

**PURPOSE/APPLICATION**

Canadian Plains Energy Services (CPES) workers are not exposed to lead in amounts that would require a Code of Practice, specialized training, decontamination procedures, identification of restricted areas or laundering facilities for lead contaminated clothing. The information in this Safe Work practice is for awareness only. Every effort has been made to ensure that a worker may not be exposed to lead at a concentration exceeding its ceiling limit at any time. It is the employer's responsibility to minimize the release of lead into the air as far as reasonably practicable, keep the work site clear of unnecessary accumulations of lead and waste materials containing lead.

**PPE**

- CPES minimum requirements
- As specified in WHMIS or any other specific training

**TRAINING**

- WHMIS

**HAZARDS & CONCERNS**

- Lead Poisoning

**PRECAUTIONS**

- Lead is a bluish-grey metal that has been used since ancient times. 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. Since lead is easily re-melted and refined, it has the highest recycling rate of all metals in the world.
- Lead can get into your body when you:
  - breathe in lead dust, fume or mist
  - swallow any lead, for example if your food or hands have been contaminated by lead, and you then eat, drink, smoke or bite your nails
- 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
- There are some reports which suggest that lead may adversely affect the reproductive systems of both males and females. A developing unborn child is particularly at risk from exposure to lead, especially in the early weeks before a pregnancy becomes known.
- Lead is used in many of the following products that workers may be exposed to:
  - batteries
  - lead shielding for x-rays
  - lead solder – used in water pipes in older homes, electronics, radiator shops
  - lead weights and tools
- Exposure to lead can possibly occur during welding activities (due to lead paint on the metals being welded).

- Lead may also be produced as a by-product in metal smelting operations and at brass or copper foundries.
- Workers for CPES Energy Services Inc. do not have a lead exposure that would require a Code of Practice. A Code of Practice is required when;
  - a. a pure substance in an amount exceeding 10 kilograms, or
  - b. in a mixture in which the amount of the substance is more than 10 kilograms and at a concentration of 0.1 percent by weight or more at a worksite.
- If a worker may be contaminated by lead at a work site, the program must have procedures and the means to decontaminate the worker. Workers for CPES Energy Services Inc. do not have a lead exposure that would require decontamination procedures.
- Employees require competent training in procedures developed by the employer to minimize the workers exposure. Worker competency is partially determined by WHMIS training and the review of this safe work practice.
- Workers for CPES Energy Services Inc. do not have lead exposure that would require a policy to identify who can enter a restricted area.
- Workers for CPES Energy Services Inc. do not have lead exposure that would require the employer to post signs that clearly indicate that lead is present in the area, only authorized persons may enter the area, and eating, drinking and smoking are prohibited in the area.
- Workers for CPES Energy Services Inc. do not have lead exposure that would require a policy regarding clothing that is used in a restricted area containing lead.
- Workers for CPES Energy Services Inc. do not have lead exposure that would require a policy or procedure for dealing with protective clothing.

#### **REFERENCES / ADDITIONAL INFORMATION**

None

#### **REGULATIONS**

##### **Alberta OHS Code – Part 4 Chemical Hazards, Biological Hazards and Harmful Substances** **General provisions for asbestos, silica, coal dust and lead**

##### ***28 An employer must***

- (a) minimize the release of asbestos, silica, coal dust and lead into the air as far as reasonably practicable,*
- (b) keep the work site clear of unnecessary accumulations of asbestos, silica, coal dust and lead and waste materials containing any of these substances, and*
- (c) ensure that the methods used to decontaminate the work area, workers, equipment and protective clothing prevent, as much as is reasonably practicable, the generation of airborne asbestos, silica, coal dust or lead.*

##### ***Restricted area***

***29(1) An employer must ensure that only a person authorized by the employer or by law to do so enters a restricted area.***

***(2) An employer must post signs that clearly indicate that***

- (a) asbestos, silica, coal dust or lead are present in the area,*
- (b) only authorized persons may enter the area, and*
- (c) eating, drinking and smoking are prohibited in the area.*

***(3) Signs posted under subsection (2) must***

- (a) be in a conspicuous location at the entrances to and on the periphery of each restricted area, as appropriate, and*
- (b) remain posted until the area is no longer a restricted area.*

***(4) An employer must***

- (a) provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from contamination by asbestos, silica, coal dust or lead,
- (b) ensure that workers' street clothing is not contaminated by asbestos, silica, coal dust or lead, and
- (c) ensure that a worker does not leave a restricted area until the worker has been decontaminated.

**(5)** Subsection (4) does not apply in an emergency if the health or safety of a worker requires the worker to leave a restricted area without being decontaminated.

