kidney function. In addition, at any time upon your request, a laboratory evaluation of male fertility will be made (microscopic examination of a sperm sample), or a pregnancy test will be given.

The standard does not require that you participate in any of the medical procedures, tests, etc. which your employer is required to make available to you. Medical surveillance can, however, play a very important role in protecting your health. You are strongly encouraged, therefore, to participate in a meaningful fashion. The standard contains a multiple physician review mechanism which would give you a chance to have a physician of your choice directly participate in the medical surveillance program. If you were dissatisfied with an examination by a physician chosen by your employer, you could select a second physician to conduct an

independent analysis. The two doctors would attempt to resolve any differences of opinion, and select a third physician to resolve any firm dispute. Generally your employer will choose the physician who conducts medical surveillance under the lead standard-unless you and your employer can agree on the choice of a physician or physicians. Some companies and unions have agreed in advance, for example, to use certain independent medical laboratories or panels of physicians. Any of these arrangements are acceptable so long as required medical surveillance is made available to workers.

The standard requires your employer to provide certain information to a physician to aid in his or her examination of you. This information includes (1) the standard and its appendices, (2) a description of your duties as they relate to lead exposure, (3) your exposure level, (4) a description of personal protective equipment you wear, (5) prior blood lead level results, and (6) prior written medical opinions concerning you that the employer has. After a medical examination or consultation the physician must prepare a written report which must contain (1) the physician's opinion as to whether you have any medical condition which places you at increased risk of material impairment to health from exposure to lead, (2) any recommended special protective measures to be provided to you, (3) any blood lead level determinations, and (4) any recommended limitation on your use of respirators. This last element must include a determination of whether you can wear a powered air purifying respirator (PAPR) if you are found unable to wear a negative pressure respirator.

The medical surveillance program of the lead standard may at some point in time serve to notify certain workers that they have acquired a disease or other adverse medical condition as a result of occupational lead exposure. If this is true, these workers might have legal rights to compensation from public agencies, their employers, firms that supply hazardous products to their employers, or other persons. Some states have laws, including worker compensation laws, that disallow a worker who learns of a job-related health impairment to sue, unless the worker sues within a short period of time after learning of the impairment. (This period of time may be a matter of months or years.) An attorney can be consulted about these possibilities. It should be stressed that OSHA is in no way trying to either encourage or discourage claims or lawsuits. However, since results of the standard's medical surveillance program can significantly affect the legal remedies of a worker who has acquired a job-related disease or impairment, it is proper for OSHA to make you aware of this.

The medical surveillance section of the standard also contains provisions dealing with chelation. Chelation is the use of certain drugs (administered in pill form or injected into the body) to reduce the amount of lead absorbed in body tissues. Experience accumulated by the medical and scientific communities has largely confirmed the effectiveness of this type of therapy for the treatment of very severe lead poisoning. On the other hand, it has also been established that there can be a long list of extremely harmful side effects associated with the use of chelating agents. The medical community has balanced the advantages and disadvantages resulting from the use of chelating agents in various circumstances and has established when the use of these agents is acceptable. The standard includes these accepted limitations due to a history of abuse of chelation therapy by some lead companies. The most widely used chelating agents are calcium disodium EDTA, (Ca Na₂ EDTA), Calcium Disodium Versenate (Versenate), and d-penicillamine (pencillamine or Cupramine).

The standard prohibits "prophylactic chelation" of any employee by any person the employer retains, supervises or controls. "Prophylactic chelation" is the routine use of chelating or similarly acting drugs to prevent elevated blood levels in workers who are occupationally exposed to lead, or the use of these drugs to routinely lower blood lead levels to predesignated concentrations believed to be 'safe'. It should be emphasized that where an employer takes a worker who has no symptoms of lead poisoning and has chelation carried out by a physician (either inside or outside of a hospital) solely to reduce the worker's blood lead level, that will generally be considered prophylactic chelation. The use of a hospital and a physician does not mean that prophylactic chelation is not being performed. Routine chelation to prevent increased or reduce current blood lead levels is unacceptable whatever the setting.

The standard allows the use of "therapeutic" or "diagnostic" chelation if administered under the supervision of a licensed physician in a clinical setting with thorough and appropriate medical monitoring. Therapeutic chelation responds to severe lead poisoning where there are marked symptoms. Diagnostic chelation involved giving a patient a dose of the drug then collecting all urine excreted for some period of time as an aid to the diagnosis of lead poisoning.

In cases where the examining physician determines that chelation is appropriate, you must be notified in writing of this fact before such treatment. This will inform you of a potentially harmful treatment, and allow you to obtain a second opinion.

