

California State University Bakersfield

Lead Exposure Management Plan

Rev: 10/98

INTRODUCTION

Cal OSHA standards regulate occupational exposure to lead in both general and construction industries. This program provides guidance for compliance with 8 CCR 1532.1, "Lead Exposure in Construction" and is intended to reduce occupational and environmental exposure to lead during maintenance, demolition and construction work.

RESPONSIBILITIES

Trades, Construction Management and Instructional Support staff are responsible for:

Notifying The Office of Safety and Risk Management (S&R) whenever painted surfaces, ceramic tile or other suspect lead containing materials will be disturbed;

Assisting with collection of paint and construction material samples from each unique surface coating and material that may contain lead prior to disturbance;

Working with S&R to develop work procedures that control release of lead into the air;

Participating in personal exposure monitoring; and

Ensuring that all construction and maintenance activities meet OSHA requirements specified in this document.

Office of Safety and Risk Management (S&R) staff are responsible for:

Developing and maintaining the campus leaded materials survey;

Arranging collection and analysis of suspect leaded materials;

Providing technical assistance to Trades, Construction Management and Instructional Support staff regarding development of exposure control work practices and contract specifications;

Assisting with personal exposure monitoring during lead related work;

Maintaining exposure monitoring and compliance records for at least 30 years;

Providing hazard communication and personal protective equipment training to workers who may be occupationally exposed to lead;

Assisting with the selection of appropriate personal protective equipment;

Coordinating medical monitoring for workers exposed to lead in excess of the Cal OSHA action level of 30 micrograms per cubic meter of air averaged over an eight hour work day; and,

Providing hazard communication information to Procurement staff to assist contractors with meeting the Cal OSHA lead exposure control standard.

Procurement staff are responsible for:

Notifying S&R of contracts for demolition and remodel work that may disturb painted surfaces, ceramic tile or other suspect leaded materials; and

Providing contractors with lead hazard communication information supplied to Procurement by S&R staff.

PERSONAL EXPOSURE ASSESSMENT

A determination of employee lead exposure levels must be made for each work practice involving materials that contain lead in excess of the detection limit for the analytical method. Personal exposure air samples shall be collected for the full duration of each job involving: manual demolition, scraping, or sanding; heat gun applications; use of power tools; abrasive blasting; or welding, cutting or torch burning on materials that contain lead. Application of leaded mortar also requires personal exposure monitoring. Until an exposure assessment has been performed, protective clothing and respirators must be worn and regulated work areas established for lead related work. Employees will be notified of exposure monitoring results as soon as possible after the information is received by S&R.

EXPOSURE CONTROL PROCEDURES

Various methods are available to maintain lead personal exposure levels below the Cal OSHA permissible exposure limit (PEL) of 50 micrograms per cubic meter of air averaged over an eight hour work day. It is desirable to maintain lead exposure levels below the Cal OSHA lead action level of 30 micrograms per cubic meter. Written work practices which include a description of equipment used, operational procedures and lead exposure control methods must be developed for each type of lead related work. Exposure control may include, but is not limited to, the following methods.

Regulated Area - CSUB will post a sign containing the following words to establish a regulated area for every job which results in personal exposures at or above the lead PEL or anytime an exposure assessment has not been conducted for the work practice or materials involved.

Warning Lead Work Area Poison No Smoking or Eating

These signs will be posted at each entrance to a regulated area. Warning signs must be kept clean and illuminated as needed to make them readily visible. Personal protective equipment is required for entry into a regulated work area.

Maximize Ventilation - HEPA filtered exhaust ventilation and power tool dust collection systems are recommended. Open windows to increase fresh air supply. Work upwind from the dust or fume source.

Wet Methods - Mist surfaces with water before scraping, brushing or cleaning. Avoid dry sanding and abrasive blasting.

Critical Barriers - Mechanical service to the room should be blocked until a negative exposure assessment for the work practice has been established.

