

Code of Practice: Working with Inorganic Lead

June 17, 2010

Application

This code of practice applies where so ordered by the Director.

Definitions

1. Words used in this code of practice will have the same meaning as defined by the Occupational Health and Safety Act.
2. Lead means elemental lead and inorganic compounds of lead containing greater than 0.1% lead., but does not include organic compounds of lead.
3. NIOSH means the National Institute for Occupational Safety and Health.

Specific Requirements

1. Every employer must assess the use, handling and storage of lead with respect to the exposure or likelihood of exposure of any employee to lead.
2. Where the assessment identifies that an employee is likely to inhale, ingest or absorb lead to such an extent that the health of the employee may be adversely affected, the employer must develop a Lead Control Program.
3. The Lead Control Program must incorporate those measures and procedures required to:
 - i) maintain employee exposures to lead to under 50 micrograms per cubic metre of air and,
 - ii) maintain employee blood lead levels to less than 2.0 micromoles per litre of blood.
4. When a change is made in any process involving the use of lead, the workplace assessment must be reviewed to determine if changes to the Lead Control Program are warranted.
5. Where a Joint Occupational Health and Safety Committee or a Health and Safety Representative is present in the workplace, the assessment defined in this section must be performed in consultation with the committee or representative.

Workplace Assessment

Requirements for Air Sampling:

1. Where reasonably practical, employee exposures must be assessed using personal sampling.
2. Where air sampling is required, it must be conducted according to the current [NIOSH Manual of Analytical Methods](#) or methods which are equivalent or better.
3. The Joint Occupational Health and Safety Committee or Health and Safety representative will be notified if air sampling is to be undertaken.
4. Written copies of the results of air sampling must be provided to:
 - i) the Joint Occupational Health and Safety Committee or Health and Safety Representative (where present) and,
 - ii) individual results to those employees from whom personal samples were collected.
5. Results of air sampling must be posted for a minimum of 30 days in a conspicuous place in the workplace in such a manner so as not to identify specific individuals.
6. Records of air sampling results must be maintained by the employer for at least 5 years.

Requirements for Health Monitoring:

1. Where a Lead Control Program is established, health monitoring in accordance with Appendix A must be provided by an appropriate health care professional to all employees exposed to lead.
2. Individual health records must be created and maintained.
3. Health records created pursuant to this code of practice are to be considered confidential documents and are to be kept in a secure manner.
4. Health records created pursuant to this code of practice or extracts or excerpts thereof may not be released except in a form calculated to prevent the information from being identified with a particular person or case or with the permission of the employee.
5. The employer must keep health records created pursuant to this code of practice in a secure place for a period of 30 years from the time of the last entry.

Requirements for Personal Protective Equipment:

1. Where reasonably practicable, employee exposures must be maintained below 50 micrograms per cubic metre of air without requiring the use of personal protective equipment.
2. Where respiratory protection is used, it must be a type which is approved by NIOSH as suitable for protection under the expected conditions of use.

Requirements for Personal Hygiene

1. No eating, drinking or smoking is permitted in an area where lead containing materials are used, handled or stored.

2. Where required as part of a Lead Control Program:

- i) street clothes must be removed and stored in a clean lead free area at the workplace;
- ii) prior to leaving the work area, lead contaminated clothing must be removed and stored awaiting laundering or disposal;
- iii) the employer must install showers with hot and cold running water between the work area and a clean lead free area;
- iv) towels, soap, and shampoo will be supplied as needed.

APPENDIX A

The health monitoring provisions of the Lead Control Program must include the following components:

Pre-placement Examination

To be performed within seven calendar days of hiring. The pre-placement examination must consist of the following items:

1. Detailed History, including:
 - i) past and current exposures to lead at work or home
 - ii) personal habits (e.g. smoking, hobbies, nail biting, alcohol use)
 - iii) health problems (gastrointestinal, hematologic, renal, hepatic, respiratory, neurological and psychological)
 - iv) genetic history
2. Physical Examination

Special attention to potential system for lead absorption such as skin, gastrointestinal system and respiratory system

3. Laboratory Tests, including at a minimum:
 - i) Blood lead (inorganic lead exposure)
 - ii) Blood count.
 - iii) Urinalysis (including microscopic)
4. Laboratory Tests, if warranted in opinion of supervising health care professional:
 - i) Blood Urea Nitrogen (BUN)
 - ii) Creatinine
 - iii) Uric Acid
 - v) Pulmonary function
 - vi) Zinc Protoporphyrin (ZPP)
 - vii) Chest X-ray

Periodic Examinations – TO BE UPDATED

Termination Examination

1. All employees must be examined at the end of their employment.
2. This examination must include all items required in a pre-placement examination.