CONTROLLING CHEMICAL HAZARDS

Guidance Sheet

CHEMICAL MANAGEMENT ROLE **ADVICE FOR IMPLEMENTERS**

Supervisors are the people responsible for implementing the chemical management plan at the worksite. Their duties typically include:

- Receiving the chemicals on site.
- Directing the work with the chemicals done by workers.
- Reviewing and sharing chemical information (Safety Data Sheets (SDS) and Guidance Sheets).
- Organizing and implementing on-site hazard assessments.
- Ensuring communication flow between shifts, contractors, etc.
- Ensuring the availability of personal protective equipment (PPE) and any other equipment required to work safety with chemicals.
- Ensuring that staff has training on the use of PPE, safety equipment, SDS, Guidance Sheets and on the chemical hazards management plan for the materials they will be working with.
- Enforcing health and safety requirements and correcting unsafe acts and conditions immediately.

There are four steps required to effectively manage chemicals at the worksite:

1. Identify the Chemical Hazards

As a supervisor you need to know what chemicals are present at the worksite and the hazards they pose. You need to collect an inventory of all chemicals at your work place and obtain Safety Data Sheets (SDS) for each of them. Implement procedures to ensure that all chemical shipments you receive are accompanied by a SDS. For specific jobs collect the SDSs for the chemicals you will be working with and review the information to see how it will apply to the task at hand.

2. Assess the Chemical Hazards

Before you begin work with chemicals you need to ask the following questions;

- What are the properties of the chemical e.g. flammable, corrosive, liquid, and solid, etc.?
- Who has responsibility for chemical management and use?
- Where is the chemical being used?
- What are the routes of entry associated with that chemical (e.g., inhalation, skin/eye contact, ingestion)?
- How much of the chemical is being used?
- How long is the worker exposed to the chemical?
- Will the work process mean that a lot of dust, vapor or gas will be released in air?

3. Evaluate and Analyze the Chemical Hazards

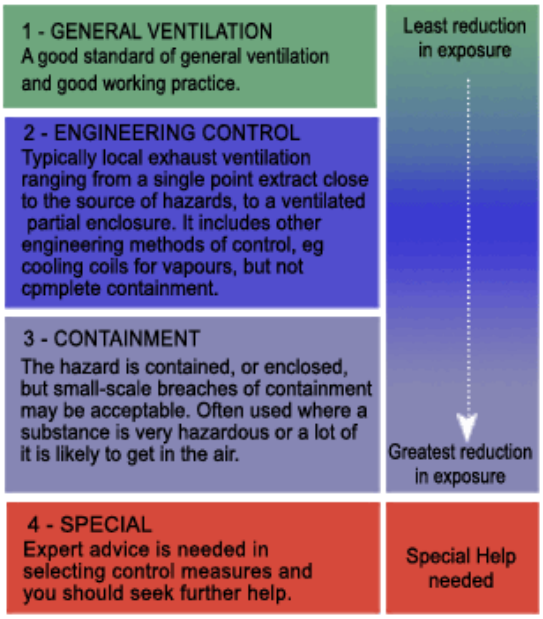
In order to evaluate and analyze the hazard, supervisors should work with the owner's site representative (Planner) to gather information about the types of chemicals that will be present and how they will be used for each new task. Then you can develop (or have the Planner develop) a chemical management process based on the control approach that best fits the type of work you plan to undertake. The easiest way to do this is to use the Controlling Chemical Hazards Guideline and the information you have gathered to select one of four control approaches (bands) (see Figure 1). The need for more effective control approaches increases with the likelihood of a chemical (or mixture) to harm health if left uncontrolled. There are two main factors which affect whether chemicals in the workplace are likely to harm health:

- the type of damage the chemical causes and the amount needed to cause that damage; and
- how much is likely to get into the air and be breathed in or come into contact with the skin or eyes

This in turn depends upon its dustiness or its ability to produce vapors or gases in air.

The Controlling Chemical Hazards Guideline is designed to help you use this basic information to define the procedures and control approaches you need to follow to protect worker health and safety. Go to www.enform.ca to gain assistance with controlling chemical exposures. The web project will provide you with Guidance Sheets that you can use to develop your chemical management process to control the hazards. In some cases because of the high toxicity or the way chemicals are being used at the work site the system will direct you to get expert advice.

Figure 1: Control Bands



4. Control for the Chemical Hazard

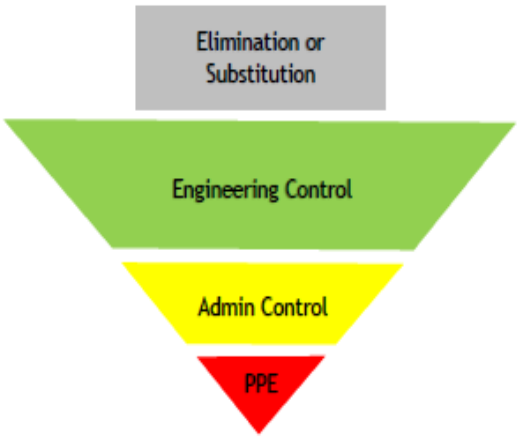
In all chemical hazard management systems, there are four basic hazard control strategies:

- » elimination/substitution;
- » engineering controls;
- » administrative controls; and
- » personal protective equipment (PPE).

Elimination and substitution control the chemical hazard by outright removing the chemical from the work site. Processes may be avoided or adjusted to eliminate the need for the chemical or a safer alternative is substituted in place of a more hazardous chemical. If elimination or substitution is not possible, engineering controls are the next possible choice.

Engineering controls control the hazard at its source. These include measures such as ventilation, containment and enclosure. The use of engineering controls should always be considered first. Administrative controls, e.g., signage, are used in conjunction with engineering controls.

Administrative controls involve the work process/worker. These include such measures as company policies, safe work procedures, training and work rotation. Finally, if the hazard cannot be sufficiently reduced by engineering or administrative controls, personal protective equipment (PPE) is used.



PPE is the last line of defense. PPE does not remove the hazard; it only puts a barrier between the worker and the hazard. PPE includes but is not limited to specified protective clothing and respiratory protective equipment (see GS PPE).

As you move through each level of control, each offers less assurance than the previous in terms of preventing exposures. For that reason, we talk about these as a “hierarchy of hazard controls”.

The Controlling Chemical Hazards web project adopts this hierarchy of controls in the guidance sheets produced and the control bands it selects based on the information you provide

QUESTIONS YOU NEED TO ANSWER

- ❒ Validate the Chemical Hazards Management plan at the work site.
- ❒ Make sure required safety equipment is available.
- ❒ Provide guidance sheets and material safety data sheets to workers,
- ❒ Ensure workers are trained on how to work safely.
- ❒ Conduct a job safety analysis to look at other hazards.
- ❒ Make sure all hazards are controlled.