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What are Safe Operating Procedures?

Safe Operating Procedures (SOPs) (or Safe Working Procedures (SWP)) are operational documents created locally to describe the safest and most efficient way to perform a certain task, carry out an operation or operate a machine/tool. Safe Operating Procedures will normally come from a risk assessment as an administrative control. Written Safe Operating Procedures are an essential part of a safe system of work and are an important part of an overall occupational health and safety program.

Safe Operating Procedures provide information necessary to guide all staff and students to perform tasks safely and reliably. Safe Operating Procedures also assist in the training and orientation of new staff and students in the hazards of the specific process or activity. Lastly Safe Operating Procedures are a valuable tool in assessing the level of understanding or competency regarding on-the-job training.

Safe Operating Procedures Policy

Safe Operating Procedures are required for any routine, repeated activity or process associated with a medium to high risk outcome from a risk assessment (hazardous work). Medium to high risk in this context means any activity or process where an injury may occur if the process is not performed in the prescribed manner.

Before carrying out hazardous work the following must occur:

- A risk assessment is carried out
- A relevant Safe Operating Procedure is prepared, and
- User are trained on the Procedure.

Safe Operating Procedures shall consider and be prioritised according to their level of risk, specifically considering hazard exposure, frequency of exposure, and worker knowledge and experience. A higher priority shall be placed on tasks performed by students and other inexperienced workers.

Safe Operating Procedures shall be reviewed:

- whenever the task or activity changes
- when a new hazard is identified or becomes known: for example, new information in a Safety Data Sheet.

- when equipment or processes are not used for a period of time (over 6 months) and worker knowledge and experience may decline
- after an associated injury, near miss or illness
- every three years.

Responsibilities

The development and implementation (including training) of Safe Operating Procedures is the responsibility of the line supervisor or academic-in-charge where students are involved. The Dean, Head of School, Director or Unit Head is responsible for maintaining an overall safe system of work that includes Safe Operating Procedures.

All staff, visitors and students are expected to familiarise themselves with and comply with the Safe Operating Procedures that exist in their area of work. Failure to comply with Safe Operating Procedures may lead to disciplinary action and/or withdrawal of rights to carry out work in the area.

Developing Safe Operating Procedures

Methodology	Resources / Tools
Step 1: Preparation	 Safe Operating Procedures shall: be written by a person with sound, hands on experience and knowledge of the activity and process involve the persons who will be using the Instructions as far as practicable, involve consultation with the Health and Safety Representative of the area. involve a review of manufacturer or supplier's manual or working instructions (where they exist) Safe Operating Procedure Template can be used
Step 2. Consider what is needed to be done or available before the task or process is carried out	 This may include: the issuing of permits or carrying out isolations if the work is done by a variety of people, are there any training, licence or skill requirements that need to be checked each time? the availability of equipment the use of personal protective equipment
Step 3. Observe the task or process	Where possible use a third person to observe and record the steps. For a new process, a dry run or trial is often the best way to identify potential problems. For example with a laboratory procedure, observe staff stepping through the process
Step 4. Record the sequence of basic job steps	A good basis for preparing a Safe Operating Procedure is to carry out a risk assessment. This may be in the form of • Work Safety Assessment (for Research work)
Step 5. Identify and assess potential hazards of each step	 <u>Safe Work Method Statement</u> (high risk work) Other <u>risk assessment</u>