IX. MEDICAL REMOVAL PROTECTION - PARAGRAPH (K)

Excessive lead absorption subjects you to increased risk of disease. Medical removal protection (MRP) is a means of protecting you when, for whatever reasons, other methods, such as engineering controls, work practices, and respirators, have failed to provide the protection you need. MRP involves the temporary removal of a worker from his or her regular job to a place of significantly lower exposure without any loss of earnings, seniority, or other employment rights or benefits. The purpose of this program is to cease further lead absorption and allow your body to naturally excrete lead which has previously been absorbed. Temporary medical removal can result from an elevated blood lead level, or a medical opinion. Up to 18 months of protection is provided as a result of either form of removal. The vast majority of removed workers, however, will return to their former jobs long before this eighteen month period expires. The standard contains special provisions to deal with the extraordinary but possible case where a longterm worker's blood lead level does not adequately decline during eighteen months of removal.

During the first year of the standard, if your blood lead level is 80 ug/100g or above you must be removed from any exposure where your air lead level without a respirator would be 100 ug/m(3) or above. If you are removed from your normal job you may not be returned until your blood lead level declines to at least 60 ug/100g. These criteria for removal and return will change according to the following schedule:

	Removal blood lead (ug/100 g)	Air lead (ug/m(3))	Return blood lead (ug/100 g)
After Mar. 1, 1980..	70 and above....	50 and above.	At or below 50.
After Mar. 1, 1981..	60 and above....	30 and above.	At or below 40.
After Mar. 1, 1983..	50 and above averaged over six months.....	30 and above.	Do.

You may also be removed from exposure even if your blood lead levels are below these criteria if a final medical determination indicates that you temporarily need reduced lead exposure for medical reasons. If the physician who is implementing your employers medical program makes a final written opinion recommending your removal or other special protective measures, your employer must implement the physician's recommendation. If you are removed in this manner, you may only be returned when the doctor indicates that it is safe for you to do so.

The standard does not give specific instructions dealing with what an employer must do with a removed worker. Your job assignment upon removal is a matter for you, your employer and your union (if any) to work out consistent with existing procedures for job assignments. Each removal must be accomplished in a manner consistent with existing collective bargaining relationships. Your employer is given broad discretion to implement temporary removals so long as no attempt is made to override existing agreements. Similarly, a removed worker is provided no right to veto an employer's choice which satisfies the standard.

In most cases, employers will likely transfer removed employees to other jobs with sufficiently low lead exposure. Alternatively, a worker's hours may be reduced so that the time weighted average exposure is reduced, or he or she may be temporarily laid off if no other alternative is feasible.

In all of these situation, MRP benefits must be provided during the period of removal - i.e., you continue to receive the same earnings, seniority, and other rights and benefits you would have had if you had not been removed. Earnings includes more than just your base wage; it includes overtime, shift differentials, incentives, and other compensation you would have earned if you had not been removed. During the period of removal you must also be provided with appropriate follow-up medical surveillance. If you were removed because your blood lead level was too high, you must be provided with a monthly blood test. If a medical opinion caused your removal, you must be provided medical tests or examinations that the

doctor believes to be appropriate. If you do not participate in this follow up medical surveillance, you may lose your eligibility for MRP benefits.

When you are medically eligible to return to your former job, your employer must return you to your "former job status." This means that you are entitled to the position, wages, benefits, etc., you would have had if you had not been removed. If you would still be in your old job if no removal had occurred that is where you go back. If not, you are returned consistent with whatever job assignment discretion your employer would have had if no removal had occurred. MRP only seeks to maintain your rights, not expand them or diminish them.

If you are removed under MRP and you are also eligible for worker compensation or other compensation for lost wages, your employer's MRP benefits obligation is reduced by the amount that you actually receive from these other sources. This is also true if you obtain other employment during the time you are laid off with MRP benefits.

The standard also covers situations where an employer voluntarily removes a worker from exposure to lead due to the effects of lead on the employee's medical condition, even though the standard does not require removal. In these situations MRP benefits must still be provided as though the standard required removal. Finally, it is important to note that in all cases where removal is required, respirators cannot be used as a substitute. Respirators may be used before removal becomes necessary, but not as an alternative to a transfer to a low exposure job, or to a lay-off with MRP benefits.

X. EMPLOYEE INFORMATION AND TRAINING - PARAGRAPH (L)

Your employer is required to provide an information and training program for all employees exposed to lead above the action level or who may suffer skin or eye irritation from lead. This program must inform these employees of the specific hazards associated with their work environment, protective measures which can be taken, the danger of lead to their bodies (including their reproductive systems), and their rights under the standard. In addition your employer must make readily available to all employees, including those exposed below the action level, a copy of the standard and its appendices and must distribute to all employees any materials provided to the employer by the Occupational Safety and Health Administration (OSHA).

