

**PURPOSE/APPLICATION**

To protect workers from injuries associated chemical hazards, biological hazards, and harmful substances.

At times, work undertaken by Canadian Plains Energy Services (CPES) may expose workers to chemical hazards, biological hazards, and harmful substances. Every effort will be made to ensure that workers are appropriately educated to and protected from the hazards of the worksite.

**PPE**

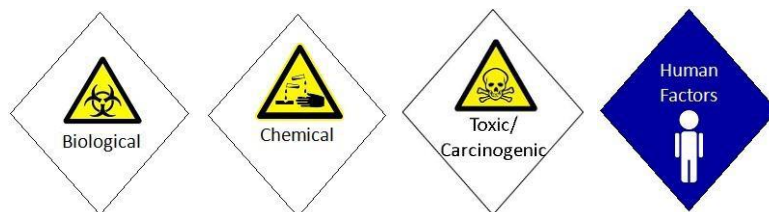
- CPES minimum requirements
- PPE as identified by product SDS

**TRAINING**

- WHMIS GHS

**HAZARDS & CONCERNS**

- Occupational illness and injury
- Property damage



**PRECAUTIONS**

Chemical hazards are any element, chemical compound, or mixture of elements and/or compounds which is a physical hazard or a health hazard. The standard applies to all hazardous chemicals regardless of the quantity or state (i.e. liquid, solid or vapour).

A chemical is a physical hazard if it possesses flammable, combustible, explosive, oxidizing, pyrophoric or reactive properties, or if it is an organic peroxide or compressed gas.

A chemical is a health hazard if it produces acute or chronic health effects in exposed individuals. Types of health hazards include:

- Carcinogens
- Reproductive toxins
- Sensitizers
- Corrosives
- Irritants
- Agents that damage the lungs, skin, eyes, or mucus membranes

A **biological hazard** is an organism, or substance derived from an organism, that poses a threat to human health. This can include:

- Human waste (urine and stool)
- Human fluids (blood, saliva)
- Microorganism, virus or toxin (cold, flu)

Workers may be exposed to chemical and biological hazards throughout the entire work area. Health hazards associated with the exposure to any chemical or biological hazards vary greatly depending on the substance and 5 factors:

- How toxic the substance is?
- How much substance exists at the work site?
- How quickly the substance burns or evaporates?
- How long workers have been exposed to the substance?
- How the substance reacts with other chemicals?

People are typically exposed to chemical and biological hazards in three ways:

1. Inhalation (breathing)
2. Indigestion (Eating / Swallowing)
3. Injection and absorption

To protect workers from the harms of chemical and biological substances:

1. Every worker will be trained in the Workplace Hazardous Material Information System (WHMIS GHS).
2. No worker will be exposed to a substance listed in Schedule 1, Table 2 at a concentration exceeding its ceiling limit at any time. CPES will ensure that no worker is exposed to a substance that exceeds the ceiling limit, short-term exposure limit, or 8-hour TWA limit prescribed by ACGIH.
3. If a worker may be contaminated by a harmful substance at a work site CPES will ensure that a means to decontaminate the worker is available.
4. Employees must be instructed on the proper handling, storage, and disposal of wastes. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials.
5. If wastes generated are classified as hazardous, employees must be trained to ensure proper disposal.
6. Workers exposed to hazards that may affect the skin, must wear protective equipment based on SDS or hazard.
  - For chemicals that are harmful to the eyes or skin the worker will have immediate access to baths, showers, and eye flushing equipment in case of emergency.
7. All harmful substances used or stored at the worksite; are to be clearly identified, or its container is clearly identified, and they are used and stored in such a way that the use or storage is not a hazard to workers.
8. CPES must also address safe practices related to the immediate storage and handling of waste, scrap, or leftover materials. If PPE or other precautions are necessary to handle waste, these should be identified in the program, this would include but not limited to coveralls, eye protection, specialized gloves, and breathing apparatus.
9. A current SDS must be readily available for all contractors.
10. CPES utilizes the software SDSBinders to manage our SDS inventory, all workers have access to this system through the CPES HSE Library accessible through the QR Code.

If a worker is or may be exposed to a hazardous substance, CPES will ensure that:

- An assessment will be conducted to assess the potential for overexposure taking into account all routes of exposure, including inhalation, ingestion, and skin contact.
- A hazard reassessment is conducted when there is a change in work conditions, which may increase the exposure, such as a change in production rate, process, or equipment.
- If the assessment shows that a worker may be at risk of overexposure to an airborne contaminant, the employer will ensure that air sampling is conducted to assess the potential for overexposure.
- Workers must wear respiratory protective equipment when airborne contaminants exceed occupational exposure limits. Refer to your provincial regulations for specific OELs.



**REFERENCES / ADDITIONAL INFORMATION**

- SDS Binders <https://cw1635439.sdsbinders.com/Default.aspx?ReturnUrl=/>
- Product Safety Data Sheets (SDS)
- COP 01 – Hydrogen Sulphide
- COP 02 - Respiratory Protection
- COP 08 – Benzene
- SWP 15 – Radiation
- SWP 16 – Asbestos
- SWP 31 – Fueling
- SWP 33 – Hazardous Materials / Products /Substances
- SWP 35 – Propane Cylinders and Torches
- SWP 64 – Blood Borne Pathogens
- SWP 72 – Iron Sulphide
- SWP 73 – NORM (Naturally Occurring Radioactive Material)

**Alberta OHS Code**

Part 4 Chemical Hazards, Biological Hazards and Human Substances

**British Columbia OHS Regulation**

Part 5 Chemical Agents and Biological Agents

**Manitoba Workplace Safety and Health Regulation**

Part 36 Chemical and Biological Substances

**Saskatchewan**

Part 21 Chemical and Biological Substances

---

Developed by:	1.	<u>Marty Fulkerth</u>		Date:	<u>April 20, 2011</u>
Revised by:	1.	<u>HSE Team</u>	2.	<u>Cherie Haynes</u>	Date: <u>June 26, 2013</u>
Revised by:	1.	<u>Brian McConnell</u>		Date:	<u>Sept 22, 2023</u>
Approved by:	1.	<u>HSE Committee</u>		Date:	<u>Sept 25, 2023</u>

---