

DHHS POLICIES AND PROCEDURES

Section V:	Human Resources
Title:	Safety and Benefits
Chapter:	Lead Work Safety Plan
Current Effective Date:	3/1/16
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Purpose

The purpose of this policy is to establish guidelines for DHHS staff for safe lead work. This written compliance program outlines specific procedures to be followed by trained employees authorized to conduct activities that may involve potential exposures to lead.

Policy

It is the policy of DHHS to protect employees, patients, clients, residents, and any other individuals from hazards associated with lead. Only properly trained staff are permitted to conduct activities, such as renovation, maintenance, alteration, and repair work, that may result in a lead exposure above the permissible exposure level (PEL). This written compliance program meets all standards set forth in 29CFR 1926.62.

Definitions

Action Level – A concentration designated by OSHA for a specific substance, calculated as an eight hour time-weighted average, which initiates certain required activities such as exposure monitoring and medical surveillance. In this policy, the action level is employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 ug/m³) calculated as an 8-hour time-weighted average (TWA).

Lead – A chemical element in the carbon group. In this policy, lead refers to 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 at least 1 mg/cm² or 5000ug/g (0.5%) lead by weight.

Permissible Exposure Limit - The maximum amount or concentration of a substance that a worker may be exposed to under OSHA. In this policy, the PEL is concentrations greater than fifty micrograms per cubic meter of air (50 ug/m³) averaged over an 8-hour period.

Roles and Responsibilities

Safety Programs Manager

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The Safety Programs Manager (SPM) ensures that a written plan is in place to establish a policy for safe lead work procedures. The SPM reviews the policy periodically.

Safety Officer

The Safety Officer monitors his/her assigned area to ensure compliance with this policy. The Safety Officer is responsible for coordinating training for applicable staff prior to working in any area where harmful exposure to lead may occur.

Manager/Supervisor

The manager/supervisor ensures that only authorized and trained staff perform work involving possible lead exposure. The manager/supervisor ensures that designated staff complete training as required.

DHHS Staff

Staff are responsible for complying with the requirements of this plan when performing any work involving the possibility of lead exposure. Affected staff complete training as required.

Implementation

Overview

OSHA standards require that employers implement a written "Compliance Program" before starting a job where employees may be exposed to lead above the permissible exposure limit (PEL). The following compliance procedures will meet or exceed all 29 CFR 1926.62 OSHA standards applicable to renovation, maintenance, alteration and repair work, including painting and decorating, and maintenance operations associated with the standard's construction activities. It also includes the following:

- Demolition or salvage where lead or materials containing lead are present.
- Removal or encapsulation of materials containing lead.
- New construction, alteration, repair, or renovation of structures, substrates, or portions that contain lead, or materials containing lead.
- Installation of products containing lead.
- Lead contamination/emergency cleanup.
- Transportation, disposal, storage, or containment of lead or materials containing lead.

Exposure Assessment

In order to determine the levels of exposure that employees are exposed to, if any, an exposure assessment shall be conducted by Plant Operations.

- All work involving or assumed to involve the presence of lead or lead containing materials, which could result in exposure at or above the PEL, shall be performed using appropriate protective measures, including proper respiratory protection with HEPA filters.
- Personal air monitoring samples shall be taken while the work is performed. These air samples shall be evaluated by an independent laboratory.

- The results of the air monitoring shall be provided to the worker(s), in writing, after the results are received. These air monitoring reports, with a description of the work conducted and the procedures and work practices used shall be made part of the written compliance program maintained by Plant Operations for future reference.
- All work involving lead or lead containing materials, where exposure at or above the action level of 30 micrograms per cubic meter of air (calculated in an eight hour time weighted average) can reasonably be anticipated, shall conform to the general procedures and work practices detailed in the National Institute of Building Sciences' "Lead Based Paint Operations and Maintenance Work Practices for Homes and Buildings", for the anticipated level of exposure.

Lead Generating Tasks

Work related tasks that are assumed to generate lead levels above the permissible exposure level are listed below. These tasks shall require interim protection (respirators, protective clothing, equipment, hand washing facilities, change areas, biological monitoring, and training required for an assumed level of exposure for the tasks performed) until air monitoring determines the actual lead exposures. Air monitoring shall conform to accepted procedures and schedules as required by the Occupational Safety and Health Agency (OSHA).

