



Safe Operating Procedure (SOP) Development

Purpose

This guideline supports WHS procedure *Managing workplace health and safety risks*. It outlines a process to assist with the development of workplace-specific Safe Operating Procedures (SOP) for plant, equipment, hazardous chemicals, work tasks and processes that have the potential to cause harm to persons, plant, material or the environment as identified from risk assessments. The process of developing an SOP is sometimes called a Job Safety Analysis (JSA).

Guidance

SOPs may need to be developed as a risk control measure:

- if indicated from the outcomes of risk assessments carried out in accordance with the procedure for managing workplace health and safety risks
- when introducing new work practices
- when introducing new technology
- from a workplace inspection
- following incident investigation which recommends a need for SOP development.

SOPs should be written with sufficient detail to ensure that someone with limited experience or knowledge of the procedure, but with a basic understanding, can successfully carry out the procedure in a safe manner when unsupervised. They should be written in a concise, logical, step-by-step, easy-to-read format.

Reference to the manufacturer's or supplier's user manuals or information may be required to assist in provision of accurate information.

The SOP should be written by a member of staff who has good knowledge of the task and has performed the particular task. Consultation with others involved in the task may be required and is encouraged. In some circumstances additional expertise may be required and this should be sought where applicable. Any elected Health and Safety Representatives are encouraged to be involved in the process.

Use of Form WHS08 *Development of Safe Operating Procedure* is recommended. This form may be modified to meet individual workplace needs. For hazardous chemicals form WHS12 *Chemical process risk assessment and control* incorporates an SOP development section.

SOPs should include:

- 1) the purpose of the work or process
- 2) any legislative information or standards that are appropriate and have been considered in the SOP process
- 3) definition of any specialised or unusual terms
- 4) specific information regarding the potential hazards and associated risks of the task
- 5) precautions required to eliminate or adequately reduce the risk prior to commencing the task
- 6) personal protective equipment to be worn while undertaking the task
- 7) the environment where the task should be undertaken
- 8) clear and simple instructions for undertaking the task described in a safe manner
- 9) correct environmental, cleanup and waste disposal measures
- 10) emergency procedures and shutdown.



How to prepare an SOP

1. Sequence of Job Steps

Break down the task or operation into the basic steps to complete the work task and/or operate the item of plant/equipment. For example, what is done first, what is done next and so on.

Record each step of the task in the order of normal sequence, making sure you describe what is done, not how it is done. As a working guide, the task description should be contained within approximately 10 broad steps. This of course may vary depending on the complexity and the hazardous nature of the job.

2. Potential Hazards/Risks

For each step in the work task, list the potential hazards/risks that are reasonably foreseeable.

The following should be explored in relation to the steps, and the person(s) doing the task - Can they:

- be struck by or contacted by anything
- strike against or contact anything
- be caught in, on, or under or between anything
- fall from height or be exposed to falling objects
- manual handling
- be exposed to welding rays, fumes, light, electricity or other forms of energy
- be exposed to stored energy
- be exposed to hazardous chemicals etc.

3. Recommended control measures in SOP

For each step in the work task, list the most appropriate risk control measure that will eliminate or minimise the risk to the person(s) completing the work task.

For each potential hazard/risk, identify and list the steps of how the work task is to be completed, including what the operator(s) should or should not do to manage the level of risk. Specifically describe the safe operating procedure and precautions that must be taken for each step.

Attach any appropriate information or references. An SOP may reference other SOPs.

4. Personal Protective Equipment

The types of personal protective equipment (PPE) to be utilised to minimise the risk to the person(s) undertaking the task shall be listed on the SOP.

5. Perform the task

Test the written procedure by carrying out the task in accordance with the documented SOP, completing the following checks:

- inspect the task again
- check the upstream and downstream tasks that may have an impact
- seek improvement to the work method
- consider all hazards at each step
- ensure understanding in the work group or an individual staff member or student of the hazards associated with each step of the procedure
- reassess and modify the SOP, as required.



Training

Training or instruction on the SOP must be provided to staff or students undertaking the task/operation for which the SOP was established. A record of completed training or instruction must be maintained.

Review of SOPs

SOPs should be reviewed on a periodic basis, eg every 2 years, depending on the level of risk, to ensure that the procedure remains current and appropriate. The review date should be added to each SOP that has been reviewed. If an SOP describes a process that is no longer required to be followed, it should be withdrawn and archived immediately.

University Resources

Safety & Wellbeing website

WHS Procedure – Managing Workplace Health and Safety Risks

WHS Procedure – Induction and Training

WHS Guideline – Personal Protective Equipment

WHS08 Safe Operating Procedure

WHS12 Chemical Process Risk Assessment and Control