

# **Lead Control**

**MSC-PRAC-30507**

**Revision 0**

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**Topic: Safety and Health**

## Lead Control

<b>PURPOSE</b>	This practice identifies a key aspect of the Mission Support Alliance (MSA) Safety & Health (S&H) industrial hygiene (IH) program, and establishes requirements for lead-related tasks.
<b>SCOPE</b>	<p>This practice identifies the requirements and responsibilities for lead control, permissible exposure limits, planning criteria, recordkeeping requirements, and employee notification.</p> <p>The requirements of this practice are consistent with the requirements published in the Hanford Mission Support Contract (MSC) Safety and Health virtual manual.</p>
<b>APPLICATION</b>	This practice applies to MSA construction personnel.
<b>GENERAL REQUIREMENTS</b>	<p>Records generated during the performance of this activity are to be included in the Construction Work Package and will be managed in accordance with <a href="#">MSC-PRAC-30374</a>, <i>Construction Work Package</i> and <a href="#">MSC-PRAC-30376</a>, <i>Construction Document Control</i>.</p> <p>Whenever work activities may result in employee exposure to lead or materials containing lead, Safety and Health or a lead Competent Person assesses the exposure potential prior to the start of work.</p> <p><b>NOTE:</b> <i>A lead Competent Person is designated by the area construction manager in accordance with practice <a href="#">MSC-PRAC-30452</a>, Program General Requirements.</i></p> <p>Construction work activities that result in exposure to lead may include, but are not limited to, the following:</p> <ul style="list-style-type: none"><li>• Demolition or salvage of structures where lead or materials containing lead are present.</li><li>• Removal or encapsulation of materials containing lead.</li><li>• New construction, alteration, repair, or renovation of structures and substrates that contain lead.</li><li>• Installation of products containing lead.</li><li>• Lead contamination/emergency cleanup.</li><li>• Transportation, disposal, storage, or containment of lead or materials containing lead on the construction site.</li></ul>

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- Maintenance operations associated with construction activities.
- Use of powder-actuated tools.

The permissible exposure limit (PEL) for lead is 50 micrograms per cubic meter calculated as an 8-hour time-weighted average over a work shift.

The action level (AL) of 30 micrograms per cubic meter as an 8-hour time-weighted average triggers the following requirements:

- Prejob planning includes, as needed, a thorough identification of lead materials. Identification may include the product name, a material safety data sheet (MSDS) with the MSDS number (if available) or a sample content analysis. Sampling data includes location, sampling method, sampling dates, laboratory identification, and analytical method.
- If documentation is not feasible or has been determined by Safety and Health to be unavailable or unreliable, a lead content sufficient to exceed the AL for lead is assumed.

Where the PEL is likely to be exceeded, a Lead Compliance Plan (form [A-6004-296](#) or equal) is developed.

Results of bulk sampling, calculations of potential lead exposure, and other data that demonstrate compliance with this practice (as well as the pertinent standards) are attached to the work package.

Where lead exposure above the AL is suspected and in the absence of monitoring data, interim protective measures are established that are equal to or greater than the assumed exposure level.

**NOTE:** “Trigger-Task” activities in [Table 1](#) may be used as the basis for initial assessment of lead exposure.

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**Table 1 - Trigger-Task Airborne Lead Concentrations**

Construction Task	Assumed Lead Concentration
Work with lead-containing coatings or paint: manual demolition (such as, dry walls); manual scraping; manual sanding; heat gun applications; power tool cleaning with dust collection systems.	not less than 50 micrograms/M3
Work with lead-containing mortar or lead burning. Where lead-containing coatings are present, rivet busting; power tool cleaning where dry expendable abrasives were used; movement/removal of enclosures used for abrasive blasting.	not less than 500 micrograms/M3
Abrasive blasting; welding; cutting torch burning on surfaces with lead-containing coatings or paints.	not less than 2500 micrograms/M3

Employees are informed, by the job safety analysis (JSA) review process, of the hazards of lead and the precautions to take to avoid exposure (refer to practice [MSC-PRAC-30509](#), *Hazard Communication*).

Employees whose work may involve exposure at or above the AL on any one day undergo initial medical monitoring that consists of blood lead levels, zinc protoporphyrin, and additional testing as prescribed by the supervising physician. Employees who are exposed 30 days or more per year are enrolled in a medical surveillance program.

Personal hygiene is very important while working with lead or lead products. To avoid accidental ingestion of lead, employees wash thoroughly (regardless of other controls) prior to eating, chewing, smoking, or drinking.

### PROCESS

Management/supervision supported by Safety and Health, the medical contractor, and training providers conduct the following basic steps to control exposure to lead:

- Implement requirements of the applicable lead standard when a potential lead hazard is present.

