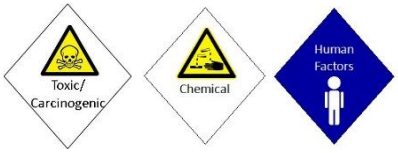

1. Introduction

1.1 Purpose

This Lead Code of Practice (COP) is to identify the proper level of protection to prevent potential lead exposure for workers, visitors, and the public on worksites.

1.2 Application

This COP applies to all Canadian Plains (CPES) workers, contractors, and worksites where there is a potential for exposure to lead at a level above the Occupational Exposure Limit (OEL). Lead-containing paints and coatings generally present a much lower risk when intact and not impacted by the work or deteriorated by age/environmental exposure. However, if they must be disturbed (e.g., by cutting, grinding, blasting, or scraping) or are flaking off/deteriorating, abatement or controlled removal is required before planned work proceeds.

1.3 Physical Properties

Lead is a bluish-grey metal. It has a low melting point, is pliable, and corrosion-resistant. Lead is naturally present in the earth, usually combined with other elements such as zinc, silver, and copper. The most common lead ore is galena or lead sulphide. Lead can be either organic or inorganic.

Lead has been historically used in many products that workers may be exposed to:

- Batteries
- Ceramic tile glazing
- Shielding for X-rays
- Paint in sites built pre-1978 (prevalent in buildings built before 1960)
- Pipe coating pre-1978 (prevalent in buildings built before 1960)
- Lead solder – used in water pipes in older homes, electronics, radiator shops

Where lead is suspected, surface testing must be completed before disturbing the material.

1.4 Health Effects

Lead enters the body when breathing in lead dust, fume, or mist, or swallowing any lead. For example, if your food or hands have been contaminated by lead, and you then eat, drink, or smoke. Once absorbed into the body, lead can cause both immediate and long-term health effects. With continued exposure, the amount of lead stored in the body increases.

If the level of lead in your body gets too high, it can cause:

- Headaches
- Tiredness
- Irritability
- Constipation
- Nausea
- Stomach pains
- Anemia
- Loss of weight

Continued exposure could cause far more serious symptoms, such as:

- Kidney damage

- Nerve and brain damage
- Memory problems
- Decrease in brain function
- High blood pressure
- Adverse effects to the reproductive systems of both males and females.

The amount of lead in someone's body is measured by blood tests. The average person has less than 1-2 micrograms per deciliter (>1-2 µg/dL). While adverse health effects can occur at relatively low levels, more obvious clinical symptoms are more likely as blood lead levels rise (e.g., above ~40–50 µg/dL), but effects can occur well below these levels.

2.0 Responsibilities

CPES holds all managers, supervisors, and employees accountable to work safely, follow this COP, and comply with all relevant legislation. All workers are expected to stop work if unsure of the hazards or the control measures. All are encouraged to ask questions and seek clarification of unknown potential lead hazards when working in older sites or sites similar to ones we have seen exposure in past.

2.1 Management

CPES Management is accountable for providing authority, resources, and oversight to ensure initiation, planning, design, execution, monitoring, controlling, and closure of the project by hiring qualified personnel to execute the work.

2.2 Supervisors

Supervisors are responsible for the day-to-day direction of work, ensuring their reports adhere to all safety, environmental, and quality control expectations. Project/Site Supervision will be responsible for training, coaching, mentoring, and directing workers and subcontractors, and addressing issues that prevent workers from safely and efficiently achieving the project deliverables.

Project/site supervisors are responsible for:

- Ensure that workers use and properly wear the appropriate Personal Protective Equipment (PPE) specified in this COP in accordance with the training and instruction provided;
- Ensure appropriate PPE as specified in this COP is readily available for all workers.
- Ensure compliance with this COP or Site-Specific Safety Plans (SSSP).
- Ensure any events where a worker may have been exposed to lead are fully recorded, investigated, and reported.
- Ensure that based on potential exposure levels, the appropriate decontamination area and supplies have arrived and is available to workers onsite.

2.3 Worker

Workers are responsible for reviewing policies, practices, and procedures and adhering to them. Workers must actively participate in Site Specific Orientations, required training, safety meetings, hazard identification, assessment, and control processes, and site and workers' requirements.

- Use and properly wear the appropriate PPE as required in accordance with the training and instruction received.
- Inspect PPE before using it; do not use PPE that is unable to perform the function for which it is designed.
- Follow all hygiene precautions required to minimize/eliminate exposure to lead contaminants. This may include Client, 3rd party Industrial Hygienist recommendations, or assessment result control plans.
- Stop work if they are unclear on the hazard and/or the controls being put in place.
- Ensure all engineered controls (e.g. vent hoods, HEPA vacuum systems, etc.) operate in serviceable condition before starting work.

