

OCE25

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.

Well servicing – chemical injection

Control approach 3

Containment

What this sheet covers

This sheet describes good practice for well servicing operations – injection of substances such as antifreeze, scale inhibitors, corrosion inhibitors and hydrate dispersants into the well. The task involves connection and disconnection of flexible metal pipes between tote tanks, a pump, and the well injection point.

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

Hazards

- ✓ Coiled tubing is used to convey a large number of different fluids in the wellbore. These fluids range from combustible fluids (eg diesel) to more complex fluid mixtures including gelled fluids, complex acid systems and cement slurries. Other fluids used may include biocides, scale removers, corrosion inhibitors etc.
- ✓ Many of the substances injected are harmful by inhalation and skin contact. Some are flammable.
- ✓ Coiled tubing units and associate equipment (eg fluid pumps) are mainly diesel powered. Diesel exhaust fumes are harmful.
- ✓ Coiled tubing operations often use nitrogen for purging lines, pressure testing and kick off operations. Nitrogen is an asphyxiating gas and contact with liquid nitrogen may lead to severe burns.

Access

- ✓ Erect barriers and notices.
- ✓ Establish radio contact between drilling, cementing and well service crews.

Storage

- ✓ Restrict access to hazardous materials storage areas.
- ✓ Provide a store with sufficient space, well organised, well lit and well ventilated.
- ✓ Prevent cross-contamination of well servicing products. Make sure incompatible substances are separated
- ✓ Check if any substances need to be kept secure, eg ethanol.
- ✓ Provide eyewash and an emergency shower close to the work site.
- ✓ Provide spill control equipment (spill kits) and absorbent mats in risk areas.

Equipment and procedures

Planning

- ✓ Ensure that the coiled tubing and pumping operations (fluid and nitrogen) are conducted and supervised by competent personnel.
- ✓ Follow a documented job programme for coiled tubing operations.
- ✓ Hold a 'SIMOPS' meeting (simultaneous operations) before any well intervention operations. Cover all jobs as planning is important for any coiled tubing job.
- ✓ Make contingency plans for common problems, such as equipment failures, spills, bursting hydraulic hoses, hydrocarbon or pump fluid leaks from equipment etc.
- ✓ Hold a pre-job meeting to confirm procedures, control measures and contingencies. Review the risk assessment.

Respiratory protective equipment (RPE) – see OCM4

- ✓ Provide RPE when mists or vapours arise, and for applying corrosion inhibitor coatings.
- ✓ Where necessary, provide CE-marked RPE with an assigned protection

Caution: Specific hazards such as acid mixing/pumping and handling other harmful chemicals require individual assessment and emergency control procedures.

Other protective equipment

- ✓ Provide eye protection – goggles or safety glasses.
- ✓ Provide standard coveralls or a chemical suit.
- ✓ Provide lace-up boots, with good slip resistant soles for working in wet areas. When handling certain materials, chemical resistant boots or overshoes may be required.
- ✓ Provide clean chemical-resistant gloves, eg nitrile, and new gloves when these are damaged.

Maintenance, examination and testing

Checking and maintenance

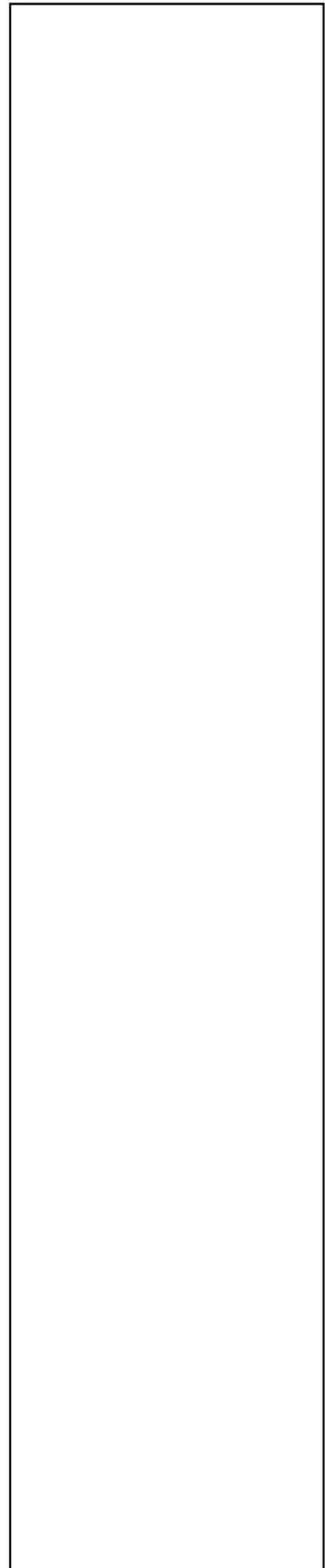
- ✓ Check for signs of damage.
- ✓ Is all equipment certified? Are whip checks fitted?
- ✓ Flush low and high pressure pumping systems with water before any operation. Check for leaks in the process. High pressure lines should be pressure tested.
- ✓ Record this information in your testing logbook.

