STANDARD OPERATING PROCEDURE

SAFETY Everyone. Everywhere. Every day

DECONTAMINATION

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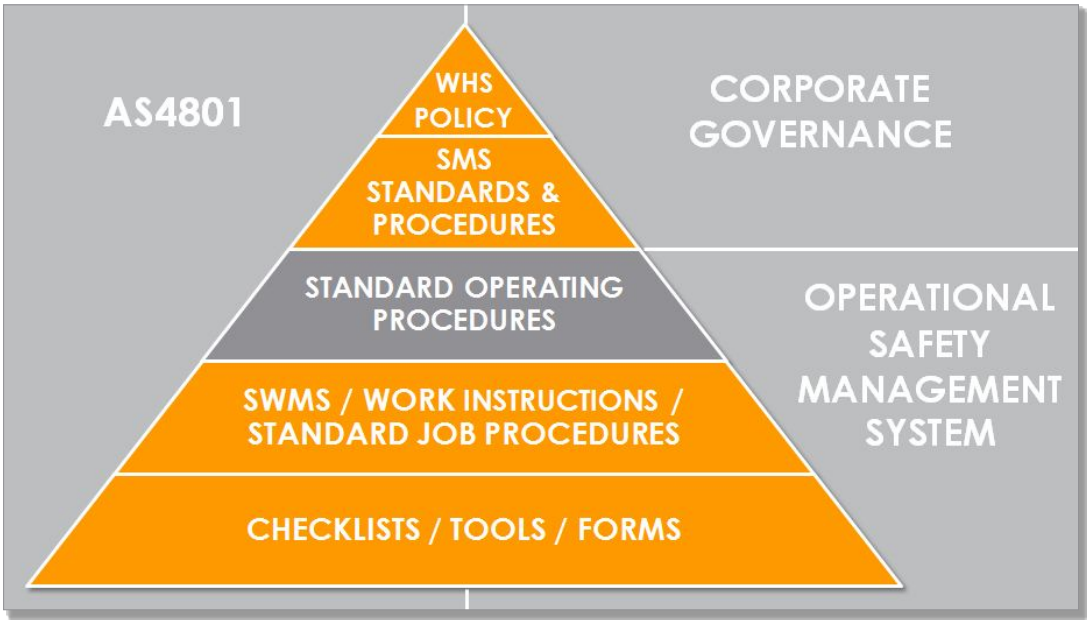
1. SMS DOCUMENT HIERARCHY



2. PURPOSE

This Standard Operating Procedure (SOP) documents Queensland Urban Utilities' (QUU's) approach to the management of decontamination work at QUU controlled workplaces.

The overall purpose of this procedure is to ensure that risks associated with decontamination work are adequately managed in order to minimise the risk of injury or harm to workers.

3. SCOPE

This SOP provides practical guidance on how to manage health and safety risks associated with decontamination work.

This procedure applies to all QUU staff, including contractors and other persons on QUU-controlled worksites.

4. DEFINITIONS AND ACRONYMS

Biological Hazard: Biological hazards are organic substances that pose a threat to the health of humans and other living organisms. (e.g. raw sewerage, blood)

Decontamination: The process of removing or neutralising contaminants that have accumulated on personnel, clothing and equipment. Decontamination protects workers from hazardous substances that may contaminate and eventually permeate the protective clothing, respiratory equipment, tools, vehicles, and other equipment used on site; it minimizes the transfer of harmful substances into clean areas; it helps prevent mixing of incompatible chemicals; and it protects the community by preventing uncontrolled transportation of contaminants.

Hazardous Material: Any substance that because of their chemical, physical or biological properties can cause harm to people, property or the environment.

Health Monitoring: Health monitoring of a person means monitoring the person to identify changes in their health status because of exposure to certain health hazards, such as hazardous substances and biological hazards.

Hygiene: The conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness.

Manager: as per QUU naming conventions, the Manager who has direct responsibility for the activity being performed or the area the activity is occurring in.

