Hazardous Chemical Safety Procedures

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APPENDIX A – CHEMICAL SPILL EMERGENCY RESPONSE

1. Governing Policy

Work Health and Safety Policy

Work Health and Safety Management System

ABN: 65 542 596 200 CRICOS No: 00114A

FEARLESS

2. Purpose

These procedures set out the requirements for managing the health and safety risks associated with the use of hazardous chemicals in the University.

3. Scope

a. These procedures apply to:
   i. all University operations where hazardous chemicals are stored, used, produced or disposed.
   ii. all workers, students, visitors or others at Flinders University workplaces.

b. These procedures apply to the following products **only** if their use is related to a work activity:
   i. food and beverages
   ii. therapeutic goods
   iii. cosmetics and toiletries
   iv. tobacco and tobacco products

c. These procedures do not apply to the management of asbestos, biological or radioactive materials, which are covered by separate individual procedures.

d. These procedures must be read in conjunction with the Hazardous Chemicals Manual

4. Definitions

Chemicals of Security Concern	Chemicals that can be used to make homemade explosives or toxic devices as listed in the National Code of Practice for Chemicals of Security Concern
Includes Security Sensitive Ammonium Nitrate (SSAN) and Explosives	Ammonium nitrate or ammonium nitrate mixture at greater than 45% mass per mass mixed with any other substance, but not in solution.
ChemWatch	The online source of chemical information and safety data sheets (SDS) used by the University to assist with the management of hazardous chemicals.
Controlled substances (or scheduled drugs and poisons)	Substances which require licensing under the *Controlled Substances Act 1984* (SA).
Consumer product	Substances that are primarily for household use or in an office and which are used and packed in ways and quantities for household or office use.
Cytotoxic Drugs	Cytotoxic drugs are chemicals that are highly toxic to cells mainly through their actions on cell replication. Many are carcinogenic, mutagenic or teratogenic. They are a subset of antineoplastic drugs.

Explosives	A compound or mixture containing those chemicals listed under the *Explosives (Security Sensitive Substances) Regulations 2021* which are used or manufactured to produce the practical effect of an explosion or a pyrotechnic effect.
Dangerous substances/goods[1]	Substances or articles that are toxic, corrosive, flammable or otherwise dangerous and defined by the Dangerous Substances legislation to be dangerous.
GHS	The Globally Harmonized System of Classification and Labelling of Chemicals, Revised Edition, published by the United Nations, as modified by Schedule 6 of the SA Work Health Safety Regulations.
Hazardous chemical	A substance, mixture or article that: i. can be a health or physicochemical hazard ii. satisfies the criteria for one or more hazard classes in the Globally Harmonized System (GHS), including a classification referred to in Schedule 6 of the SA Work Health Safety Regulations. For these procedures, hazardous chemicals also include dangerous substances, controlled substances (scheduled drugs and poisons), prohibited and restricted carcinogens, restricted chemicals and security sensitive ammonium nitrate or other security sensitive substances and carbon nanotubes.
Hazardous Chemicals Manifest	A written summary, primarily for emergency services, for specific types of hazardous chemicals with physical hazards, acute toxicity or skin corrosion, that are used, handled or stored at a workplace.
Hazardous Chemical Register	A list of the product names of all hazardous chemicals used, handled or stored at the workplace accompanied by the current Safety Data Sheet (SDS) for each hazardous chemical listed. *Note: ChemWatch is the University-wide online system for maintaining chemical registers and accessing Safety Data Sheets (SDSs). ChemWatch uses the term "manifest" for the hazardous chemical register. The terms "hazardous chemical register" and "chemical manifest" may be used interchangeably within the University.*
Placard	A sign or notice containing information about hazardous chemicals, which is displayed in a prominent place where the chemicals are used or stored.
Placard Quantities	The quantities referred to in Schedule 11 of the SA Work Health Safety Regulations.

