

SAFE HANDLING OF LEAD

INTRODUCTION

Lead is a toxic material that can adversely affect every system of the human body, especially the renal, nervous, hematopoietic, and reproductive systems. This guideline describes general methods that shall be used when handling lead to reduce or eliminate employee exposure and prevent environmental damage

APPLICABLE STANDARDS

OSHA 29 CFR 1910.1025

OSHA 29 CFR 1926.62

FESHM 5052.3.

DEFINITIONS

The term "handling" is used to describe movement, machining or assembly operations. Examples include hand stacking of lead bricks or assembly of lead components.

PROCEDURE

1. Materials that may contain lead must be tested or assumed to contain lead before any activity is und which could disturb the material.
2. A Hazard Analysis (HA) for tasks involving direct handling of lead shall be completed per PPD-OPER-004. The HA should be written in consultation with the PPD ES&H Group.
 - A. Contact the PPD ES&H Group as soon as possible. Pre-planning is necessary in order to keep personnel exposure and area contamination levels to a minimum.
 - B. The HA should cover items listed in FESHM Chapter 5052.3. Points to remember include:
 - PPD ES&H should determine lead contamination levels prior to and after the job.
 - Workers must be current in either "Lead Worker" or "Lead Handling" training. "Lead Worker" training is required if there is a potential of exposure to airborne lead above the OSHA Action Level. "Lead Handling" is required if employee exposure is NOT expected to exceed the Action Level. "Lead Worker" training is required annually.
 - The Fermilab Medical Department must be notified of workers potentially exposed to lead above the OSHA Action Level (0.03 mg/M³). Blood tests must be offered prior to the start of lead work. Follow-up blood tests shall be offered after the lead work is completed. For those who routinely perform lead work (approx 30 days/year or more) follow-up blood tests will be offered every 6 months, unless lead exposure warrants more frequent analysis.
 - If respirators must be used, the users must be current on their medical clearance, respirator training and fit testing.
 - The task manager should coordinate with the Building Manager and nearby personnel prior to beginning the work.
 - Clean surfaces with a HEPA vacuum, maslin wipe, or 5% trisodium phosphate solution. Cleaning solutions contaminated with lead must be collected and tested to determine proper disposal method. Lead contaminated solids shall be processed as hazardous waste.

- Following the completion of lead work, wipe sampling in the work area will be conducted to verify the surface contamination level is below 50 micrograms/dm², the Fermilab standard. Buildings where lead is stored or where frequent lead work is performed shall be sampled on a semi-annual basis, in addition to immediately following lead work.
 - The lead may be radioactive, contact the PPD ES&H Group for a survey.
- C. Contact PPD ES&H prior to removal of significant quantities of paint to determine if the paint contains lead. Job-specific removal procedures may be required based on the percentage of lead present.
3. Storage
- A. Lead shall be stored in designated and labeled areas. Whenever possible, lead should be stored in the lead storage areas under the control of the PPD ES&H Group.
- B. Lead shall be stored in covered containers