**Protective clothing used in restricted areas containing asbestos or lead**

**30(1)** If clothing used in a restricted area containing asbestos or lead is reused and not discarded, the employer must have the clothing laundered in the appropriate manner and at appropriate intervals to ensure

- (a) the clothing is decontaminated, and
- (b) there is no cross - contamination of other clothing by asbestos or lead.

**(2)** The employer must ensure that clothing contaminated with asbestos or lead that is to be laundered before being reused is stored and transported in sealed containers.

**(3)** Containers used in subsection (2) must be clearly labelled

- (a) to identify the contents,
- (b) to indicate that the contents are a hazard, and
- (c) to warn workers that dust from the contents should not be inhaled.

**Saskatchewan OHS Regulation -PART XXI Chemical and Biological Substances**

**General duties of employers**

**302(1)** An employer shall, at a place of employment:

- (a) monitor the use or presence of, or a worker's exposure to, any chemical substance or any biological substance that may be hazardous or harmful to the health or safety of a worker;
- (b) where reasonably practicable, substitute a less hazardous or harmful chemical substance or biological substance for a hazardous or harmful chemical substance or biological substance;
- (c) subject to subsection 307(1), to the extent that is reasonably practicable, reduce any contamination of the place of employment by a chemical substance or biological substance; and
- (d) develop and implement work procedures and processes that are as safe as is reasonably practicable for the handling, use, storage, production and disposal of chemical substances and biological substances.

**(2)** An employer shall take all practicable steps to prevent exposure of a worker, to an extent that is likely to be harmful to the worker, to:

- (a) a chemical substance or biological substance that may be hazardous; or
- (b) a chemical substance or biological substance in combination or association with any other substance present that may be hazardous.

**(3)** An employer shall:

- (a) inform the workers of the nature and degree of the effects to their health or safety of any chemical substance or biological substance to which the workers are exposed in the course of their work; and
- (b) provide the workers with adequate training with respect to:
  - (i) work procedures and processes developed pursuant to clause (1)(d); and
  - (ii) the proper use of any personal protective equipment required by these regulations.

**(4)** An employer shall make available to the committee, the representative or, where there is no committee or representative, the workers:

- (a) the results of any measurements of worker exposure to, and contamination of a place of employment by, a chemical substance or biological substance; and

*(b) any steps taken to reduce the contamination of a place of employment by, and eliminate or reduce exposure of the workers to, a chemical substance or biological substance.*

**British Columbia OHS Regulation - Part 6 Substance Specific Requirements**

**Lead**

**6.60 Exposure control plan**

*The employer must develop and implement an exposure control plan meeting the requirements of section 5.54 if workers are or may be exposed to lead in excess of 50% of the exposure limits, or if exposure through any route of entry could result in elevated lead body-burdens, as defined by the Board.*

**6.61 Air monitoring in construction projects**

*If there is a potential for hazardous exposure to airborne lead in a construction project, the employer must ensure that air monitoring is conducted*

- (a) during the first shift of the construction project involving lead, and*
- (b) as necessary throughout the project to ensure that controls are effective and respiratory protection is adequate.*

**Note:** *Air monitoring is used to ensure containment structures, ventilation and other control measures have effectively accounted for risk factors such as variability of lead content in material and abatement methods.*

**6.62 Warning signs**

*Warning signs must be posted at the boundary of any work area where hazardous lead exposures could occur.*

**6.63 Personal hygiene**

*If exposure to finely divided lead or lead compounds results in the contamination of exposed skin or work clothing, the requirements for personal hygiene in Part 5 (Chemical and Biological Substances) must be met.*

**6.64 Work surfaces**

*All surfaces in the work area must be kept as free as practicable from accumulations of lead dust.*

**6.65 Lead removal**

*Removal of lead dust must be done by a means which prevents the dispersal of finely divided lead into any work area.*

**6.66 Instruction and training**

*The employer must ensure that a worker who is at risk of exposure to lead is adequately instructed and trained in*

- (a) the hazards of lead,*
- (b) the written work procedures to be followed,*
- (c) the correct operation and use of any required engineering controls and personal protective equipment,*
- (d) personal hygiene and decontamination procedures, and*
- (e) the purpose and significance of any health monitoring.*

**6.67 Health protection**

*The employer must develop and implement an effective health protection program, in a manner acceptable to the Board, if a worker is exposed to potentially hazardous levels of lead.*

**6.68 Records**

*The employer must*

- (a) maintain records of risk assessments, worker exposures and worker training, and*
- (b) ensure that health monitoring records are maintained in a manner acceptable to the Board.*



**SAFE WORK PRACTICE**

**SWP-67**

**April 18, 2018**

**LEAD**

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