

SKF 4163 : Safety in Process Plant Design

Chemical Health Risk Assessment

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This CHRA guidelines has been compiled to assist employers and safety and health practitioners on the procedures and protocol for conducting the assessment (CHRA).

According to USECHH Regulations 2000,

Employers **are not permitted** to use any chemicals hazardous to health (CHH) unless an assessment of the risks has been conducted.

Therefore, the duty to perform an assessment of health risks arising from the use of CHH at the place of work is **mandatory**.

Purpose of CHRA

To enable **decisions** to be made on:

- appropriate control measures
- induction and training of employees
- monitoring and health surveillance activities

in order to protect the health of employees who may be exposed to CHH.

Objectives of CHRA

1. To **identify** the hazards posed by each chemical substance used, stored, handled or transported within the place of work.
2. To **evaluate** the degree of exposure of employees to the CHH, either through inhalation, skin absorption or ingestion.

3. To **evaluate** the adequacy of existing control measures.
4. To **conclude** on the significance of the health risk posed by the CHH.
5. To **recommend** further appropriate control measures to prevent or reduce risks.

Content of Assessment

The USECHH Regulations 2000 stipulates that the assessment shall contain,

- a. The potential risks to an employee as a result of exposure to CHH.
- b. The method and procedures adopted in the use of the CHH.
- c. The nature of the hazard to health.
- d. The degree of exposure to such CHH.

- e. The risk to health created by the use and the release of chemicals from work processes.

- f. Measures and procedures required to control the exposure of an employee to CHH.

- g. The measures, procedures, and equipment necessary to control any accidental emission of a CHH as a result of leakage, spillage, or process/equipment failure.

- h. The necessity for employee monitoring programme.
- i. The necessity for health surveillance programme;
and
- j. The requirement for the training and retraining of
employees.

1.3 Application

This manual had been prepared to provide guidance for assessors to conduct a [CHRA](#) by going through

- a step-by-step procedure
- prescribed techniques and format.

1.4 Types of Assessment

- a) Generic Assessment
- b) Full Assessment

The amount of work and detail of a particular assessment will depend on,

- the CHH involved
- the complexity of the work processes

1.4.1 Generic Assessment

- Applicable when a chemical or a group of CHH are used **in the same way** in several workplaces provided that **the control measures in place are similar**.
- An assessment is made of a representative **workplace or job**, and this assessment is then used for the similar work activities that involve comparable risks.

- Example of similar workplaces:
 - a chain of fast-food outlets or service (Petrol) stations.

- Only valid for work activities
 - that are clearly similar,
 - with comparable levels of risks,
 - have that same type of control measures to control those risks.

1.4.2 Full Assessment

A full assessment should be conducted for each and every workplace where CHH are used.

Reference

Assessment of the health risks arising from the use of hazardous chemicals in the workplace: 2nd edition (2000), Department of Occupational, Safety and Health (DOSH), Ministry of Human Resources, Malaysia