- Exposure levels of over 50 to 500 micrograms per cubic meter:
 - a. Manual demolition of structures (e.g., dry wall)
 - b. Dry manual scraping
 - c. Dry manual sanding
 - d. Using a heat gun
 - e. Power tool cleaning with dust collection systems
 - f. Spray painting with lead-based paint
- Exposure levels over 500 to 2500 micrograms per cubic meter:
 - a. Using mortar containing lead
 - b. Burning lead
 - c. Rivet busting on lead paint
 - d. Power tool cleaning without dust collection systems
 - e. Clean up activities where dry expendable abrasives are used
 - f. Abrasive blasting enclosure movement and removal
- Exposure levels over 2500 micrograms per cubic meter:
 - a. Abrasive blasting
 - b. Cutting
 - c. Welding
 - d. Torch burning

Respiratory Protection

Respiratory protection shall be provided and required to be used whenever exposure levels are above the PEL. Respiratory protection may be provided when the exposure levels are at or below the PEL if requested by the worker. The provisions and requirements of the Respiratory

Protection Plan shall be adhered to. Any air purifying respirator used for lead work must be equipped with high efficiency particulate air (HEPA) filter cartridges.

Protective Clothing

Protective work clothing and equipment, appropriate for the work and anticipated exposure level being performed shall be provided to all employees. Protective clothing includes:

- Coveralls or full body work clothes.
- Gloves, hats, and shoes or disposable shoe covers.
- Face shields, vented goggles, or other eye and face protection as appropriate.

Exposure levels of 50 micrograms per cubic meter or higher has specific requirements concerning clothing issue, laundering, storage, notifications and labeling. Refer to 29 CFR 1926.62 or page 48 of the NIBS Lead-Based Paint O&M Work Practices Manual.

Housekeeping

Housekeeping procedures must be followed on all jobs where employees are covered by any of the OSHA lead standards. Proper housekeeping procedures include:

- Maintain surfaces as free of lead and lead-contaminated dust as practical.
- Clean surfaces with a vacuum equipped with a HEPA filter or other methods that minimize the likelihood of lead becoming airborne.
- Shoveling, dry or wet sweeping and crushing can be used only where vacuuming or other equally effective methods have been tried and found not to be effective.
- Compressed air must not be used to remove lead from any surface unless it is used in conjunction with a ventilation system that captures the airborne dust created by the compressed air.

Hygiene

Hygiene facilities must be provided as appropriate.

- Hand washing facilities must be provided at any exposure level.
- Change areas, showers (if feasible), and clean eating areas must be provide if the exposure level is at or above the PEL.
- Food, beverages, and tobacco products may not be present, used, or consumed in areas where lead exposure is at or above the PEL. Cosmetics cannot be applied in areas where lead exposure is at or above the PEL.

Medical Surveillance

A medical surveillance and medical removal protection program must be provided for any worker exposed at or above the action level (30 micrograms per cubic meter) for more than 30 days in any consecutive 12 month period. The provisions of this program shall be in compliance with 29 CFR 1926.62.

Training

All employees exposed to lead, at any level, must be provided hazard communication training before they start their job assignment. Training requirements are listed below for the different levels:

- Employees exposed below the Action Level:
 - a. The hazards of lead.
 - b. Warning signs, labels, and safety data sheets (SDS's).
 - c. The requirements of the OSHA lead in construction standard, to include information and training on how to perform proper work procedures and practices required for the job to be accomplished. (Reference NIBS "Lead-Based Paint Operations & Maintenance Work Practices Manual", Chapter 5 - General Work Procedures and Chapter 6 - Work Practices).
- Employees exposed at or above the Action Level on any day must be provided with initial training and at least annually thereafter:
 - a. The basic training topics listed above.
 - b. The contents of the lead in construction standard and its appendices.
 - c. The nature of the tasks that could lead to exposures at or above the Action Level.
 - d. The purpose, proper selection, fitting, use, and limitations of respirators.
 - e. The purpose and description of the medical surveillance program and the medical removal program.
 - f. Engineering and work practice controls associated with the employee's job assignment.
 - g. The contents of the employer's written compliance program.
 - h. Instructions to employees prohibiting use of chelating agents except under medical supervision and removal from lead exposure.
 - i. The employee's right to access their exposure and medical records.
- Employees performing work in any of OSHA's "lead related tasks" or where there is reason to believe that the exposure is above the PEL, and until an exposure assessment documents that exposure levels are below the PEL, employees shall be trained in:
 - a. The basic training topics listed above.
 - b. The purpose, proper selection, fitting, use, and limitations of respirators.
 - c. Safety issues related to the work.
- Work supervisors, who have had lead abatement training, shall provide the appropriate level of training to all affected employees. This training shall be documented and maintained by the supervisor for one (1) year after there has been a job change.

