CHEMICAL RISK MANAGEMENT STANDARD

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Application

This standard applies to all staff members, visitors, co-locators, contractors and students at the University who direct or participate in the use of chemicals, including but not limited to laboratories and workshops.

Purpose

- Ensure optimal planning and preparation is carried out for the procurement, safe use, transfer, and disposal of chemicals.
- Ensure that all potential hazards are identified, and appropriate controls put in place including hazards to the natural environment.
- Facilitate the adoption of the Chemical Risk Management Protocol across the university.
- Protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous chemicals.
- Ensure that any adverse effect caused by an act or omission in relation to hazardous chemicals on any person or the environment is avoided, remedied, or mitigated.

Introduction

The standard and their associated documents will address how the university is to employ good practice controls to manage the risks associated with chemicals transport, storage, use and disposal, while also complying with the requirements of the Health and Safety at Work (Hazardous Substances) Regulations 2017 and the Hazardous Substances and New Organisms Act 1996. Under its net zero carbon commitments, the university also recognises specific greenhouse gas emissions liabilities.

The words "hazardous substances" or "hazardous chemicals" can have different meanings according to legislation, country, or context. The definition of hazardous chemicals in scope of this protocol is in alignment with the definition of Hazardous Substances provided by the HSNO Act 1996. The words 'Hazardous Chemicals' and 'Hazardous Substances' are used interchangeable throughout the protocol and have the same definition.

Common and practical examples of what it is included and what is not are reported below.

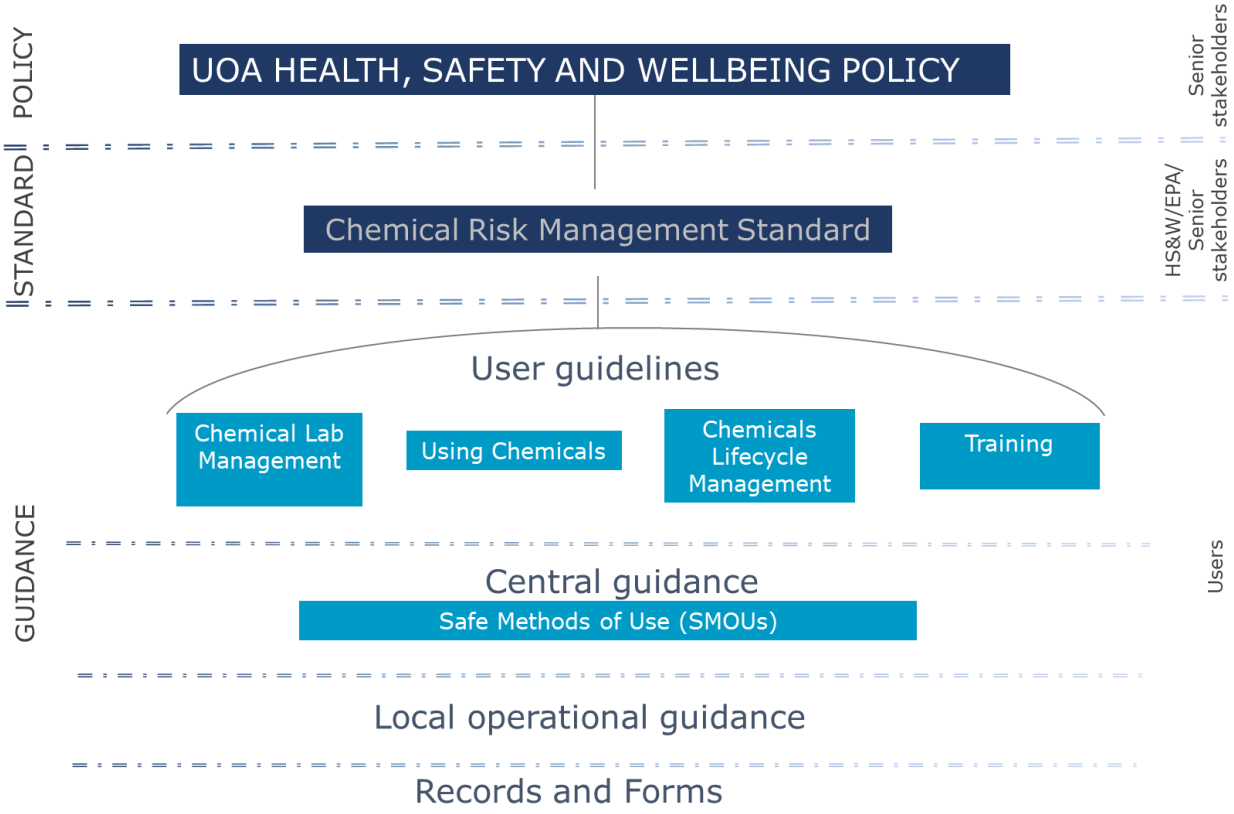
Hazardous Substances include, but are not limited to:

- Laboratory chemicals
- Industrial chemicals classified as hazardous according to criteria of Environmental Protection Agency (EPA) NZ
- Household cleaners and cosmetics classified as hazardous according to criteria of EPA NZ
- Persistent Organic Pollutants
- Novel compounds
- Agrichemicals
- Fuels, oils or other petrol derivatives
- Radioactive chemicals

Examples of exclusions:

- Medicines
- Psychoactive substances
- Fireworks
- Fuel in vehicles
- Controlled Drugs
- New Organisms
- Hazardous substances that are not chemical (biological or non-commercial mineral origin)

The present document is part of a series of documents with the following hierarchy:



Chemical Risk Management Standard

1. An initial evaluation of the significance of the hazards inherent in the chemicals procured or synthesised must be undertaken prior to receipt or synthesis to scope any risk assessments necessary.

2. The need for caution and a precautionary approach in managing adverse effects where there is scientific and technical uncertainty about those effects, is mandatory.

3. Risks associated with the receipt, storage, handling, transport, use and disposal of chemicals must be assessed.

4. Appropriate controls identified in material safety data sheets (MSDSs) and/or risk assessments must be in place.

5. Staff, students, contractors and visitors involved in the receipt, storage, handling, transport, use and disposal of chemicals must receive appropriate induction, training and management supervision, and this training must be documented.

6. Emergency response and contingency plans must be in place.

7. Users of laboratories containing hazardous substances must be made aware of emergency response procedures they are required to undertake.

8. Purchase of laboratory chemicals must occur through SciTrack.

9. The SciTrack inventory must be kept up to date with the correct location and ownership of hazardous substances.

10. If a Chemical Owner leaves the university, hazardous substances must be transferred to new owners or disposed of, in consultation with the academic head or delegate.

11. Hazardous substances must be transported and disposed of properly in accordance with the Chemical Risk Management Guidelines.

Roles and responsibilities

In the management of hazardous substances, responsibilities are assigned to the following roles.

Deputy Vice-Chancellor (Research):

- Provide leadership and governance that supports and strengthens the adoption of the Chemical Risk Management Protocol (hereafter the 'Protocol')
- Ensure sufficient resourcing and funding to support the service delivery model.

Associate Director, Health, Safety and Wellbeing:

- Ensure specialist support is available to users of hazardous substances
- Work in partnership with the Vice-Chancellor's senior leadership team, deans/directors of service, directors of LSRIs and heads of school to support and strengthen engagement with the Chemical Risk Management Protocol.
- Analyse and approve results of internal inspections and reviews, ensuring that incidents and breaches are investigated, communicated, and critical issues are escalated.
- Direct core communications (themes, principles, etc.)
- Identify exemplars of good practice and recommend these to Deputy Vice-Chancellor (Research).

Hazards and Containment Manager:

- Advise Associate Director of Health, Safety and Wellbeing on hazardous substances risk management performance.
- Manage the development of the Protocol collateral: standard and guidance.
- Ensure the implementation, monitoring and evaluation of the Protocol.
- Advise on technical matters.
- Raise any substantial issues of non-conformity or non-compliance with the Associate Director of Health, Safety and Wellbeing.
- Identify exemplars of good practice and recommend these to Deputy Vice-Chancellor (Research).

