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NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- To outline expectations that ensure chemical, physical, and biological hazards in the workplace are anticipated, identified, evaluated, and controlled.

PRINCIPLES

Alberta Health Services (AHS) is committed to providing a healthy and safe work environment. This Standard outlines expectations to protect workers’ health and to ensure AHS is in compliance with legislative requirements and other applicable occupational health and safety standards.

The Alberta Occupational Health & Safety (OHS) Code requires employers to ensure that a worker’s exposure to any substance listed in Schedule 1, Table 2 is kept as low as reasonably achievable and does not exceed its occupational exposure limit (OEL).

The OHS Code also has OELs for physical hazards such as noise. Measurement of worker exposure is necessary to determine compliance with Schedule 3, Table 1 of the OHS Code.

This Standard focuses on chemical, physical, and biological hazards in AHS workplaces. Worker exposures to communicable diseases and blood and body fluids can be minimized proactively through Workplace Health and Safety (WHS) programs such as Communicable Diseases Assessment (CDA) and immunization programs, annual influenza immunization campaign, through the use of safety engineered devices, and in accordance with applicable AHS policies. Exposures to other biologicals (e.g., mould, fungi, mouse and bird droppings) are included in this Standard. Ergonomic, psychosocial, and radiation hazards are not included in the scope of this Standard.
APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, Students, Volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS

1. **Hazard Identification and Assessment**
   
   1.1 Chemical, physical, and biological hazards shall be identified as per the *Hazard Identification, Assessment and Control (HIAC)* Standard.
   
   1.2 Potential hazards shall be identified at the design stage of new facilities, prior to the start of renovations, or with any new or changes in work processes.
   
   1.3 **Qualitative assessments** may be conducted to determine the need for quantitative exposure assessment.
   
   1.4 **Quantitative assessments** shall be prioritized based on the risk of potential harm to worker’s health and the risk of non-compliance with the OHS Code. Health effects of the agent, frequency, and duration of exposure and existing control measures shall be considered. Work may be stopped during the quantitative assessment if the health and safety of workers is deemed to be at risk.

2. **Hazard Controls**

   2.1 Appropriate control measures shall be determined based on the results of exposure assessments and in consultation with operational area and other internal and external AHS stakeholders.

   2.2 As far as practicable, identified controls and corrective actions shall be implemented by the operational area supervisor/manager as per the hierarchy of controls in the HIAC Standard.

   2.3 Workers shall be trained in the proper use, care, and maintenance of established controls required for their work.

3. **Worker Responsibilities**

   3.1 All workers shall:

   a) observe established safety requirements to conduct work tasks in a safe manner;

   b) use the established control measures to protect themselves and others from exposure to hazardous materials;
c) properly use and care for personal protective equipment in accordance with manufacturer’s instructions, infection prevention and control requirements, and/or WHS direction;

d) participate in worksite-specific training; and

e) report all incidents, injuries, unsafe conditions, insecure conditions, or damage to property to supervisor as soon as possible.

4. **Leader Responsibilities**

4.1 All **leaders** shall ensure that:

a) identified health hazards are addressed as per the *Occupational Hygiene* Process;

b) workers are provided education on the risks associated with health hazards, including the hazardous products, they work with and that they receive worksite specific Workplace Hazardous Materials Information System (WHMIS) training;

c) all **safety equipment** is maintained and regularly tested as per manufacturers’ specifications and applicable Standards;

d) workers are aware of and instructed on the emergency response plans in the event of an accidental exposure or a chemical spill, including site specific Code Brown processes; and

e) exposure and chemical spill incidents reported in MySafetyNet are investigated and appropriate corrective measures are implemented.

