**Objective:** To provide an overview of the hazards of lead and the precautions to protect employees from excessive exposures

Lead is a toxic heavy metal. Lead and lead alloys are often used to make batteries, ammunition, and other metal products. In the past, lead was regularly used in paint, ceramics, caulk, and pipe solder. Residual lead may still be associated with these products as they age and deteriorate.

Lead primarily enters the body through inhalation and ingestion. Once lead enters the body, it accumulates, primarily as a bone seeker, and then slowly releases into the bloodstream over time.

**Workers with Potential Lead Exposures**

* Lead manufacturers, miners, refiners, and smelters
* Artists, due to lead pigments in glass and ceramics
* Auto and radiator repairers, due to potential lead in radiators
* Battery manufacturers, due to potential lead in batteries
* Bridge reconstruction workers, construction workers, and painters, due to potential lead in paint
* Police officers and firing range instructors, due to lead in ammunition
* Electrical component manufacturers, plumbers, and pipe fitters due to potential exposures to lead solder
* Recyclers of metal, electronics, and batteries
* Rubber product and plastic manufacturers
* Solid waste incinerators

**Symptoms of Lead Exposure**

**Short-term exposure to high levels:**

* Abdominal pain or constipation
* Fatigue or weakness
* Headaches
* Loss of appetite
* Pain or tingling in the hands or feet
* Fertility effects, including damage to the fetus

**Long-term exposure:**

* Anemia
* Fertility effects, including damage to the fetus
* Kidney damage
* Central nervous system/neurological effects
* Adverse gastrointestinal effects

**Exposure Response**

* Contact your employer immediately:
* If you experience any health-related signs or symptoms as described above.
* If you have any concerns about your ability to have a healthy child.
* If you have difficulty breathing with a respirator.
* If significant exposures to lead are suspected, seek prompt medical attention. Take the associated SDS to the medical provider.

**Safe Work Practices**

* Avoid all contact with lead to the greatest extent possible.
* Wear all required PPE (e.g., eye protection, gloves, boots, protective clothing, and respiratory protection).
* Never eat, drink, or smoke in potentially lead-contaminated areas. Lunch rooms should be kept free of all potential lead contamination.
* Avoid lead exposures if you are pregnant or may become pregnant.
* Use proper HEPA-filtered vacuums to clean up dust; avoid all dry sweeping
* Avoid taking home dust on clothing or shoes. Do not launder contaminated clothing with general wash at home. If possible, do not wear contaminated clothing home. Shower and change your clothes at work, keeping clean clothes away from contaminated clothing.
* Use good personal hygiene including good hand washing practices prior to eating or drinking.

**Employer Responsibilities**

**Employers must:**

* Provide good ventilation, preferably local exhaust ventilation at the source with HEPA filtration built in.
* Conduct air monitoring to determine proper respiratory protection and whether medical surveillance and any other aspects of the OSHA standard (29 CFR 1910.1025) apply.
* If respiratory protection is necessary, provide properly-fitted, NIOSH-approved air-purifying respirators with HEPA filter cartridges at a minimum. However, upon request, provide powered air-purifying respirators with HEPA cartridges.
* Provide other PPE, including eye protection, protective gloves, boots or shoe covers, and protective clothing.
* Provide all PPE free of charge to employees.

*For further information regarding lead, please consult the Lead Standard (CFR 1910.1025, particularly Appendices A and B).*

This form documents that the training specified above was presented to the listed participants. By signing below, each participant acknowledges receiving this training.

Organization: Date:

Trainer: Trainer’s Signature:

**Class Participants:**

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

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