[1] *Dangerous substances are regulated by Work Health and Safety Regulations, while dangerous goods transport activities and gas fitting work are regulated by dangerous goods legislation.*

Precursor Chemicals	Any substance, whether natural or synthetic and specified in the *Controlled Substances Act 1984* (SA).
Prescribed Equipment	Equipment prescribed under regulation 9 of the Controlled Substances (Controlled Drugs, Precursors and Plants) Regulations 2014 (SA), including specified equipment that is, or may at some stage have been, capable of being used in the manufacture of controlled drugs. The prescribed equipment categories are set out in the Regulations.
Prohibited and restricted carcinogens and restricted chemicals	Chemicals that are hazardous as they may cause cancer. *Note: those substances listed in the (Schedule 10)* SA Work Health Safety Regulations *and have been listed as Prohibited or Restricted Carcinogens require a permit from SafeWork SA (or equivalent interstate Regulator).*
Safe Work Procedure (SWP)	A written document which outlines the risks associated with a work task or activity and lists the associated control measures into step-by-step instructions for conducting the work safely.
Safety Data Sheet (SDS)	Document prepared by the manufacturer or importer of a chemical that provides information about uses, chemical and physical properties, health hazard information, precautions for use, safe storage and handling and emergency information. SDSs are obtained directly from the manufacturer or through the online ChemWatch SDS database. To be considered current they must be no more than 5 years old.
Teratogen/ Embryotoxic/ Reproductive toxin	An agent or factor which causes malformation of an embryo or foetus.
Workplace exposure limit (WEL)	The maximum airborne concentration of a particular substance or mixture that must not be exceeded in a person's breathing zone at the workplace, as specified in the Workplace Exposure Limits for Airborne Contaminants list published by Safe Work Australia.
Worker	A person who carries out work in any capacity for the University including all academic and professional staff, contractors and sub-contractors and their employees, labour hire company employees, trainees, persons gaining work experience and volunteers.

5. Hazardous chemical general safety duties

The University must manage the risks to health and safety associated with using, handling, generating, storing or disposing of hazardous chemicals at the workplace, including:

a. identifying any risk of physical or chemical reaction of hazardous chemicals and ensuring their stability

b. providing adequate information, training, instruction and supervision to workers, students and others

c. providing emergency plans and procedures and equipment, including spill containment and clean up systems

d. providing access for all workers, students or others to current Safety Data Sheets (SDSs) by either obtaining them from the manufacturer, importer / supplier of the chemical or via ChemWatch

e. ensuring hazardous chemicals used, handled or stored in the workplace do not become unstable, decompose or change to become hazardous

f. ensuring incompatible hazardous chemicals are appropriately segregated during storage, use and handling to prevent unintended reactions or other hazardous interactions

g. ensuring that ignition sources are controlled where there is a possibility of fire or explosion when flammable or combustible substances are present

h. ensuring correct labelling of all containers, pipework, and waste items that contain hazardous chemicals ensuring workplace exposure limit for hazardous chemicals, where set, are not exceeded

i. providing health monitoring (where required)

j. maintaining appropriate registers and manifests (where relevant) of hazardous chemicals and notifying the regulator where required

k. ensuring the stability and support of bulk hazardous chemical containers, including securing and bunding them to prevent any damage to containers or release of material

l. obtaining appropriate licensing and permits where required and ensuring regulatory requirements specified are complied with.

6. Non-hazardous chemicals and consumer products

a. If the chemical is a **Non-Hazardous Substance and a Non-Dangerous Good**, and it is being used as per the manufacturer's instructions and controls as specified in the Safety Data Sheet then there is:

   i. no need for a formal documented risk assessment or Safe Work Procedure (SWP), and

   ii. no need to be listed in a hazardous chemical register

   However, any risks associated with the chemicals must still be managed.

b. Consumer products (e.g. household cleaners, dishwashing liquids, whiteboard cleaners) that are only used in the workplace in ways and quantities consistent with household use:

   i. do not require a SDS or risk assessment, and

   ii. do not need to be listed in a hazardous chemicals register.

c. Labels must however be present and have sufficient information about safe use, handling and storage of the chemical and must be legible on all containers and instructions must be followed.

d. Where domestic chemicals are used in a manner or quantity different to normal household use (i.e. bulk storage or research use) then an SDS, risk assessment and safe work procedure is required, appropriate controls must be implemented and chemicals entered onto the ChemWatch manifest.

