

OCE17

Offshore COSHH essentials



This information will help offshore dutyholders (owners, operators and contractors) to comply with the Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended, to protect workers' health.

This guidance consolidates good control practice and reinforces existing knowledge with additional information.

It will help you carry out COSHH assessments, review existing assessments, deliver training and in supervising activities involving substances hazardous to health.

It is aimed at staff whose responsibilities include the management of substances hazardous to health on offshore installations (eg occupational health specialists, COSHH assessors, supervisors etc). It is also useful for trade union and employee safety representatives.

Following this guidance is not compulsory and you are free to take other action. But if you do follow this guidance, you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.

Also see essential information on the back of the sheet.

Laboratory practice

Control approach 2 Engineering control

What this sheet covers

This sheet describes good practice for laboratory work offshore involving the analysis of chemicals and process fluids, eg measuring oil in water using perchloroethylene (TTCE).

It covers the key points you need to follow to help reduce exposure to an acceptable level, as part of your COSHH assessment.



Hazards

- ✓ There is a wide range of hazards from chemicals (eg TTCE) and process fluids (gas, oil, condensate, drilling fluids) that are handled in laboratories.
- ✓ Health risks from process fluids include cancer, genetic damage, toxicity to reproduction and dermatitis.
- ✓ TTCE is classified with limited evidence of carcinogenic risk. It may also cause liver/kidney damage and narcotic effects.
- ✓ The workplace exposure limits (WELs) for TTCE is 50 ppm (8-hour time-weighted average (TWA)) and 100 ppm (15-minute TWA).
- ✓ The WEL for benzene is 1 ppm (8-hour TWA). Keep exposure as far below this as reasonably practicable.

Access

- ✓ Restrict access to the laboratory.
- ✓ Secure the laboratory and store while unoccupied.
- ✓ Locate the work away from doors and walkways to prevent draughts interfering with fume cupboard extraction.

Storage

- ✓ Provide a store with sufficient space, well organised, well lit and well ventilated.
- ✓ Provide eyewash equipment close to the work site.
- ✓ Segregate incompatible materials, and segregate waste.
- ✓ Provide suitable fire extinguishing equipment.

Equipment and procedures

Control equipment

- ✓ Provide a good standard of general ventilation.
- ✓ Provide a fume cupboard with sash, deep enough to contain equipment and chemicals.
- ✓ The cupboard should have an inward air speed of 0.3–0.5 metres per second. With the sash at working height, the air speed should be at least 0.75 m/s.
- ✓ Fit an airflow indicator to show that extraction is working properly.
- ✓ Discharge extracted air to a safe place.
- ✓ Provide enough make-up air for the fume cupboard to work properly.
- ✓ Provide good lighting.
- ✓ Provide measured-volume dispensers to avoid pouring chemicals or reagents.

Control procedures

- ✓ Carry out all work with hazardous substances in the fume cupboard – dusts, liquids or gases.
- ✓ Store samples for degassing in a fume cupboard, with the cap removed.
- ✓ Keep the sash at the right working height to allow sufficient inward air speed and fit a restraint on opening.
- ✓ After analysis, put solutions in a labelled waste bottle stored in the fume cupboard.
- ✓ Minimise contents of cupboard.

Caution: Never pour chemicals or reagents down sinks or into drains

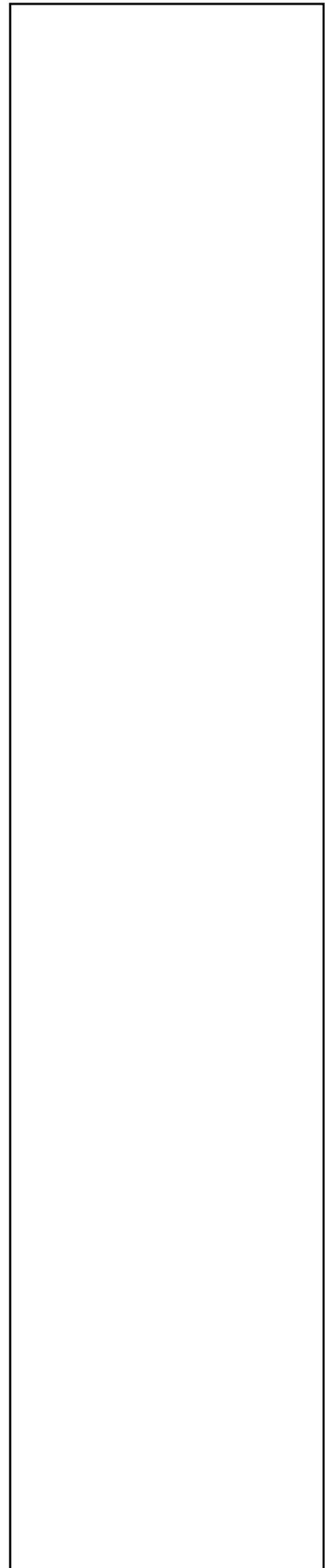
Personal protective equipment (PPE) – see OCM3

- ✓ Ensure eye protection is worn for laboratory and sampling work.
- ✓ Ensure workers wear protective gloves for sampling. Single-use nitrile or PVC gloves are acceptable.
- ✓ Discard gloves at the end of the task.
- ✓ Tell workers to discard single-use gloves every time they take them off.