## Lead Control

- Develop and implement a Lead Compliance Plan when exposure is or is likely to be above the PEL. The plan addresses the scope of work activities; provides initial exposure assessment; and prescribes exposure controls, air-monitoring requirements, work practices, personal protective equipment, and additional information as required.
- Determine lead exposure initially and periodically as work is conducted.
- Air monitoring for lead may be waived provided all of the following conditions are met:
  - Monitoring has been performed in the last 12 months.
  - Data from historical monitoring originates from work operations that closely resemble the planned work operations.
  - Workplace and environmental conditions (such as indoors or outdoors, temperature, wind speed, ventilation, and space configuration) are similar to those when the monitoring was performed.
  - The processes, types of material, control methods, and work practices are similar.

**NOTE:** *A copy of the data that meets the above criteria is available in the general workplace; justification for waving initial monitoring is included in the Lead Compliance Plan. Employees involved are briefed regarding the existence of such data.*

- Notify each affected employee, in writing, of the results of monitoring within 5 working days.
- Provide employees with appropriate training and medical surveillance.
- Determine the types of projects, activities, and operations that could involve lead or lead-containing materials. For those jobs, conduct JSA and/or other appropriate hazard identification methods as part of the work design, planning, and control process. Ensure that Safety and Health participates in, or conducts, the hazard identification.

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- If lead or lead materials are involved, ensure that Safety and Health conducts a lead hazard evaluation to determine the potential exposure and to recommend initial controls.
- Incorporate recommendations from Safety and Health for lead hazard control measures into any JSA and work control documents.
- Provide appropriate types of training for all employees who are exposed to lead. This training includes:
  - Hazard communication training for potentially exposed employees.

**NOTE:** *Lead hazard communication training can be given in prejob briefings, safety meetings, daily meetings, and other appropriate forums.*

- Lead worker training specified by [29 CFR 1926.62](#), *Lead* for workers exposed at the AL for any one day, or who are exposed to lead compounds that are skin irritants.
- Respirator training if respirators are to be used.
- Provide information to workers regarding task-specific lead hazards and controls, the lead compliance plan, JSAs, work practices, and other applicable information, including any changes that are made to these controls.
- Provide information on the health effects of lead and medical monitoring.
- Provide training annually, as appropriate, to workers who continue to have exposure to lead at or above the AL on any one day.

Safety and Health performs the following:

- As part of the JSA and other hazard evaluation processes, identifies and evaluates lead hazards and potential exposures during planning and the conduct of work.
- Reviews and approves the Lead Compliance Plan.

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- As necessary, quantitatively determines the presence of lead in materials, substrates, and other media. This may involve the collection of samples for analysis by a qualified laboratory or field testing using acceptable test methods.

**NOTE:** *The lead Competent Person may perform the quantitative or qualitative determination in lieu of Safety and Health.*

- Provides results of any lead survey to management/supervision, along with information regarding hazard potential and control measures. As appropriate, makes recommendations to management/supervision to maintain, modify, upgrade, or downgrade controls accordingly.
- Takes prompt corrective measures (or supports any Competent Person in this role) to eliminate hazards; such as recommending to management/supervision to implement or modify engineering, administrative, work practice, and personal protection (including respiratory protection) controls.
- Conducts an exposure assessment, as appropriate.
- As appropriate, assists management/supervision in ensuring that workers have the necessary training and medical surveillance based upon the activity and hazard.
- Ensures that medical monitoring is conducted in accordance with [29 CFR 1926.62](#) including imposition of work restrictions where appropriate and reviewing results of medical monitoring.
- In evaluating lead hazards and specifying controls for a job, (a) utilizes reliable historical exposure monitoring data generated for other similar operations or activities, (b) utilizes objective data, and/or (c) plans and conducts initial monitoring to determine exposures and assess the effectiveness of hazard controls.
- Conducts initial and periodic exposure monitoring in accordance with National Institute for Occupational Safety and Health (NIOSH)/OSHA methods if lacking historical or objective data.
- Maintains effective records of jobs monitored, so that a historical database can be used to specify controls and eliminate unnecessary and redundant monitoring for future activities.

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- Supports project management/supervision in responding to exposures above the PEL when workers were not adequately protected.
- As appropriate, participates in prejob and daily worker briefings regarding task-specific lead hazards and controls, the Lead Compliance Plan, work practices, and other applicable information, including any changes that are made to controls or to the Lead Compliance Plan.

### FORMS

*Lead Compliance Plan, [A-6004-296](#)*

### RECORDS IDENTIFICATION

**Records Capture Table**

<b>Name of Document</b>	<b>Submittal Responsibility</b>	<b>Retention Responsibility</b>
<i>Lead Compliance Plan, <a href="#">A-6004-296</a></i>	Buyers Technical Representative	Project Document Control

### REFERENCES

[29 CFR 1926.62](#), *Lead*  
[MSC-PRAC-30374](#), *Construction Work Package*  
[MSC-PRAC-30376](#), *Construction Document Control*  
[MSC-PRAC-30452](#), *Program Policy and Requirements*  
[MSC-PRAC-30509](#), *Hazard Communication*