Occupational Exposure to Lead for CSULA Employees

RM/EHS

SRM-T8CCR-5198

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Introduction

- This training will provide you with information regarding your potential exposure to lead, and what work practices you will use to minimize that exposure.
- We'll talk about the following:
 - Cal/OSHA Reg. 5198 and it's appendices.
 - What kinds of operations may expose you to lead and lead dusts.
 - What work practices are prohibited in dealing with lead and lead dust.
 - Approved work practices.
 - Respiratory protection, if required.
 - Medical surveillance
 - Information regarding chelating agents

Overview

- Occupational exposure to lead occurs in at least 120 different occupations.
- Some of those occupations are here at the university, although we do not have very high potential exposures.
- When we have an understanding of what the risk of exposure is, we can take preventative steps to reduce or eliminate those exposures.
- This training will provide that understanding.

Vocabulary

- Lead means elemental lead (as in fishing weights), all inorganic lead compounds, and a class of organic lead compounds called lead soaps.
- Permissible Exposure Limit (PEL) 50 micrograms per cubic meter of air over an 8 hour time weighted average (TWA).
- Action Level 30 micrograms per cubic meter of air over an 8 hour time weighted average.
- Chelation a type of medical therapy where a chemical agent is introduced into the body to bind with and excrete metals, such as lead.

T8CCR Section 5198

- General Industry Safety Order 5198
- This is the occupational lead standard the university is required to follow.
- It contains the state PEL and Action levels for exposure to lead, details when and how exposure monitoring for lead exposure is to take place, details what compliance steps the university is required to take, discusses respiratory protection, protective clothing and equipment, housekeeping, hygiene facilities and practices, medical surveillance, employee information and training, signage, recordkeeping, and observation of any monitoring.

Lead Trained Workers

- Currently, the university has no lead trained workers, so no one will be permitted to work with materials where the lead content exceeds 600 parts per million lead.
- Lead is only a health issue when it is airborne as a dust, or vapor, so working in areas where lead paint has been applied, but is in good condition, is not an issue.

Lead Exposure Potential

- What kinds of operations can produce a lead exposure?
 - Any task where lead containing materials are worked "dry". Examples would be dry sweeping dust and paint chips from areas where lead based paint is deteriorated.
 - Soldering with lead containing solder.
 - Pouring molten lead into forms.

Prohibited Work Practices

- Any dry sweeping of lead containing dust or debris.
- Abrasive operations such as sanding lead containing paint surfaces where dust is produced.

Approved Work Practices

- Contact RM/EHS before disturbing potential lead containing material
- Always use wet methods when sweeping up debris where lead or lead containing dust can be expected.
 - Wet methods means using a spray bottle with water and a surfactant ("wet water") to wet the debris pile and keep dust from becoming airborne.
- Use a certified HEPA vacuum to pick up lead or lead containing dust.
- Place debris that may contain lead in a separate poly bag and notify your supervisor or RM/EHS prior to action. Debris with lead is a hazardous waste.

Respiratory Protection

- If RM/EHS determines that the job you will be doing will produce lead exposures, you will be placed in the university Respiratory Protection Program and Lead Medical Surveillance Program.
 - You will be medically evaluated to see if you can wear a respirator.
 - You will be trained in the use, care, and cleaning of a respirator
 - You will be issued the appropriate type and size of respirator for the task you are performing.
 - You will be fit tested in the respirator you have been issued.
 - You will receive baseline medical surveillance associated with the "Lead" medical surveillance program.

Lead Exposure Monitoring

- In all cases, RM/EHS will monitor the potential exposure to assess the level of lead a specific process may be expected to produce.
- All employees working with lead will be medically evaluated to establish a baseline blood lead level, prior to work assignments involving exposures above established lead levels.

Medical Surveillance

• If it has been determined by air sampling that you have been exposed to lead above the action level (30 micrograms per cubic meter of air) for more than 30 days in any calendar year, you will be provided with medical monitoring (blood tests) to determine if you have elevated blood lead levels. This testing must be followed by a second test within 6 months. This will be at no cost to the employee.

Medical Surveillance (continued)

• If your blood test shows greater than 40 milligrams per deciliter of whole blood concentration of lead, you may be temporarily medically removed from the exposure creating job, until your blood level returns below 40 milligrams per deciliter.

Medical Surveillance (continued)

- Please be advised that you are not required to participate in any of the medical procedures, test, or examinations that the university is required to provide for you.
- However Medical Surveillance can play an important part in protecting your health.

Chelation

- Pronounced "KEY LAY SHUN"
 - From the Greek verb meaning "to claw"
- Prophylactic chelating is a medical process where a chemical is introduced into the body to remove metals, such as lead form blood and tissues. This process is prohibited by this standard.
- Therapeutic chelating, administered under the care of a licensed health care professional, and used to further the recovery of a patient, is not prohibited.

Summary

- We've talked about:
 - Section 5198 and it's appendices
 - The types of operations here that can produce an exposure to lead.
 - Prohibited work practices
 - Approved work practices
 - Respiratory protection, if required.
 - Medical surveillance
 - Chelating agents.
- If you have any questions now, or while you're on the job. Please contact RM/EHS at 3-3531

Where to Get More Information

- Your supervisor
- Risk Management/Environmental Health & Safety
- Cal/OSHA web site: http://www.dir.ca.gov/Title8/5198