Maintenance, examination and testing

Checking and maintenance

- ✓ Check for signs of damage to control equipment before starting work.
- ✓ At least once a week, check that airflow indicators work properly.
- ✓ Keep this information in your testing logbook.



Examination and testing

- ✓ Extraction systems require statutory 'thorough examination and testing' (TEXT).
- ✓ Get a competent ventilation engineer to perform the TEXT at least once every 14 months (see HSE publication HSG258).
- ✓ Carry out all actions arising from the TEXT.
- ✓ Check that eyewash bottles are within date; replace if part-used or out of date.

Records

- ✓ Keep records of all examinations and tests for at least five years.

Cleaning and housekeeping

- ✓ Clean the laboratory once a week. Keep it tidy.

Waste

- ✓ Collect chlorinated solvent waste separately, for safe disposal.
- ✓ Collect oil and hydrocarbon waste for disposal in 'oily waste' containers.
- ✓ Place needles, broken glass etc in a 'sharps' container for special disposal.
- ✓ Residues are 'hazardous waste'. Label containers clearly – include a UN number where appropriate. Store and dispose of waste safely.

Personal decontamination and skin care

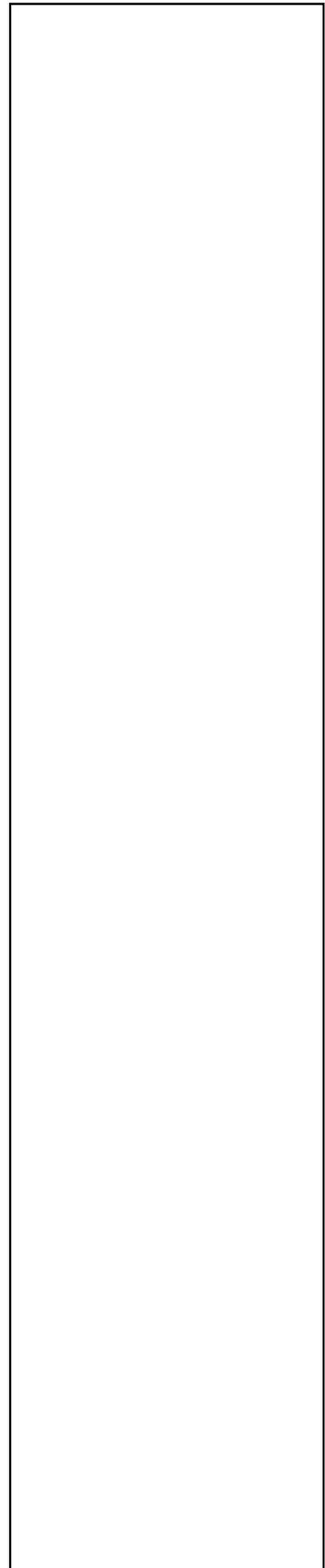
- ✓ Provide warm water, mild skin cleaners, nailbrushes and soft paper, fabric towels or hot air for drying. Avoid abrasive cleaners.
- ✓ Provide pre-work creams, which make it easier to wash dirt from the skin, and after work creams to replace skin oils.

Training and supervision

- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Tell workers, including maintenance workers, what the hazards and risks are.
- ✓ Training includes toolbox talks on:
 - how to use equipment properly;
 - how to check that extraction is working properly;
 - good record keeping;
 - how to clean up spills correctly; and
 - what to do if something goes wrong.
- ✓ Involve managers and supervisors in health and safety training.

Laboratory record keeping

- ✓ Keep records of:
 - instructions, procedures and methods;
 - samples and results, including quality assurance results; and
 - audit checks of results and records.
- ✓ Keep all reports for at least five years.



Essential information

OCE0 *Advice for managers*

OCM2 *Local exhaust ventilation (LEV)*

OCM3 *Personal protective equipment (PPE)*

OCE16 *Bulk sampling*

Employee checklist

- Is the equipment in good condition and working properly?
- Is the extraction working?
- Is your respirator working properly? Check it every time.
- Look for signs of leaks, wear and damage before every job.
- Clean up leaks and spills immediately.
- If you find any problem, get it fixed. Don't just carry on working.
- Discard single-use gloves every time you take them off.
- Wash hands before eating, drinking or using the lavatory.

Further information

COSHH in laboratories

www.rsc.org/images

[COSHH08_tcm18-35257.pdf](#)

Workplace exposure limits EH40

www.hse.gov.uk/coshh/table1.pdf

You can find the full Offshore

COSHH essentials series at

www.hse.gov.uk/coshh/index.htm

This guidance was developed by representatives from the UK offshore oil and gas industry and trade unions, with HSE.