Personal Protective Equipment: anything used or worn by a person to minimise risk to the person's health and safety, including air supplied respiratory equipment.

PPE: acronym used for Personal Protective Equipment.

SMS: acronym used for QUU's Safety Management System.

Supervisor/PICOW: term used for any QUU employee who acts or is appointed as a Supervisor, Coordinator or Team Leader within QUU. A PICOW (Person in Control of Worksite) is the person designated to be in control of a workplace by QUU.

WHS: acronym used for Work Health and Safety.

WHSMS: acronym used for QUU's Work Health and Safety Management System

Worker: employees, contractors, subcontractors, outworkers, apprentices and trainees, work experience students, volunteers and PCBUs who are individuals if they perform work for the business.

5. ROLES AND RESPONSIBILITIES

The QUU *WHS Resources, Responsibility and Accountability Standard (STD132) and Procedure (PRO359)* detail the overarching responsibility and accountabilities for WHS that are relevant to decontamination and which must be met by personnel at all levels within QUU. The section below outlines responsibilities specific to decontamination.

5 QUU EXECUTIVE

QUU Executive and Senior Management (CEO, ELT, General Managers – Officer and Non-Officer Appointed) are responsible for overseeing and ensuring the implementation of the requirements of this SOP and related procedures within their respective functional areas. This includes ensuring all sites are suitably risk assessed and have appropriate facilities, services and resources to ensure that risks associated with decontamination work are adequately managed to minimise the risk of injury or harm to workers, the environment and wider community.

5.1 MANAGER

- Ensure that hazard identification and risk assessment are a routine activity and are included as part of the job planning process.
- Participate where appropriate in WHS risk assessments and oversee the implementation of control measures.
- Oversee the timely documentation of hazards within QUU's hazard and incident reporting system and appropriate reporting of risk registers to the Executive Leadership Team (ELT), Operational Safety Group, Strategic Safety Group, Audit Finance and Risk Committee (AFRC) or Board.
- Create and maintain the Hazard Register and Operational Risk Register in QUU central reporting system to ensure all hazards and risk relevant to operations in area(s) of responsibility are captured, managed and periodically reviewed at the local WHS Committee.
- Ensure activities that require decontamination processes are identified and local plans/procedures are established for these activities, which includes incorporating decontamination processes in emergency response arrangements where required.

5.2 SUPERVISOR/PICOW

- Supervisors/PICOW must ensure the completion of relevant risk assessment/s prior to undertaking any work activity or task e.g. WRAP. Where controls cannot be implemented the issue is required to be escalated to the appropriate Manager.
- Where there is the possibility of workers or equipment being exposed to a biological or chemical hazard that may result in contamination, a decontamination plan must be developed.

5.3 WORKER

- Workers must be involved in the completion of relevant risk assessment/s prior to undertaking any work activity or task e.g. WRAP. At a minimum a worker must complete a WRAPSHEET and abide by the SWMS for hazardous chemicals when working alone.
- Workers must follow the decontamination plan and SDS and advise of any event that occurs which involves a spill or exposure of a contaminate which has the potential of causing injury or illness to the worker or others.
- Workers are responsible to report and complete an environmental incident form where there is a potential impact to the environment.

5.4 CONTRACTORS

At all times when performing work on a QUU site or for/on behalf of QUU, contractors must comply with QUU's decontamination work requirements detailed in this and related procedures, and must report any contamination work-related incidents to the relevant QUU Manager and to their employing/contracting agency in accordance with QUU WHS Incident Reporting Procedures.

5.5 QUU WHS TEAM

- Managing this decontamination procedure and ensuring it meets QUU business and WHS needs.
- Responding to requests for WHS advice and assistance in the event of contamination issues that require additional WHS support.
- Monitoring compliance with this SOP and ensuring that standards for WHS management are maintained.

5.6 FIRST AID OFFICER

Observing for potential contamination when attending a medical emergency and administering first aid and, where required, following decontamination principles to ensure that their or others health and safety is not adversely affected.