Work in partnership with faculty executive management and sustainability teams to ensure that:

- Professional practice requirements are clear and understood.
- Informed of changes and updates.
- Advice and support are available to deal with unforeseen events identified during internal inspection and review.

Deans:

- Provide active leadership and governance to support and strengthen the Protocol
- Ensure compliance with the Protocol.
- Ensure there are resources in place to provide a safe working environment with regards to hazardous substance use.

Heads of School/Heads of Department/Directors of LSRIs:

- Provide active leadership and governance to support and strengthen the Chemical Risk Management Protocol.
- Ensure compliance with the Protocol.
- Ensure that assigned staff are aware of their specific responsibilities for meeting hazardous substance risk management requirements.
- Ensure that staff and students receive training as appropriate and are competent to undertake their respective tasks.
- Ensure that succession plans are in place for key personnel, including transferral of hazardous substances to new ownership.
- Monitor and review hazardous substance risk management performance within their remit.
- Review the performance of the chemical owners, in with this standard, within their remit once a year, to be include in their annual assessment

Chemical Owners/Laboratory manager:

- Have an appropriate level of awareness and working knowledge of the Protocol and ensure compliance with the Protocol and continuous improvement in hazardous substances risk management practices.
- Ensure that staff and students are aware of their responsibilities, receive training as appropriate and are competent to undertake their respective tasks.
- Identify hazardous substances
- Determine whether hazardous substance use presents a significant hazard that requires a risk assessment

- Evaluating the risks associated with hazardous substances use and implementing appropriate controls to minimise the risks through risk assessments
- Include all hazardous substance in SciTrack
- Monitor and review if all the controls finding during the risk assessment are implemented before the activity starts.
- Organize internal audits as appropriate and implement corrective actions if necessary
- Organize hazardous substances clear-outs when required
- Ensure that every hazardous substance under their name has adequate management since its creation/purchase until its disposal/destruction, including its storage, transport, and handling.
- Ensure hazardous substance use as per the requirements of a Laboratory Manager defined by the Health and Safety at Work (Hazardous substances) Regulations 2017.

Technical Managers:

- Set performance standards for their specific areas of responsibility and of monitoring these standards on an on-going basis.
- Ensure effective management of health, safety, and wellbeing within their remit by supporting the chemical owner. This support includes their responsibilities to the standard, laboratory signage, laboratory security, access to the installations, emergency response, monitoring the implementation and operation of controls. Identifying others than locally has been agreed to be formally delegated to the technical staff *

  *Task can be delegated but not the responsibilities
- Monitoring laboratories activities and escalating non-compliances.

Staff, visitors, co-locators, contractors, and students:

- Carry out their work, research, and study safely and in accordance with the university's Health, safety and Wellbeing Policy, Chemical Risk Management Protocol, local arrangements, and any other relevant legislation.

Definitions

The following definitions apply to this document:

Chemical is a distinct compound or substance, especially one which has been artificially prepared or purified.

Co-locator means a separate legal entity that enters into an agreement with the university to receive negotiated use of space (office, laboratory and/or ancillary) and agreed ancillary support services for the purpose of deepening research-related relationships with the University.

Compound means any chemical combination of chemical elements.

Laboratory Manager Means the designated laboratory manager that meets the requirements of section 33 of the HSNO Act 1996 and Part 18 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Chemical Owner Is the term that the University of Auckland use to name the designated *Laboratory manager* (See Laboratory Manager definition)

It defines the person with ownership and responsibility for the chemicals. They may be a *Principal Investigator* (PI) or when a PI cannot be identified, the chemical owner is the person responsible for the facility in which the hazardous substance is used and may be a senior technician or a technologist. In the case of 'communal' departmental/school chemicals, the academic head may be the chemical owner.

