**Objective:** To introduce common engineering controls for lead exposure, including methods of substitution, isolation, and ventilation

Because lead exposure is dangerous, employers must implement **engineering controls** to minimize employee exposure to the greatest extent possible. Engineering controls are greatly preferred over administrative controls as the best way to control exposures. Personal protective equipment (e.g., a respirator) is considered a last resort, as the worker must wear it properly.

Know what engineering controls are in place at your organization. The following are three major engineering control measures to minimize lead exposure.

**Substitution**

* Substituting the use of lead with less hazardous materials
* Making changes to processes or equipment to reduce or eliminate lead exposure risks

**Isolation**

* Limiting direct exposure to lead and limit the potential spread of contamination by:
* Containing any work with lead to designated, sealed-off areas under negative air pressure from surrounding areas
* Keeping lead-exposed areas sealed off and under negative air pressure from surrounding work areas

**Ventilation**

* Using **local exhaust ventilation** to capture lead particles at the source, and therefore preventing them from dispersing into the work area
* Using **dilution ventilation** to continuously circulate the air to dilute the general lead levels to below the action level (30 µg/m3)

Local exhaust ventilation is strongly favored over dilution ventilation because the lead particles are removed from the worker’s breathing zone right at the source. Dilution ventilation, on the other hand, allows for dispersal of the lead particles, giving workers a much higher probability of inhalation exposures.

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:

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