

Worker Checklist

Chemicals are extensively used throughout the oil and gas industry, which is why it is vital to identify and control their hazards. Effective chemical control starts with a plan that addresses how chemicals are selected, purchased, mixed, used, handled and transported at the work site.

Suppliers, operators, contractors and workers all have responsibilities for chemical control. Workers, are entitled to information on chemical hazards such as safety data sheets (SDS) and how the hazards should be controlled. The hazard assessment process is the foundation for determining the types of controls needed, as well as the requirements for work procedures and worker training.

If you do not know what chemical substance you are working with and how to handle it safely, stop and ask!

1. START-UP MEETING

Start-up meetings are an excellent opportunity to clarify the chemicals being used and the controls needed to safely work with them. The implementer/supervisor is responsible for the start-up meeting and should confirm the following:

- All hazardous substances have been identified and required product information is available
- All required control measures have been implemented and the associated operating, maintenance and emergency procedures are adequate and in place
- Training of employees involved with the operation is completed and documented

The start-up meeting should include a representative from each contractor and each area of the job. Chemical control roles and responsibilities should be discussed and confirmed.

See **Appendix F - Start-Up Meeting Template** for more information.

- Have you participated in a start-up meeting and do you understand the risks, what precautions to take and what to do in an emergency?

2. IDENTIFY THE CHEMICAL HAZARDS

Chemicals may pose short and long-term threats to worker health. Additional information and training is required to identify hazards presented by the use and transportation of chemicals.

The risk presented by any given chemical depends on several factors: how hazardous the substance is, the nature of the hazard, the state or form in which it is hazardous, how it will be used, the degree and extent of the potential exposure, the chemical's route of entry, and how exposure is controlled.

Workers can identify chemicals by using the following tools:

- SDS
- Guidance sheets
- Manufacturer instructions and information
- Industry knowledge and literature
- Health, hygiene, or chemical specialists

Refer to **Section 5 - Chemical Hazard Identification** for more information.

3. CHEMICAL HAZARD ASSESSMENT

The concept of a workplace health and safety hazard assessment is well-known within the upstream oil and gas industry. While the chemical hazard assessment functions the same, it can present three unique challenges:

1. The chemical hazard assessment starts in the planning phase and is repeated during the implementation and execution phases. Some chemical hazard controls can only be applied at specific phases of the project or process. All participants must know and understand:
 - What are the properties of the chemical (e.g. flammable, corrosive, liquid and solid)?
 - Who is responsible for the chemical management and use?
 - Where is the chemical being used?
 - How much of the chemical is being used?
 - How long is the worker exposed to the chemical?
 - What are the routes of entry associated with that chemical (e.g. inhalation, skin/eye contact, ingestion)?
2. Chemical hazards are not as easily spotted or as well-understood as more common ones, such as “slip, trip, and fall” hazards which pose an immediate threat to the safety of the worker.
3. There are unique chemical situations to consider due to the blending and production of fluids that may not resemble their original makeup.

Refer to **Section 6 - Chemical Hazard Assessment** for more information.

- Have you completed an onsite hazard assessment?
- Are you aware of the specific chemicals being used onsite?
- Have you assisted in the decision to blend or mix chemicals?
- Have you completed a hazard assessment of the new blend or mix?
- Have you determined if there are hazards associated with the new blend or mix?

4. HAZARD CONTROLS

Chemical risk depends on a number of factors: the hazards of the substance, how it is used, the degree and extent of exposure, and how exposure is controlled. Controlling chemical hazards requires the following:

- Hazard assessment, including anticipating, identifying, assessing, evaluating, and controlling hazardous chemical exposure
 - Monitoring exposure and health surveillance (if applicable)
 - Preventing or controlling the risks
 - Developing control measures
 - Informing and training workers about hazards and controls
- Have you implemented the required controls to mitigate the chemical risk?
 - Have you communicated these controls to all participants involved?

5. WORKER COMMUNICATION

Communication of key information (e.g. safety data sheets, chemical mixtures, and blending information) between participants is crucial throughout the process. Too often, participants are unaware of the chemicals they are using or the changes that may occur. Lack of sufficient information introduces unnecessary risks, such as failing to choose a safer chemical, installing adequate ventilation, applying correct chemical handling procedures, or using adequate protective gear.

- Have you ensured there is effective communication between shifts, contractors, etc.?
- Have you reviewed and shared the chemical information with all participants who are handling, storing or working with the chemical?

6. PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is the last line of defense and is used where the hazard cannot be eliminated or sufficiently reduced by engineering or administrative controls. PPE does not remove the hazard; it only provides a barrier between the worker and the hazard. Examples include specified protective clothing and respiratory protective equipment.

Refer to “Guidance Sheet - Personal Protective Equipment” at EnergySafetyCanada.com for more information.

- Have you selected the appropriate PPE for the work task?