They have the responsibilities stated under responsibilities of a Laboratory Manager under the Health and Safety at Work (Hazardous Substances) Regulations, Part 18. For further details see the Chemical Ownership guidelines.

Forms are the blank templates to be filled in with information that will become these records.

Hazard A hazard is a source or a situation with the potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.

Hazardous Chemicals or Hazardous Substance is any substance with one or more of the following intrinsic properties:

- explosiveness
- flammability
- a capacity to oxidise
- corrosiveness
- toxicity (including chronic toxicity)

- ecotoxicity, with or without bioaccumulations; or

Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more or the properties specified above.

A hazardous substance has one or more hazard classifications in its safety data sheet.

Chemical Risk Management Protocol (The 'Protocol'): This protocol falls under the university's Health, Safety and Wellbeing Policy, and includes the Chemical Risk Management Standard and a set of associated guidance.

Laboratory means a vehicle, room, building, or any other structure set aside and equipped for scientific experiments or research, for teaching science, or for the development of chemical or medicinal products

Laboratory Chemicals includes hazardous chemicals used in laboratories and workshops. It does not include commercial cleaning products or chemicals that you can buy from a supermarket or hardware store. Note however that large quantities of industrial chemicals such as isopropanol should be recorded in the laboratory's chemical inventory.

Line Manager refers to anyone working at the University of Auckland and who guides or controls research, teaching, budget, workspace, or people (staff, visiting researchers or contractors)

Local Operational Guidance. Generated by schools, departments, specific laboratories, workshops, or external organizations e.g., procedures and operational instructions based on international standards or best practices. These must have been approved by line manager or academic leaders to set performance standards for their specific area of responsibility.

Principal Investigator (PI): An academic staff member who is the lead researcher responsible for project(s) such as laboratory study(ies) or clinical trial(s) and is usually the holder of and independent grant administered by the university. The phrase is also often used as a synonym for "head of the laboratory" or "research group leader." The Principal Investigator is responsible for assuring compliance with applicable university standards and procedures, and for the oversight of the research study and the informed consent process. The PI may delegate tasks to members of their research team or technical staff (is this is officially agreed), but they retain responsibility for the conduct of the study and the management of the hazardous substances under their ownership. PIs are academic leaders for the Health, Safety and Wellbeing Policy, and as such must accomplish with the responsibilities stayed in that policy.

Records is what is chosen by the line manager or academic leader to demonstrate that the process and activities have been conducted in the way prescribed in local operational guidance.

Risk assessment is the process of evaluating the risk(s) arising from the hazard(s), considering the adequacy of any existing or potential controls, deciding whether the risk(s) is acceptable, and taking further protective or preventative action as required.

A risk assessment is created in alignment with the university's health and safety risk management standard, using the prescribed format and authorised at the appropriate level.

SciTrack is the University's purchasing and inventory management system for chemicals and restricted biologicals. SciTrack suppliers include all university-approved suppliers of hazardous laboratory chemicals and/or restricted biologicals. All purchases from SciTrack suppliers (including non-hazardous lab consumables) must go through SciTrack.

Separate legal entity means any person or individual (e.g., company, partnership, charitable trust) that has its own legal rights and obligations, separate to the university. This includes university spinout companies.

Substance:

- any element, defined mixture of elements, compounds, or defined mixture of compounds, either naturally occurring or produced synthetically, or any mixtures thereof:
- any isotope, allotrope, isomer, congener, radical, or ion of an element or compound which has been declared by the authority, by notice in the New Zealand Gazette, to be a different substance from that element or compound:
- any mixtures or combinations of any of the above:
- any manufactured article containing, incorporating, or including any hazardous substance with explosive properties

Staff members refers to individuals employed by the university on a full or part-time basis.

University means the University of Auckland and includes all its subsidiaries.

Key relevant documents

- Hazardous Substances and New Organisms Act 1996
- Health and Safety at Work (Hazardous Substances) Regulations 2017
- University of Auckland Health, Safety and Wellbeing Policy
- Chemical Risk Management Guidelines
- Net Carbon Zero Strategy