6. RELATED DOCUMENTS

- WHS Hazard and Risk Management Procedure (PRO363)
- WHS Incident Reporting, Investigation and Escalation Procedure (PRO364)
- WHS Communication and Consultation Procedure (PRO361)
- Hygiene Maintenance SOP (PRO448)
- Hazardous Chemicals SOP (PRO377)
- Hazardous Materials SOP (PRO420)
- Personal Protective SOP (PRO424)
- Health Management SOP (PRO367)

7. PROCEDURE

7.1 OVERVIEW

QUU workers and contactors and their work equipment and tools may be exposed to or come in contact with hazardous substances, including but not limited to biological hazards within sewage, and the working environment.

Action must be taken to contain contaminants and decontaminate in the following circumstances:

- Where workers are physically exposed to sufficient quantities of a contaminant (e.g. causing individual discomfort, irritation to lungs, skin, eyes, mucous membrane and/or raw sewage to exposed skin or worker's clothes);
- Where plant and equipment are contaminated and present risk of cross-contamination to other work areas; and
- Where there are risks of contamination to the environment and wider community.

The decision on whether decontamination is required is based on the type, nature and extent of contaminate/s. For some circumstances decontamination may be required immediately, for others decontamination may be a process within a work task and procedure.

7.2 BACKGROUND INFORMATION

7.2.1 Types of Contamination

Contaminants can be located either on the surface of personal protective equipment or permeated into the PPE material. Surface contaminants may be easy to detect and remove; however, contaminants that have permeated a material are difficult or impossible to detect and remove. If contaminants that have permeated a material are not removed by decontamination, they may continue to permeate the surface of the material where they can cause an unexpected exposure.

The first step in decontamination is to comply with the relevant Standard Operating Procedures that minimises contact with hazardous chemicals, materials and waste and thus the potential for contamination (see related documents). For example:

- Implement work practices that minimize contact with hazardous substances (e.g. do not walk through areas of obvious contamination; do not directly touch potentially hazardous substances).
- Use remote sampling, handling, and container-opening techniques (e.g., drum grapplers, pneumatic impact wrenches).
- Wear disposable outer garments and use disposable equipment where appropriate.
- Cover equipment and tools with a strippable coating which can be removed during decontamination.
- Encapsulate and seal the source of contaminants, e.g., with plastic sheeting

Any injuries to the skin surface, such as cuts and scratches, may enhance the potential for chemicals or infectious agents that directly contact the worker's skin to penetrate into the body. Particular care should be taken to protect these areas.

7.2.2 Workplace Exposure Standards

Chemicals with workplace exposure standards are listed in the Workplace Exposure Standards for Airborne Contaminants. These exposure standards are also available from the Hazardous Substances Information System (HSIS) on the Safe Work Australia website. The HSIS database contains additional information and guidance for many substances. Although exposure

standards may also be listed in Section 8 of the Safety Data Sheet (SDS), you should always check the Workplace Exposure Standards for Airborne Contaminants or HSIS to be certain.

Guidance on interpreting exposure standards is available in the Guidance on the Interpretation of Workplace Exposure Standards for Airborne Contaminants.

7.3 Decontamination Plan

A decontamination plan should be developed (as part of the Site Emergency Plan or WRAP/Risk Management Plan) and set up before any personnel or equipment may enter areas where the potential for exposure to hazardous materials exists. The decontamination plan should:

- Determine the number and layout of decontamination stations;
- Determine the decontamination equipment needed;
- Determine appropriate decontamination methods;
- Establish procedures to prevent contamination of clean areas;
- Establish methods and procedures to minimize worker contact with contaminants during removal of PPE and equipment;
- Establish methods for disposing of clothing and equipment that are not completely decontaminated.

7.4 Types of Decontamination

- Reactive Decontamination (in response to a splash, spill, incident)
- Planned (following work with hazardous substances eg. Asbestos)

7.4.1 Decontamination Methods

All personnel, clothing, equipment, and samples leaving the contaminated area of a site (generally referred to as the Exclusion Zone) must be decontaminated to remove any harmful chemicals, substances or infectious organisms that may have adhered to them.

