

**CADANGAN PINDAAN KEPADA
PERATURAN-PERATURAN KESELAMATAN DAN
KESIHATAN PEKERJAAN (PENGUNAAN DAN
STANDARD PENDEDAHAN BAHAN KIMIA
BERBAHAYA KEPADA KESIHATAN) 2000**



(PERATURAN USECHH)



**JABATAN KESELAMATAN DAN KESIHATAN PEKERJAAN
MALAYSIA**

Background of USECHH Regulations



- **Come into operation on 4 April 2000**
- **Purpose of the regulations:**
 - To provide a legal framework to control exposure of chemicals hazardous to health.
 - To set a standard of exposure of chemicals hazardous to health at the place of work.
 - To promote good chemical management system at the place of work.
 - To prevent and reduce cases of occupational disease, occupational poisoning or adverse health effect due to exposure to chemical hazardous to health (CHH).

Scope of application



- Apply to all places of work which are within the jurisdiction of OSHA 1994 where CHH are used except chemicals which are:
 - a radioactive materials (Atomic Energy Licensing Act 1984)
 - foodstuffs
 - hazardous to health solely by virtue of their explosive or flammable properties, or solely because they are at a high or low temperature or a high pressure
 - pharmaceutical products

Chemicals hazardous to health (CHH)



- Listed in Schedule I or II
- Possesses any of the properties categorised in Part B of Schedule I of CPL Regulations 1997:
 - Very toxic
 - Toxic
 - Harmful
 - Corrosive
 - Irritant
- Pesticides (Pesticides Act 1974)
- Schedule wastes (listed in First Schedule of Environmental Quality (Schedule Waste) Regulations 1989)

Purpose of amendment



- To review Permissible Exposure Limit (PEL) listed in Schedule I
- To review chemicals listed in Schedule II (Medical surveillance)
- In line with update information and latest development of current needs and technologies
- To tackle issues on overlapping/inconsistency of USECHH regulations and related regulations under Factories and Machinery Act 1967-
 - Lead
 - Asbestos
 - Mineral dusts

AMENDMENT

List of amendment in USECHH Reg.

2000



- Regulation 3: Application
- Regulation 5: Register of CHH
- Regulation 7: Eight –Hour time-weighted average
- Regulation 8: Compliance with permissible exposure limit using respirator
- Regulation 9: Assessment of risk to health
- Regulation 10: Review assessment
- Regulation 11: Assessment to be carried out by an assessor
- Regulation 12: Assessment of risk to health report
- Regulation 13: Assessment report

Continue.....



- Regulation 15: Control measures
- Regulation 16: Use of approved PPE
- Regulation 17: Engineering control equipment
- Regulation 18: Design, construction and commissioning of LEV equipment
- Regulation 19: Records of engineering control equipment
- Regulation 20: Duty of employer to ensure labelling
- Regulation 22: Information, instruction and training
- Regulation 24: Chemical Safety Data Sheet

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- Regulation 26: Monitoring of exposure
- Regulation 27: Health surveillance programme
- Regulation 28: Medical removal protection
- Schedule I, II and III

New clause introduced



- PEL for extended working hour
- Assessment
 - Simple assessment
 - Generic assessment
- Arrangements to deal with accidents, incidents and emergencies
- Eating and drinking facilities and practices
- Specific requirements
 - Pre-placement medical examination
 - Hygiene facilities and practices
 - Notification

Application



- ▶ Workplaces where CHH are used except:
 - Radioactive materials
 - Foodstuffs
 - Hazardous to health by virtue of their explosive/flammable properties, or solely because they are at a high/low temperature or a high pressure
 - Dispensed medicine
 - medicine supplied by a registered medical practitioner, registered dentist or veterinary surgeon for the purpose of the medical, dental or animal treatment, of a particular individual by a licensed pharmacist on the premises specified in his licence or substance prescribed by traditional and complimentary medical practitioner
- ▶ Use
 - production, processing, handling, storage, transport, removal, disposal or treatment

Registration of chemical risk assessor, occupational health doctor and hygiene technician



- Chemical risk assessor, occupational health doctor and hygiene technician
- Registered with the DG

Register of CHH



Information required in the register:

- ▶ a list of all CHH processed, produced, or stored;
- ▶ the average quantity used, produced or stored per month or per year whichever is applicable for each of the CHH;
- ▶ the process and work area where the CHH are processed, produced or stored;
- ▶ physical form of the CHH;
- ▶ hazard classification of the CHH;
- ▶ the name and address of the supplier of each of the CHH;
- ▶ the current Safety Data Sheet for each of the CHH.