Methodology	Resources / Tools
Step 6. Review associated legislative requirements, standards and University guidelines	The <u>Victorian WorkSafe website</u> provides topic based OHS information The <u>OHS Manual</u> provides guidance on major OHS issues. The Library provides access to <u>Australian Standards</u>
Step 7. Assess the risks of the hazards	See OHS Risk Management Standard
Step 8. Suggest practical ways of eliminating and controlling the hazards using the hierarchy of controls.	See <u>Possible Solutions</u> . If the process or activity remains high risk after applying the control measures discuss the feasibility of the process or activity with the responsible manager. It may be necessary to discontinue/not do the process or activity
Step 9. Write up the Safe Operating Procedures	Use straightforward language: see NSW WorkCover "Writing work method statements in plain English: Guidelines". The Safe Operating Procedures template provides further guidance.
Step 10. Test the Safe Operating Procedures by consultation and verify relevant issues are documented	With a new process or a changed one, where possible a dry run or trial is often the best way to identify potential problems. For example with a laboratory procedure observe staff stepping through the new Instruction
Step 11. Obtain approval of the Safe Operating Procedures from a supervisor or manager.	When complete, Safe Operating Procedures should be reviewed, signed and dated by the area supervisor and if there is one, the local health and safety representative (HSR).
Step 12. Ensure the new or revised Safe Operating Procedures are available to staff and students that may need them	Safe Operating Procedures should be displayed prominently or readily available in the areas in which they are to be used: For equipment and machinery: • Safe Operating Procedures for each piece of equipment/machinery should be displayed prominently close to the location of the equipment/machinery • the manufacturer's user manual provided with the equipment/machinery is a good resource for safety information to include in Safe Operating Procedure.
Step 13. Carry out any necessary training or familiarisations.	The supervisor shall verify that the Safe Operating Procedures are being followed and are workable.
Step 14. Update Safe Operating Procedure Register	

Supporting Documents

Deakin University OHS Manual:

- <u>Hazard Isolation Standard</u>
- OHS Risk Management Standard
- Other Risk Assessments
- Permit System Standard
- <u>Safe Operating Procedure Register Template</u>
- <u>Safe Operating Procedure Template</u>
- <u>Safe Working Method Statements</u>

- Staff Consultation and Representation
- Work Safety Assessment

Australian Standards

NSW WorkCover: Writing work method statements in plain English

Examples

Examples of Standard Safe Operating Procedures can be found at:

- WorkSafe Tasmania
- <u>Victorian Education Department</u>: Cutting Tools, Shaping Tools, Joining Tools, Finishing Tools
- <u>Victorian Education Department</u>: maintenance plant and equipment
- WorkSafe Victoria
- Canadian Centre for Occupational health and Safety: <u>Safety Hazards</u> (a wide range of examples)

DOCUMENT HISTORY		
Name of procedure	Safe Operating Procedures(Instruction)	
Overarching policy	Health Wellbeing and Safety policy	
OHS Manual	Safe Work Practices	
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POSSIBLE SOLUTIONS TO PREVENT OR REDUCE THE LIKELIHOOD OF INJURIES (in order of preference: 1 is a better solution than 2 etc).

Working Environment

- Install ventilation extraction systems in hot work areas.
- 2. Fit localised lighting on machines to enable operators to comfortably view work pieces.
- 3. Suspend electrical power lines and air lines.
- 4. Round-off edges and corners of benches, equipment or fittings.
- 5. Install safety barriers to protect pedestrians from vehicles or mobile plant.
- 6. Install mirrors and flashing lights to warn of approaching vehicles or mobile plant.
- Fit reverse warning beepers and lights to mobile plant for example, forklifts.
- 8. Install hand rails on ramps and steps.
- 9. Install non-slip floor surfaces.
- 10. Install good lighting along walkways.
- 11. Removing overhanging objects from work areas.
- 12. Provide fixed plant and machinery with drip trays.
- 13. Supply cool water for workers required to work in hot areas.
- 14. Regularly sweep and clean floors.
- 15. Keep walkways and work areas uncluttered.
- 16. Identify walkways with painted yellow lines.
- 17. Have available temporary signs to warn of slippery surfaces.
- 18. Introduce job rotation and frequent rest breaks for jobs which could cause workers to suffer from the extremes of hot or cold.
- 19. Provide workers with a variety of tasks.
- 20. Introduce job rotation for jobs which may be fatiguing.
- 21. Provide personal protective clothing and footwear to minimise the effects of cold.