RPE

- ✓ Examine and test RPE thoroughly at least monthly and infrequently used RPE at least three monthly. Replace worn parts.

Exposure monitoring

- ✓ Prove that you are using the right level and type of RPE – use monitoring records or do personal air monitoring.



Records

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

Cleaning and housekeeping

- ✓ Clean the area after the task, or as specified in working procedures
- ✓ Clear the injection lines after use – collect the waste for disposal.
- ✓ Clear up spills immediately. Use protective gloves. You may also need RPE.
- ✓ Label bags of dirty clothing to warn the laundry about the hazard.

Waste

- ✓ Collect oil and hydrocarbon waste generated by coiled tubing and pumping units for disposal in 'oily waste' containers. Provide drip trays under all equipment that may leak hydrocarbons.
- ✓ Waste chemicals and residues are 'hazardous waste'. Label containers clearly – include a UN number where appropriate. Store and dispose of waste safely.
- ✓ Return tote tank residues to the supplier.

Personal decontamination and skin care

- ✓ Remove contaminated clothing immediately. Wash off all contamination.
- ✓ Eye contact: use eyewash for at least 15 minutes, holding open the eyelid. Contact the offshore medic.
- ✓ Provide warm water, mild skin cleansers, nail brushes, and soft paper, fabric towels or hot air for drying. Avoid abrasive cleansers.
- ✓ Provide pre-work skin creams, which will make it easier to wash dirt from the skin, and after-work creams to replace skin oils.

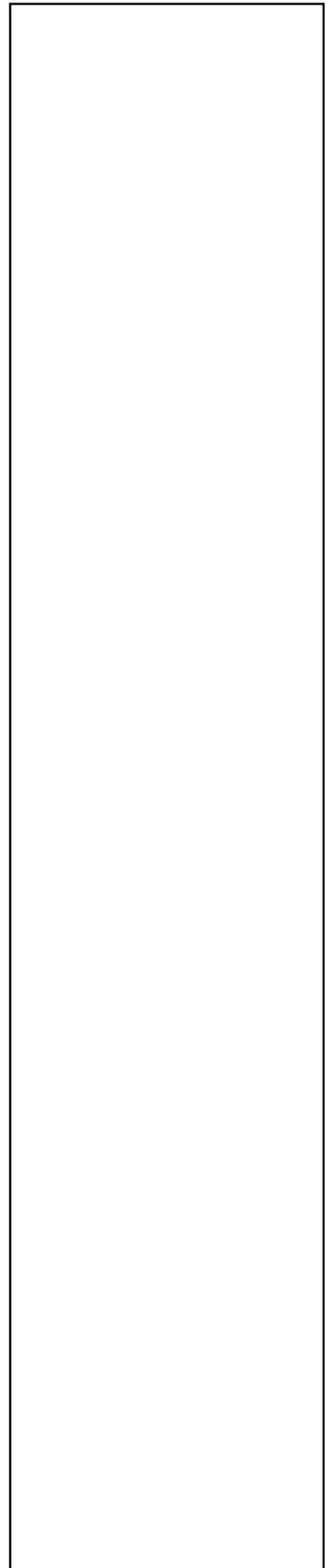
Caution: 'Barrier creams' or 'liquid gloves' do not provide a full barrier.

Health surveillance

- ✓ Conduct low-level health surveillance for dermatitis involving skin checks by suitably trained responsible person.

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 the equipment is working properly;
how to use the right safe working procedures;
 - checking for damage;
 - emergency procedures;
 - how to use RPE and check that it is working;
 - personal hygiene;
 - how to clean up spills correctly;
 - how to decontaminate effectively; and
 - what to do if something goes wrong.
- ✓ Involve managers and supervisors in health and safety training.



Essential information

OCE0 *Advice for managers*

OCM3 *Personal protective equipment (PPE)*

Employee checklist

- Are you clear about the procedures for doing the job?
- Is the equipment in good condition and working properly?
- 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.
- Use, look after and store your PPE in accordance with instructions.
- Wash hands before eating, drinking or using the lavatory.

Other hazards

- Static electricity – earthing fuel lines, storage tanks
- Flammability
- Slips and trips
- Substances harmful to the marine environment

Further information

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.