Permissible Exposure Limit (PEL)



- ▶ Ceiling limit (CL)
- ▶ Eight hour time-weighted average limit
- ▶ Replace maximum exposure limit with short term exposure limit (STEL)
 - 15 minutes time weighted average airborne concentration that should not be exceeded at any time during a workday, even if the 8hr TWA airborne concentration is within the permissible exposure limit -time-weighted average

NEW CLAUSE: Extended working hour



- Exposure/work shift longer than 8 hrs
- Adjusting the eight-hour time weighted average limit using the following formula:

$$\text{Adjusted exposure limit} = 8\text{hr TWA} \times \left\{ \frac{8}{h} \times \left(\frac{(24-h)}{16} \right) \right\}$$

where, h is hours worked per day

- Adjustment not apply to a chemical which is marked with number two(2) in “Indication” column in Schedule I
 - PEL based on irritation effect

Assessment of risk to health



- ▶ **Full assessment**
 - carry out by a chemical risk assessor

- ▶ Simple assessment
 - The chemical is listed in the register
 - Not applicable to chemicals classified as:
 - ❖ Carcinogenicity category 1; or
 - ❖ Mutagenicity category 1; or
 - ❖ Respiratory sensitizer category 1
 - carry out by a trained person appointed by employer

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▶ Generic assessment

- where the same CHH are used, produced, processed, handled, stored, transported, disposed or treated in the same way in several workplaces and the control measures implemented are similar
- conduct upon approval from the Director General
- carry out by a chemical risk assessor

Reassessment



- ▶ significant change in the work that could affect the outcome of the assessment
- ▶ new or improved control measures are implemented
- ▶ more than five years have elapsed since the last assessment
- ▶ directed by the Director General, Deputy Director General or the Director of Occupational Safety and Health

Assessment report



- Assessor to furnish and present the report to the employer
- Within one month of the completion of the assessment

Control measures



Apply the following measures where it is not practicable to prevent exposure to a chemical classified as Carcinogenicity category 1 :

- the design and use of appropriate work processes, systems and engineering controls and provision and use of suitable work equipment and materials;
- the control of exposure at source including adequate ventilation systems and appropriate organisational controls;
- totally enclosing the process and handling systems, unless this is not reasonably practicable;
- where adequate control of exposure cannot be achieved by other means, the provision of suitable approved personal protective equipment in addition to the measures required by paragraph (a), (b) and (c);
- cleaning floors, walls and other surfaces at regular intervals;
- designating those areas and installations which may be contaminated by carcinogens and using suitable and sufficient warning signs; and
- storing, handling and disposing of carcinogens safely, including using closed and clearly labeled containers.

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Control measures



Ensure that CHH used or stored:

- is clearly identified, or its container is clearly identified; and
- is used and stored in such a way that the use or storage is not hazardous to the employees.

Use of personal protective equipment (PPE)



- ▶ Employer shall establish PPE programme which include procedures on-
 - selection and issuance
 - information, instruction and training
 - inspection
 - maintenance
- ▶ PPE programme to be documented and maintained for at least 2 years

Engineering control equipment



- Employer to ensure that the engineering control equipment is maintained in-
 - an efficient state
 - efficient working order
 - good repair and
 - a clean condition

Design, construction and commissioning of local exhaust ventilation equipment



- Designed and commissioned by professional engineer
 - mechanical or chemical engineer registered as a professional engineer under subsection 10(2) of the Registration of Engineers Act 1967)

Records of engineering control equipment



- Include record of commissioning of LEV

Relabelling



- Relabel the container with the chemical name or the trade name or product identifier as written on the original label if the contents of the container are used-
 - within a normal workshift; or
 - in a testing chemical laboratory; or
 - the size of the container is 125 ml or below

Information, instruction and training



- Include information on any adverse effect to reproductive system or foetus or breastfeeding child
- Provide information on:
 - results of any monitoring of exposure
 - collective result of medical surveillance
 - Medical removal and return to former job
- Provide information to the respective employee within 1 month after receipt of such information

NEW CLAUSE: Hazard information



- the employer may use the chemical for trial purposes if it does not exceed a capacity of 5 kg, provided that the hazard and precautionary statements are available.

Monitoring of airborne chemicals



- ▶ Carry out a monitoring of exposure of employees to CHH where-
 - it is requisite to ensure that Reg 7,8,or 9 is complied; or
 - an assessment of risk to health indicates that monitoring of exposure is required; or
 - it is requisite to ensure that subregulation 17(2) is complied with; or
 - directed by the Director General, Deputy Director General or Director of Occupational Safety and Health
- ▶ Conduct within 4 months after receiving assessment report

Monitoring of airborne chemicals



- ▶ The sample that needs laboratory analysis shall be tested at a chemical laboratory accredited by Department of Standards Malaysia.