Plant or Machinery

- 1. Enclose very noisy plant or machinery in sound-proof barriers or relocate in separate area from the majority of workers.
- 2. Guard moving parts of the plant or machinery (fixed or adjustable guards, photo-electric, pressure sensing mats).
- Interlock guards with power supply (power supply is automatically switched off when guard is opened or removed).
- 4. Make guards difficult to remove or machinery difficult to disable.
- 5. Install two hand controls.
- 6. Provide feeder tables or rollers.
- 7. Use clamps, supports, guides or stops to position workpieces.
- 8. Fit lock out switches to all plant and machinery to disconnect power supply while being cleaned, serviced or repaired.
- 9. Guard or shield hot or cold machine components from accidental contact.
- 10. Fit emergency stops to plant and machinery which is easy to see, operate and reach at all times.
- 11. Make sure plant or machine controls are easy for the operator to understand and reach.
- 12. Introduce lock-out procedures and provide locks and tags.
- 13. Write safe operating procedures for all machinery operations.
- 14. Clearly identify with warning signs and line marking areas where hot processes are carried out.
- 15. Provide workers likely to be burnt by hot material with personal protective equipment such as gauntlets, aprons, face shields.
- 16. Provide workers with good quality hearing protection.

POSSIBLE SOLUTIONS TO PREVENT OR REDUCE THE LIKELIHOOD OF INJURIES (in order of preference: 1 is a better solution than 2 etc).

Chemicals or Substances

- 1. Use less dangerous chemicals or substances.
- 2. Use paste or pellets instead of powders.
- 3. Apply paint by brush instead of spraying.
- 4. Store chemicals in sealed containers.
- 5. Install an extraction system to remove fumes vapours or dust.
- 6. Obtain Material Safety Data Sheets for all chemicals or substances. Particularly Hazardous Substances and Dangerous Goods.
- 7. Follow safety precautions contained in Material Safety Data Sheets.
- 8. Make sure all containers are labelled.
- 9. Write safe operating procedures for the handling or use of chemicals or substances.
- 10. Train workers on the safe handling or use of chemicals or substances.
- 11. Provide first aid, safety showers, eye wash.
- 12. Provide proper personal protective equipment such as gloves, aprons, cartridge respirators, safety glasses and face shields.

Tools or Equipment

- 1. Make sure tools or equipment with rotating or moving blades or cutters are fitted with guards.
- 2. Make sure electrically powered equipment is only used if protected by a safety switch (Residual Current Device).
- 3. Provide industrially insulated power extension cords.
- 4. Prevent mobile plant or vehicles driving over power cords.
- 5. Regularly test and tag electrically powered equipment.
- 6. Write safe operating procedures for all powered tools and equipment.
- 7. Train workers on the safe use of tools and equipment.
- 8. Introduce job rotation and frequent rest breaks for jobs which involve the risk of injury from mechanical vibration.
- 9. Provide safety glasses or face shields.
- 10. Provide workers with good quality hearing protection.
- 11. Provide workers likely to be burnt by hot material with personal protective equipment such as gauntlets, aprons, face shields.

Manual Handling

- 1. Reduce the weight of the object to be lifted or carried; for example, smaller containers or less material per container.
- 2. Make sure containers are easy to lift or carry; for example, they are provided with handles or grips, or are a comfortable shape and size.
- 3. Change the height of workbenches or shelving to reduce the need to bend or overreach.
- 4. Provide equipment to assist with the lifting carrying or moving; for example, hoists, trolleys, scissor lifts, conveyors.
- 5. Make sure tools or equipment are comfortable and easy to lift, use or operate.
- 6. Suspend heavy tools or equipment.
- Provide footrests, comfortable and adjustable seating and cushioned floor coverings.
- 8. Reduce the distance to carry objects.
- 9. Change the work process so that objects do not have to be lifted or moved as often by hand.
- 10. Introduce job rotation with a mixture of repetitive and non repetitive tasks.
- 11. Provide training in safe manual handling.
- 12. Make sure there is a two person lift.
- 13. Provide frequent short rest breaks for workers carrying out repetitive tasks.