Decontamination methods either:

- (1) Physically remove contaminants;
- (2) Inactivate contaminants by chemical detoxification or disinfection/sterilization; or
- (3) Remove contaminants by a combination of both physical and chemical means.

7.4.2 Persons, clothing and Biological Contamination

Where contamination from biological hazards (e.g. raw sewage) occurs, personal protective clothing should be changed as soon as practicable. The worker should shower at the nearest depot and warm soapy water used to wash hair, facial hair and all exposed skin. A nail brush should be used to clean under finger nails. Refer to Hygiene Maintenance SOP (PRO448).

If there is a significant incident or possibility of ingestion, notification to the Team Leader, compile an incident form and seek medical advice from QUU's external provider.

Contaminated clothing should be handled as hazardous waste in an appropriately sealed bag or container. Facilities such as washing machines and dryers are provided at Depots to permit the cleaning of contaminated clothing.

7.4.3 Plant and Equipment

Work practices must include procedures that ensure clean equipment are stored separately to contaminated tools. All equipment must be cleaned as soon as possible where contamination has occurred before being stored.

Workers using trucks and equipment that are used for works on both clean and waste water must adhere to strict hygiene and decontamination procedures to ensure there is no risk to public health and worker health.

It is important to select the correct equipment to minimise the exposure to or generation of hazardous materials (e.g. asbestos, sewerage).

When working with Asbestos or other fibrous materials manually operated (non-powered) hand tools should be used wherever possible. If they will not provide sufficient physical force to perform the required operation, low-speed, battery-powered tools which are able to be used in conjunction with wet methods for dust control are preferred.

Care should be taken when using brooms, high pressure water and compressed air, as if they are incorrectly used, they can increase exposure to hazardous materials (e.g. cause asbestos to become airborne, splash sewerage on to other workers.

Asbestos vacuum cleaners

Asbestos vacuum cleaners should comply with the requirements in Australian Standard *AS/NZS 60335.2.69 Industrial vacuum cleaners.* Household vacuum cleaners must never be used where asbestos is or may be present, even if they have a HEPA filter.

More comprehensive information about asbestos vacuum cleaners is provided in the *Code of Practice: How to Safely Remove Asbestos*

8.0 Personal protective equipment

PPE will need to be used, in combination with other effective control measures, when working with hazardous materials. The selection and use of PPE should be based on a risk assessment.

Safety data sheets (SDS) must be referred to for information on appropriate PPE to use and any other precautions to take when using the chemicals (the manufacturer can supply the SDS.

The ease of decontamination should be one of the factors considered when choosing PPE. Where possible, disposable equipment should be used and should be disposed of as hazardous waste.

For further information regarding PPE, refer to **Personal Protective SOP (PRO424)**

REFERENCES

The following references contain information used in the preparation and development of this SOP:

- *Queensland Work Health and Safety Act 2011.*
- *Queensland Work Health and Safety Regulations 2011.*
- *Managing the Work Environment and Facilities Code of Practice 2011.*
- *The Storage and Handling of mixed classes of dangerous goods*
- *Emergency Control organisation and procedures for buildings, structures and workplaces Code of Practice 2002*

- *Abrasive Blasting Code of Practice 2004*
- *Selection, use and maintenance of respiratory protective equipment 2009*
- *How to Manage and Control Asbestos in the Workplace Code of Practice 2011*

9.0 REVIEW

The Decontamination SOP is to be reviewed every 2 years or earlier if:

- There is an identified risk to business;
- A significant safety or serious injury event occurs;
- Incident investigation or audit results show that application of the standard fails to deliver the required outcomes;
- There are changes in associated legislation; or
- There is evidence that the standard is not having a positive impact on safety-related KPIs.

10.0 FURTHER INFORMATION

For further information, contact your Health and Safety Representative or the QUU Work Health and Safety Team.