Signs

Whenever work is performed in areas where employees' exposure is above the PEL a warning sign shall be posted in a readily visible manner. The warning sign must read:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Recordkeeping

Plant Ops shall establish and maintain records with the following information:

- Exposure assessment data, including name, social security number and job classification of the worker who was monitored and of all other employees whose exposure the sampling is intended to represent.
- The date, number, duration of sampling, location, result(s), description of the sampling procedure, analytical methods used and evidence of their accuracy. Type of respirator worn (if any). Environmental factors that could affect the sampling results. Air monitoring records must be maintained for 30 years.
- Training done for each worker. Training records must be maintained for 1 year past the end of employment.
- Records of each worker subject to medical surveillance, if any. Medical records must be maintained for 40 years or 20 years past the end of employment, whichever is longer.
- Cases of medical removals, if any.
- Objective data for exemption from requirement of initial monitoring.

Custodial Operations and Maintenance

Employees performing maintenance activities not associated with construction work, such as custodial duties, are covered by the general industry standard for lead, 29 CFR 1910.1025.

- Custodial operations include cleaning and vacuuming, when they are done in work not related to construction operations. This would include cleaning and repainting (e.g., minor surface preparation) where there is insignificant damage, wear or corrosion of existing lead-containing paint and coatings and substrates.
- Maintenance activities covered by the general industry standard are those that involve making or keeping a structure, fixture, or foundation in proper condition in a routine, scheduled, or anticipated fashion.
- Protective measures for work in these categories are based upon exposure monitoring of the operation. Appropriate protective measures to be taken by and for the employees shall be determined by the detail supervisor.

Disposal of Lead-Based Paint Waste and Lead Containing Materials

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Waste material containing lead may be considered hazardous or non-hazardous under the Resource Conservation and Recovery Act (RCRA). Waste materials containing levels of five parts per million (ppm) by the Toxicity Characteristic Leaching Procedure (TCLP) are considered as hazardous.

- Exemptions: Wastes that are generated as part of "interim controls" or as operation and maintenance for lead-based paint may be exempt from the hazardous waste regulations under the "household waste exemption". This exemption applies to routine maintenance and does not apply to renovation and demolition activities.
- If less than 100 kg/month (about 220 pounds) of hazardous waste is produced, generators qualify as "conditionally exempt small quantity generators." The waste may then be disposed of as non-hazardous. The 100 kg/month limit is for all hazardous waste, not just lead containing waste materials.
- Abatement Waste Categories: There are four categories of lead waste.
 - a. Low-Lead Waste: These wastes include filtered wash water, disposable clothing after vacuuming, and cleaned plastic sheeting. These wastes typically pass the TCLP test and are not hazardous.
 - b. Architectural Components: This category includes painted building components, such as doors, trim, windows, baseboards, soffits, railings, molding, radiators, and stone or brick. Refer to your county to see if these materials are considered non-hazardous, and allows them to be disposed of in appropriate landfills. The "Toxic Substance Control Act" (TSCA), as amended by Title X, the "Residential Lead-Based Paint Hazard Reduction Act of 1992" mandates that no co-disposal of lead-based paint architectural components with municipal or other acidic/putrescible industrial wastes be allowed. These architectural component materials should be wrapped in plastic prior to disposal, if appropriate, and disposed of in construction and demolition landfills which do not accept municipal waste.
 - c. Concentrated Lead Waste: These wastes include lead paint chips and dust; sludge from paint stripping; unclean rags, mops, and scrapers; and HEPA filters. These materials should be handled as hazardous, unless we generate and dispose of less than 220 pounds per month of hazardous materials, in which case small

quantities can be disposed of as not hazardous material under the small quantity generator exemption.