Your employer is required to complete this training program for all employees by August 28, 1979. After this date, all new employees must be trained prior to initial assignment to areas where there is a possibility of exposure over the action level.

This training program must also be provided at least annually thereafter.

XI. SIGNS - PARAGRAPH (M)

The standard requires that the following warning sign be posted in work areas where the exposure to lead exceeds the PEL:

WARNING
LEAD WORK AREA
NO SMOKING OR EATING

XII. RECORDKEEPING - PARAGRAPH (N)

Your employer is required to keep all records of exposure monitoring for airborne lead. These records must include the name and job classification of employees measured, details of the sampling and analytic techniques, the results of this sampling, and the type of respiratory protection being worn by the person sampled. Your employer is also required to keep all records of biological monitoring and medical examination results. These must include the names of the employees, the physician's written opinion, and a copy of the results of the examination. All of the above kinds of records must be kept for 40 years, or for at least 20 years after your termination of employment, whichever is longer.

Recordkeeping is also required if you are temporarily removed from your job under the medical removal protection program. This record must include your name and social security number, the date of your removal and return, how the removal was or is being accomplished, and whether or not the reason for the removal was an elevated blood lead level. Your employer is required to keep each medical removal record only for as long as the

duration of an employee's employment.

The standard requires that if you request to see or copy environmental monitoring, blood lead level monitoring, or medical removal records, they must be made available to you or to a representative that you authorize. Your union also has access to these records. Medical records other than PbB's must also be provided upon request to you, to your physician or to any other person whom you may specifically designate. Your union does not have access to your personal medical records unless you authorize their access.

XIII. OBSERVATIONS OF MONITORING - PARAGRAPH (O)

When air monitoring for lead is performed at your workplace as required by this standard, your employer must allow you or someone you designate to act as an observer of the monitoring. Observers are entitled to an explanation of the measurement procedure, and to record the results obtained. Since results will not normally be available at the time of the monitoring, observers are entitled to record or receive the results of the monitoring when returned by the laboratory. Your employer is required to provide the observer with any personal protective devices required to be worn by employees working in the area that is being monitored. The employer must require the observer to wear all such equipment and to comply with all other applicable safety and health procedures.

XIV. FOR ADDITIONAL INFORMATION

A. Copies of the Standard and explanatory material may be obtained by writing or calling the OSHA Docket Office, U.S. Department of Labor, room N2634, 200 Constitution Avenue, N.W., Washington DC 20210. Telephone: (202) 219-7894.

1. The standard and summary of the statement of reasons (preamble), Federal Register, Volume 43, pp. 52952-53014, November 14, 1978.
2. The full statement of reasons (preamble) Federal Register, vol. 43, pp. 54354-54509, November 21, 1978.
3. Partial Administrative Stay and Corrections to the standard, (44 FR 5446-5448) January 26, 1979.
4. Notice of the Partial Judicial Stay (44 FR 14554-14555) March 13, 1979.
5. Corrections to the preamble, Federal Register, vol. 44, pp. 20680-20681, April 6, 1979.
6. Additional correction to the preamble concerning the construction industry, Federal Register, vol. 44, p. 50338, August 28, 1979.
7. Appendices to the standard (Appendices A, B, C), Federal Register, Vol. 44, pp. 60980-60995, October 23, 1979.
8. Corrections to appendices, Federal Register, Vol. 44, 68828, November 30, 1979.
9. Revision to the standard and an additional appendix (Appendix D), Federal Register, Vol. 47, pp. 51117-51119, November 12, 1982.
10. Notice of reopening of lead rulemaking for nine remand industry sectors, Federal Register, vol. 53, pp. 11511-11513, April 7, 1988.
11. Statement of reasons, Federal Register, vol. 54, pp. 29142-29275, July 11, 1989.
12. Statement of reasons, Federal Register, vol. 55, pp. 3146-3167, January 30, 1990.
13. Correction to appendix B, Federal Register, vol. 55, pp. 4998-4999, February 13, 1991.
14. Correction to appendices, Federal Register, vol. 56, p. 24686, May 31, 1991.

B. Additional information about the standard, its enforcement, and your employer's compliance can be obtained from the nearest OSHA Area Office listed in your telephone directory under United States Government/Department of Labor.

[60 FR 52856, Oct. 11, 1995; 63 FR 1152, Jan. 8, 1998; 71 FR 16673, April 3,

2006]

[← Next Standard \(1910.1025 App C\)](#)

[← Regulations \(Standards - 29 CFR\) - Table of Contents](#)

[⬆ Back to Top](#)

www.osha.gov

www.dol.gov

[Contact Us](#) | [Freedom of Information Act](#) | [Customer Survey](#)
[Privacy and Security Statement](#) | [Disclaimers](#)

Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210