Frequency of Monitoring



- not more than six months for exposure at or above the permissible exposure limit; or
- not more than twelve months for exposure at or above action level but below the permissible exposure limit
- The monitoring of exposure may be terminated if the exposure is below the action level.

(at least two consecutive measurement, at least seven days apart)

- action level - half of the value of the permissible exposure limit.

Medical surveillance programme



- ▶ Replace health surveillance with medical surveillance
- ▶ Employer to carry out medical surveillance programme where assessment indicate it is necessary or appropriate for protection of the health of employees exposed to CHH
 - the employee is exposed or likely to be exposed to chemicals specified in Schedule II and there is a likelihood that an identifiable disease will result from that exposure; or
 - the exposure of the employee to a CHH is such that -
 - an identifiable disease may be related to the exposure, or
 - there is a likelihood that the identifiable disease may occur under any particular conditions of his work; and
 - there are valid techniques for detecting indications of the identifiable disease.

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Medical surveillance programme



- the medical surveillance shall be continued after the exposure to that chemical has ceased, unless it has been cancelled by the occupational health doctor or an occupational safety and health officer who is also a medical practitioner.

Medical removal protection



- ▶ Remove from any work-
 - the employee has a detected medical condition which places him at increased risk of material impairment to health from exposure to CHH
 - a pregnant or breastfeeding employee expose or is likely to expose to CHH that can adversely affect the foetus or breastfeeding child after being notified by the pregnant employee or breastfeeding employee or an occupational safety and health officer who is also a medical practitioner or an occupational health doctor
- ▶ Informed the employee the reason of the medical removal

NEW CLAUSE: Arrangements to deal with accidents, incidents and emergencies



Ensure that—

- procedures, including the provision of appropriate first-aid facilities, have been prepared;
- information on emergency arrangements, including—
 - (i) details of relevant work hazards and hazard identification arrangements, and
 - (ii) specific hazards likely to arise at the time of an accident, incident or emergency, is available; and
- suitable warning and other communication systems are established.

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NEW CLAUSE: Arrangements to deal with accidents, incidents and emergencies



- In the event of an accident, incident or emergency related to the presence of CHH at the workplace, the employer shall ensure that—
 - immediate steps are taken to—
 - i. mitigate the effects of the event,
 - ii. restore the situation to normal, and
 - iii. inform those of the employees who may be affected; and
 - only those persons who are essential for the carrying out of repairs and other necessary work are permitted in the affected area and they are provided with—
 - i. appropriate approved PPE, and
 - ii. any necessary specialised safety equipment and plant,
 - iii. which shall be used until the situation is restored to normal.

- Immediate access to the emergency showers, eye wash equipment or other appropriate equipment if chemicals harmful to the eyes or skin are used.

NEW CLAUSE: Eating and drinking facilities and practices



- ▶ Ensure employees do not eat, drink or smoke in any place of work where CHH are used.
- ▶ Eating and drinking facilities are isolated from place of work where CHH are used but such facilities shall be readily accessible to employees
- ▶ Ensure employees do not enter eating and drinking facilities wearing any clothing or personal protective equipment worn during the work shift unless CHH has been removed.

NEW CLAUSE: SPECIFIC REQUIREMENTS



▶ **Preplacement medical examination**

- Employer shall conduct pre-placement medical examination to employee commencing work with chemicals listed in Schedule II

▶ **Hygiene facilities and practices**

- Employer shall provide adequate changing rooms, lockers, washing and shower facilities for employees using chemicals listed in Schedule III.
- Employer shall ensure that employees using chemicals listed in Schedule III do not leave the place of work wearing any clothing or personal protective equipment worn during the work shift.

NEW CLAUSE: NOTIFICATION



- Employer shall shall notify DG in writing two weeks before starting any work involving the removal of asbestos containing materials, sand blasting or any work involving any other CHH as prescribed by DG.

Schedule I: List of permissible exposure limits



- **335 chemicals**

Schedule II: Chemicals for which medical surveillance is appropriate



1. Asbestos
2. Auramine
3. Benzene
4. Carbon disulphide
5. Carbon tetrachloride
6. Dianisidine
7. Dichlorobenzidine
8. Disulphur dichloride
9. Hexavalent chromium compound [Cr (VI)]
10. Lead
11. Mercury
12. Nitro or amino derivatives of phenol and of benzene or its homologues
13. n-hexane
14. Organophosphate
15. Orthotholidine
16. Pitch
17. Potassium or sodium chromate or dichromate
18. Silica
19. Trichloroethylene
20. Vinyl chloride monomer (VCM)
21. Cadmium

Schedule III: CHH with specific requirements



- Asbestos
- Lead, elemental and inorganic compounds
- Mercury
- Pesticides as defined under the Pesticides Act 1974 [Act 149] except Class IV
- Silica - crystalline

THANK YOU