Personal Protective Equipment - Respiratory protection will be used until a negative exposure assessment is completed for the material and work practice and whenever exposure control measures cannot be used to reduce lead exposure below the PEL. Respirators must be approved for protection against lead dust, fumes and mists. The CSUB Respiratory Protection Program (IIPP Appendix O) provides additional information on the care, handling and training of personnel using respirators.

Disposable coveralls with shoe and head covers and gloves will be provided and worn until a negative exposure assessment has been established for the work practice. Safety glasses or goggles must be worn if particulate or debris present an eye hazard. Need for additional protective equipment will be identified by the responsible supervisor prior to the start of work. HEPA vacuum dust off of PPE and remove it at the completion of lead

related work. Clean change areas are required for jobs in which workers are exposed to lead at levels above the PEL. See housekeeping practices for PPE decontamination and disposal procedures.

Housekeeping Practices - Disposable drop cloths should be placed below work areas to catch lead contaminated debris. HEPA vacuums should be used to collect lead dust. Shoveling, dry sweeping and brushing, and use of compressed air are prohibited for gathering leaded waste. Wash all surfaces in the work area and PPE that needs to be decontaminated for reuse with a trisodium phosphate solution. Collect sponges, mops, other cleaning items and disposable PPE in plastic bags that can be sealed. If the construction waste has been characterized as hazardous, cleaning items and PPE must also be disposed of as hazardous waste.

Hygiene - The consumption of food, beverages or tobacco is prohibited in areas where lead exposure may occur. Wash hands and face with soap and water before eating.

Administrative Controls - Job and personnel rotation can be used to reduce exposure to individuals involved in lead related work. If administrative controls are implemented, the duration of exposures and exposure levels must be documented for each worker.

Inspections - Supervisors must conduct regular inspections of work sites where lead related work is conducted to assure compliance with OSHA regulations.

TRAINING

California Department of Health Services (DOHS) Certification - DOHS certification as a lead abatement worker is required when personal exposure exceeds the Cal OSHA PEL or when activities in public buildings may result in a significant exposure to adults or children. Disturbance of any material containing lead equal to or in excess of 0.5 % by weight is presumed to present a potential for significant human exposure. DOHS lead worker certification will be required for lead related work with materials containing 0.5% lead or more.

Cal OSHA Hazard Communication Training - Employees who work around and contact leaded materials will be trained in: lead hazard recognition; the health hazards of lead exposure; ways to minimize exposure; the meaning of exposure control signs; and, use of material safety data sheets.

Cal OSHA Lead Standard Training - Employees who are subject to lead exposure at or above the action level on any day or who are subject to lead exposure that may cause

skin or eye irritation will be trained in: the content of 8 CCR 1532.1; the nature of specific operations which could result in exposure to lead above the action level; the purpose, selection, fitting and use of personal protective equipment including respirators; the purpose and requirements of the medical monitoring and medical removal programs; and, contents of the CSUB lead compliance plan including exposure control methods. Hazard communication training will also be provided.

MEDICAL MONITORING

Initial medical monitoring for blood lead and zinc protoporphyrin levels will be provided if employee exposure exceeds the Cal OSHA action level. Medical surveillance, per the requirements of 8 CCR 1532.1(j), is required when employee exposures meet or exceed the action level 30 days in any consecutive 12 months. If medical surveillance identifies blood lead levels in excess of 50 mg/dl and a medical determination indicates an increased risk of health impairment due to lead exposure, affected employees shall be temporarily removed from the lead related work activity. All medical records will be maintained by the University's contract medical care provider for 30 years

WASTE MANAGEMENT

All construction debris suspected of containing lead must be analyzed to determine how the waste must be managed. Materials which have a total threshold limit concentration of lead below 1000 parts per million may be discarded as non-hazardous. Materials containing equal to or greater than 1000 ppm lead must be sampled for additional analysis to characterize the waste as hazardous or non-hazardous. Contact S&R during the planning phase of each project to arrange for waste characterization.