5. **Workplace Health & Safety Responsibilities**

5.1 WHS shall:

a) develop and assist in the implementation of *occupational hygiene* programs, processes, and safe work practices;

b) develop training and guidance on emerging topics and to meet legislative requirements;

c) develop programs to manage potential and identified hazards and to meet legislative requirements;

d) develop Codes of Practice for substances listed in Schedule 1, Table 1 of the OHS Code that AHS workers may be exposed to;

e) develop, as appropriate, resources on emerging issues and/or of concern to AHS workers;
f) conduct or assist in the provision of qualitative and quantitative exposure assessments and recommend appropriate control measures;

g) follow the established process on maintenance and calibration of occupational hygiene equipment;

h) establish health assessment and medical surveillance standards;

i) conduct health assessments and/or medical surveillance as warranted based on exposure assessment results, OHS Code requirements, or as per direction from WHS Medical Director; and

j) coordinate medical testing and follow up for workers in the event of an accidental exposure to hazardous substances as per the OHS Code.

**DEFINITIONS**

Control(s) means the actions, processes, training or personal protective equipment provided to reduce or eliminate the frequency, consequence or likelihood of an incident occurring from an identified hazard.

Exposure assessment means the determination or estimation (qualitative or quantitative) of the magnitude, frequency, duration, and route of exposure of a hazard.

Hazard means a source of potential harm to a worker, property or environment.

Health assessments means any specific screening, assessment or examination of an individual which is carried out by an occupational health professional to determine or monitor the individual's occupational health status and includes, when appropriate, preventative measures such as recommended immunizations as well as consultations with other health professionals.

Leader means supervisors, managers, executive management, and all senior leaders.

Manager means the individual(s) who has the delegated human resource authority for directly planning, monitoring, and supervising direct reports.

Medical Surveillance means a systematic collection, analysis and dissemination of disease/test data on groups of workers, designed to detect early signs of work-related illness.

Occupational hygiene means the anticipation, recognition, evaluation, prevention, and control of those environmental factors or stresses arising in or from the workplace which may cause sickness, impaired health and well-being, or significant discomfort among workers or among citizens of the community.

Occupational Exposure Limit (OEL) means the airborne concentration of a chemical substance that nearly all workers may be repeatedly exposed to without adverse health effects. An OEL may be expressed as an 8-hour time-weighted average (TWA) airborne concentration,
a 15-minute short term exposure limit (STEL) or a ceiling exposure limit or a combination of the OELs.

**Qualitative assessment** means gathering information on the hazardous agent and processes, reviewing the control measures in place to determine if potential exposures are being appropriately controlled.

**Quantitative assessment** means actual measurement of exposure to the hazardous agent.

**Risk** means the effect (positive or negative) of uncertainty on objectives.

**Safety engineered device (SED)** means a device that has a built in sharps injury protection mechanism such as an attached sheath covering the needle or scalpel after use or needles that retract after use. Other types of safety devices include blunt needles or needle-less systems. SEDs protect the user from exposure to blood borne pathogens or chemical hazards (i.e., cytotoxic medications).

**Safety equipment** means equipment that is any equipment that when used properly will protect the worker from exposure to the identified hazard. This includes but not limited to fumehoods, biological safety cabinets, safety engineered devices (SED), personal protective equipment and emergency showers and eyewash stations.

**Supervisor** means a person, whether unionized or non-unionized, who has charge of a work site or authority over an AHS worker.

**Worker** means AHS employees, members of the medical and midwifery staffs, students, volunteers, and workers of contracted service providers

**Workplace** means a location where a worker is, or is likely to be, while engaged in their work or work-related activities. The workplace includes all locations where business or social activities organized by AHS are conducted, including but not limited to work in the community and locations of work-related social events. Workplace includes any vehicle or mobile equipment used by the AHS worker as part of their job.

**REFERENCES**

- Alberta Health Services Governance Documents:
  - Communicable Disease Assessment Policy (#1170)
  - Occupational Exposure to Blood and Body Fluids Policy (#1111)
  - Workplace Health and Safety Policy (#1121)
- Alberta Health Services Forms:
  - Occupational Hygiene Concern Needs Assessment
- Alberta Health Services Resources:
  - Emergency Response: Code Brown
  - Hazard Identification, Assessment and Control Standard
  - Incident Management Process
  - Occupational Hygiene Process
  - Occupational Hygiene Program Guide for Workplace Health & Safety
  - Workplace Health & Safety Management System
• Non-Alberta Health Services Documents:
  o *Occupational Health and Safety Act (Alberta)*
  o *Occupational Health and Safety Code (Alberta)*

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