3.0 Training

CPES will inform workers on how potential lead exposure can impact their health or safety and provide the workers with adequate training with respect to work procedures and processes, and the proper use of any personal protective equipment required. Training may be performed in-house or by a third party. Lead awareness training may be required, depending on the scope of work; this will be outlined in the SSSP.

4.0 Hazard Identification, Assessment, and Control (HIAC)

Where lead is present or suspected at a worksite, CPES will take all practicable steps to reduce the potential of dust and dispersal of lead or particulates. When a specific coating is suspected of containing lead, due to its age or information obtained, CPES shall request lead testing reports from the facility owner or arrange for testing to be completed by a third-party subcontractor/specialist/laboratory.

Where the presence of lead has been confirmed, no work may commence until the lead has been abated. Where requested by the asset owner, CPES will employ a CPES-approved Subcontractor who specializes in lead abatement to oversee the work. For small lead removal projects, the following methods/tools may be utilized by subcontractors, with the appropriate PPE:

- Vacuum Shrouded Tools
- Needle Gun
- Wet Manual Scraping

If lead-containing materials are being removed for cutting or welding purposes, the material should be removed at least six inches on either side of the cut or weld.

Note – Some legislative jurisdictions require notification before work can commence. For example, WorkSafeBC requires a Notice of Project for Hazardous Substances 48 hours prior to work commencing. Verify with the site Owner/Prime Contractor all required notifications have been completed.

4.1 Barriers

Areas where lead abatement is occurring must be visually identified to prevent inadvertent entry. Hard barriers should be used wherever possible. If dust is being produced, areas should be enclosed with material that will reduce the spreading of airborne material during agitation.

4.2 Exposure Thresholds

8-hour Time Weighted Average (TWA) exposure limits in Alberta, BC, and Saskatchewan are 0.05 miligram(mg)/cubic metre($m^{3)}$.

*****Verify current legislative exposure levels in your jurisdiction before starting work*****

Monitoring

Where CPES workers are required to be in the area during abatement, the CPES Subcontractor or the Owner/Prime Contractor must conduct their exposure monitoring/assessments to ensure exposure levels are below the OEL. Air monitoring must be done by a qualified person (i.e., Industrial Hygiene or Industrial Hygiene Consultant).

Air quality samples are required at a minimum:

- At the start of the abatement activity until the effectiveness of controls can be confirmed.
- When there is any change to the process.
- When there is a change in the work crew.

More air sampling is required if a large amount of dust is produced. All records must be retained for a minimum of 10 years following the completion of work.

Where workers have been exposed to potential lead hazards:

- Blood testing should be completed if a worker is exposed to airborne lead at or above the internal CPES action level of 0.03 mg/m³ as an 8-hour TWA for 30 days or more in a 12-month period.
- Health assessments will be offered to all workers involved in work that may result in elevated blood levels of lead.
- CPES will ensure that reasonable access and the costs incurred for health assessments regarding lead exposure will be managed by the worker's employer.

5.0 Personal Protective Equipment

Whenever possible, wet methods will be encouraged to prevent the generation of airborne dust. When protection from dust or particulates that contain lead is required, workers must wear:

- Disposable coveralls, booties, and hoods.
- Fit-tested air purifying respirator with a particulate cartridge (P100) preferred use of full face mask respirators (however, use of half face mask respirators will require additional attention to eye protection depending on lead removal method performed (i.e. chemical method googles required)).
- Eye/face protection (goggles or safety glasses) and gloves.
- Dependent on the task, a welding face shield or an abrasive blasting helmet/hood supplied air respirator may be required.

6.0 Decontamination and Disposal Requirements

- Before removing, vacuum off coveralls, boots, non-disposable personal protective equipment, and tools using a HEPA filter.
- All coveralls and gloves should have the outer layers down, containing any dust within the folds or rolls of fabric.
- All lead-containing contaminated materials are to be placed in labelled containers in accordance with applicable federal, provincial/state, and local regulations.
- Place non-disposable personal protective equipment and hand tools in a plastic bag for transport to an approved wash facility.
- Wash eye protection, respirator, and any hand tools – let air dry in a clean location. Wash your hands and face with soap and water.

References/Additional Information

Alberta OHS Code

41(1) Lead exposure control plan

British Columbia OHS Regulation

Part 6: Substance Specific Requirements

Saskatchewan

S-15 Designated Chemical Substances Lead

Revised by:	1.	Brian McConnell	2.	Dylan Dressler	Date:	Nov 18, 2025
Approved by:	1.	Corporate HSE Committee			Date:	Nov 27, 2025