

# LEAD AWARENESS

## Supplement to Standard Training Module

### TRAINING REQUIREMENTS OVERVIEW

This standard Vivid training module provides a general overview of the lead standard for general industry. It is important to note that facilities **must** have their own written site-specific lead compliance program in place, when employee exposure limits are exceeded. In addition, facilities **must** to train their employees on the specific plans.

Facility-specific training **must** be provided in addition to the general overview for:

1. **All employees with potential exposure to lead (work around or with), or actual exposure below the action level - must receive facility-specific information in addition to the general overview. The additional training **must** cover:**

- **Contents of Appendix A and B of the lead standard**

Frequency: Training **must** be provided at the time of initial employment, or when the employee's actual or potential lead exposure changes.

2. **Employees exposed to concentrations of lead at or above the action level - must receive additional facility-specific information. The additional training **must** cover:**

- **Content of the lead standard and appendices**
- **Operations where exposure is likely**
- **Specifics of the respiratory protection program**
- **Medical surveillance program**
- **Health effects of exposure to lead**
- **Engineering & work practice controls implemented to protect employees from exposure**
- **Written compliance plan**
- **Policy on use of chelating agents**
- **Requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels**
- **Results of lead exposure monitoring**

Frequency: Training **must** be provided at the time of initial employment, and at least annually, thereafter.

## GENERAL OVERVIEW OF THE STANDARD

### LEAD – 29 CFR 1910.1025

**PURPOSE:** To provide effective control measures of actual or potential exposure to lead, through appropriate engineering and work practices and procedures for working with or handling lead.

1. **SCOPE:** Applies to all occupational exposures to lead, except the construction industry covered by 29 CFR Part 126 & agricultural operations covered by 29 CFR Part 128.
2. **PERMISSIBLE EXPOSURE LIMIT (PEL):** The employer shall ensure that no employee is exposed to an airborne concentration of lead in excess of the following:
  - Time-weighted average (TWA) – 50 micrograms per cubic meter (ug/m<sup>3</sup>) averaged over an 8-hour period
  - If employee exposure to lead is greater than 8 hours, the standard defines a calculated adjustment to the PEL
3. **EXPOSURE MONITORING:** Requirements for personal breathing zone air sampling are outlined in the standard. Sampling must be conducted as follows:

*Initial Monitoring* – required for employees that may be exposed to lead at or above the action level (30 ug/m<sup>3</sup>). Requirements are stated for:

- Determination of employees used for representative sampling
- Protocol for additional sampling when initial representative samples are positive or negative for the action level of lead
- Documentation of employee exposure records
- Initial monitoring required when changes in processes, production, engineering controls or personnel changes may result in new or additional exposures to lead.

*Periodic Monitoring* – if initial or periodic monitoring statistically indicates that employee exposures are at or above the action level of 30 ug/m<sup>3</sup>, then 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 where lead may be present.

Requirements for periodic monitoring are stated for:

- Employee exposure levels at or above 30ug/m<sup>3</sup> but below the PEL (50 ug/m<sup>3</sup>). Repeat monitoring at least every 6 months.
- Employee exposure levels at or above the PEL (50 ug/m<sup>3</sup>). Repeat monitoring at least quarterly.

Employee Notification – Employers must notify employees of monitoring results in writing, within 5 working days of receiving sampling results. If the PEL was exceeded the notification must include the corrective actions the employer is taking to reduce employee exposure below the PEL.

4. METHODS OF COMPLIANCE: Requirements are stated for:

Engineering, Administrative, and Work Practice Controls -

- For employees exposed to lead above the PEL for more than 30 days/ year
- For employees exposed to lead above the PEL but for less than 30 days/year

Written Compliance Program - Each employer shall establish & implement a written compliance program to reduce exposures at or below the PEL and action level, by means of engineering & work practice controls. The plans shall be revised & updated at least every 6 months to reflect the current status of the program. The written plan must:

- Describe each operation in which lead is emitted (I.E. machinery used, material processed, controls in place, size of workforce, employee job responsibilities, operating procedures & maintenance practices)
- Describe specific means to achieve compliance (including engineering/studies used to determine methods)
- Detail information and technology considered in meeting the PEL
- Contain air monitoring data that documents the source of lead emissions
- Detail a schedule for implementation of the program (I.E. copies of purchase orders/construction contracts)
- Identify appropriate work practices
- Identify appropriate administrative controls
- Include any other relevant information