- d. Other Wastes: Other wastes should usually be tested to determine if they are hazardous, and managed appropriately. The most important waste in this category is contaminated soil.

Operations and Maintenance (O&M) Work Procedures and Practices

The NIBS, "Lead-Based Paint Operations & Maintenance Work Practices Manual for Homes and Buildings" provides three (3) general work procedures and sixteen (16) work practices that are to be used whenever any work is to be performed that involves lead containing materials or assumed lead containing materials. By following the appropriate work procedure and applicable work practice(s) routine O&M work can be performed in a safe manner. Copies of the general work procedures and practices are distributed to Plant Operations employees for reference.

- Work involving lead based paint or suspected lead based paint shall be conducted in accordance with the following provisions to insure worker safety. These procedures shall be in effect for all areas and all affected employees.
- No area of the facility shall have any painted surface scraped, sanded, or otherwise disturbed in such a manner that might lead to the release of lead particles into the air.
- No employee shall conduct any work on a painted surface that could expose them to lead containing materials that could be absorbed or inhaled into the body without receiving proper training and proper personal protective equipment, so that they are properly protected from exposure.
- All areas of the facility that require work on painted surfaces shall have those areas tested, to determine if lead based paint is present before any work is started.
- Any area that tests positive for lead based paint shall not be dry scraped, sanded or otherwise disturbed in any manner that could result in the release of lead dust or lead containing material.
 - a. These areas may be painted with an additional coat of paint, provided that the preparation of the areas and the application of the paint does not damage the existing surfaces or cause a release of lead containing material at or above the PEL.
 - b. These areas can be wet scraped and/or wet sanded in preparation for painting. The employees shall be trained and instructed to utilize wet chipping, scraping, and sanding methods when performing these tasks, as outlined in "Lead-Based Paint, Operations & Maintenance Work Practices Manual for Homes and Buildings" by National Institute of Building Sciences. Plastic sheeting needs to be provided under the work surface areas to collect paint chips and debris for proper disposal. Employees are to be provided with latex or rubber gloves to

prevent absorption through the skin when handling lead based paint materials.

- Any area that tests negative for the presence of lead may be worked on using standard work practices. It is important to remember that each different or non-homogeneous section of the area be tested. (i.e. - a room with a door, window and wall surfaces to be painted must have a test conducted of each surface.)
 - a. These areas can be wet scraped and/or wet sanded in preparation for painting. The employees shall be trained and instructed to utilize wet chipping, scraping, and sanding methods when performing these tasks, as outlined in "Lead-Based Paint, Operations & Maintenance Work Practices Manual for Homes and Buildings" by National Institute of Building Sciences. Plastic sheeting needs to be provided under the work surface areas to collect paint chips and debris for proper disposal.
- If two layers of paint exist on the surface, the tests are to be conducted of the surface coat and the bottom coat of paint using a swipe test or equivalent method. If an area has multiple layers of paint, the sample should include all layers and a total lead test shall be conducted.
- All tests for lead based paint shall be documented. A log book shall be maintained by Plant Operations for this purpose. The log is to contain the following information:
 - a. Name and job qualification of employees.
 - b. Details of the samplings and analytic techniques.
 - c. Results of the sampling.
 - d. Type of respiratory protection worn.
 - e. Date of test.
 - f. Test kit used.

References

- National Institute of Building Sciences'(NIBS) "Lead-Based Paint Operations and Maintenance Work Practices Manual for Homes and Buildings"
https://www.wbdg.org/ccb/NIBS/nibs_lbp_om_manual.pdf
- OSHA Hazardous Materials, 29CFR1910.125
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9775
- OSHA Regulations for Construction, Lead, 29CFR 1926.62
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10641

For questions or clarification on any of the information contained in this policy, please contact [Human Resources](#). For general questions about department-wide policies and procedures, contact the [DHHS Policy Coordinator](#).