Additional Control Requirements – Additional requirements are stated for:

- Mechanical Ventilation
- Recirculation of Air
- Administrative Controls (if job rotation is used)

5. **RESPIRATORY PROTECTION:** Requirements are stated for when employees are required to use respiratory protection to reduce lead exposures to the PEL or below. Respirators must be used during:
- Periods necessary to install or implement engineering/work practice controls
  - Work operations for which engineering and work practice controls are not sufficient to reduce employee exposures to or below the PEL
  - Periods when an employee “requests” a respirator

A respiratory protection program must be established under 29 CFR 1910.134 (Respiratory Protection), in combination with additional requirements stated in the lead standard for:

- Select appropriate respirators (and provide a powered air-purifying respirator if requested by an affected employee)
  - Limitations to the assignment of employee tasks, based on medical examinations
6. **PROTECTIVE WORK CLOTHING AND EQUIPMENT:** If an employee is exposed to lead above the PEL or where the possibility of skin or eye irritation exists, personal protective equipment (coveralls, gloves, head/foot coverings, goggles and other clothing) must be provided at no cost to the employee. Requirements for policies and procedures for care and use of work clothing and equipment are outlined for:
- Removal of clothing in designated change rooms
  - Storage and labeling of contaminated clothing and equipment
  - Cleaning, laundering, repair and replacement
  - Disposal
7. **HYGIENE FACILITIES AND PRACTICES:** When employee exposures to lead are in excess of the PEL, the employer must provide appropriate personal hygiene facilities. Specific requirements are listed for the provision of:
- Change rooms
  - Showers/lavatories
  - Lunchrooms
  - Hand and face washing facilities
  - Presence of food/beverage/tobacco/cosmetics in lead contaminated areas
8. **INFORMATION AND TRAINING:** The employer must institute a means to communicate lead hazards to employees. Training requirements are stated for:

Potentially Exposed Employees - Awareness information and training is required for employees with any potential exposure to airborne lead (required to provide contents of Appendices A & B of the lead standard)

Employees Exposed to Lead (at or above the action level) - The employer must implement a training program for all employees who are exposed to lead concentrations at or above the action level, and ensure their participation. Training shall be conducted at the time of initial assignment, and annually thereafter – and in a manner which the employee is able to understand. The following must be included:

- Content of the lead standard and appendices
  - Operations where lead exposure is likely
  - Specifics of the respiratory protection program
  - Medical surveillance program
  - Health effects of exposure to lead
  - Engineering & work practice controls
  - Written compliance plan
  - Policy on use of chelating agents
  - Requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels
9. HOUSEKEEPING: Defined housekeeping practices and procedures are required to be in place (for areas that have the potential for lead contamination) to maintain all work areas and work surfaces as free as practical from the accumulation of lead. Housekeeping practices and procedures must:
- Keep all surfaces maintained as free as practical of accumulations of lead
  - Prohibit the use of compressed air to clean surfaces
  - Restrict shoveling, sweeping and dry cleanup to only those instances where vacuuming is not feasible
10. MEDICAL SURVEILLANCE: The employer shall institute a medical surveillance program for all employees who are or may be exposed above the action level (30 ug/m<sup>3</sup>) for more than 30 days/year. Medical surveillance program requirements are stated for:
- Frequency, content and location of initial employee examinations
  - Biological monitoring (blood sampling & analysis)
  - Periodic examinations
  - Employee notification of results
  - Pre-placement examinations
  - Written medical opinions
  - Second opinions

- Medical removal from work
11. RECORDKEEPING: Requirements are stated for employer records retention, including:
- Employee exposure monitoring
  - Medical surveillance records
  - Medical removal
  - Employee training records

## REFERENCE MATERIALS

### Websites

*OSHA lead information:*

[www.osha.gov/SLTC/lead/index.html](http://www.osha.gov/SLTC/lead/index.html)

*OSHA respiratory protection information*

[www.osha.gov/SLTC/respiratoryprotection/index.html](http://www.osha.gov/SLTC/respiratoryprotection/index.html)