7. Risk assessment and management of hazardous chemicals

a. The risks to health and safety associated with all aspects of hazardous chemicals must be managed in accordance with WHS legislation, Codes of Practice for Managing Risk of Hazardous Chemicals in the Workplace, Australian Standards and any relevant licenses or permits and the University WHS Risk Management Procedures and Hazardous Chemical Manual.

b. A risk assessment should be undertaken before purchasing the chemical to see if the hazardous chemical can be eliminated or substituted with a less hazardous alternative.

c. The risk assessments must identify:

   i. physical risks (e.g. fire, explosion, burns)

ii. health risks both short and long term (e.g. poison, carcinogen, teratogen).

d. A risk assessment must identify all reasonably foreseeable risks posed by a hazardous chemical including:

i. when purchasing, generating, using, storing, transporting, handling waste and disposal

ii. when dealing with spills and other emergencies that may arise from chemicals.

e. Where risks are identified, then all efforts should be made to:

i. eliminate the use of that chemical where reasonably practicable to do so, or
ii. substitute with a less hazardous chemical, or

iii. minimise the risk by selecting control measures or a combination of controls in line with the WHS Hierarchy of Risk Control as specified in the WHS Risk Management Procedure

iv. reduce the risk by minimising the amount of chemicals on site. There are strict limits regarding the amount of chemicals allowed to be stored and used in areas

v. information regarding the selection of appropriate control measures should be identified from the SDS, labels, Regulations, Codes of Practice, Australian Standards and the Hazardous Chemical Manual.

f. Controls identified during the risk assessment process must be documented and:

i. checked, maintained and reviewed for effectiveness and, if needed, changed to ensure, as far as reasonably practical, that a safe work environment is maintained

ii. reflected in the associated Safe Work Procedure (SWP), including how they are to be used.

g. Personal Protective Equipment (PPE) as a control should be used as a last resort or in combination with higher level controls.

h. Where it is identified as a suitable control, the PPE must be appropriate for the hazardous chemical, fit correctly and be maintained in line with manufacture instructions.

i. Appropriate information, training and supervision must be provided in the safe use of all controls, including the PPE.

j. Completed hazardous chemical risk assessments, including proposed control measures, must be authorised by the manager/supervisor who is responsible for the area or activity.

k. Risk Assessments, Safe Work Procedures and all associated controls must be reviewed every **5 years or when there is a change**. The review must assess and confirm that the controls remain effective.

l. Risk assessments must be kept as per the WHS Record Keeping requirements by the local area (hard copy or electronic) and must be available to all workers, students and others who will be using the hazardous chemicals.

8. Consultation

a. Throughout the risk assessment process, managers /supervisors must consult, so far as is reasonably practicable with:

i. workers who use, or are likely to use the hazardous chemical(s)

ii. elected Health and Safety Representatives (HSR's)

iii. where relevant, students and other persons who may need to work with or be exposed to the chemicals.

b. Consultation, cooperation and coordination must also occur with other businesses or Person Conducting a Business or Undertaking (PCBUs) involved with hazardous chemicals at University workplaces (for example, those who carry out deliveries or cleaning) or who share the workplace with the University (for example, in joint research or teaching facilities).

9. Safe Work Procedures (SWP)

a. Where control measures have been identified in the risk assessment, a Safe Work Procedure (SWP) must be developed and include how the controls are to be implemented/ used for the relevant task/activity.
b. The SWP must address all activities concerning the hazardous chemicals including how it will be safely stored, used, handled, transported, disposed of and how to address any emergencies that may arise (e.g. spills).
c. SWPs must be signed by the relevant manager/ supervisor.
d. SWPs, along with the relevant associated risk assessment and controls must be reviewed to ensure they remain effective as a minimum every **5** years or whenever there are any changes made.
e. SWPs (electronic or hard copy) must be kept as per the WHS Record Keeping and available to all workers, students and where relevant others who will be using or exposed to the hazardous chemical.

10. Safety Data Sheets (SDSs)

a. A Safety Data Sheet (SDS) must be available for every hazardous chemical purchased, stored, used, or transported for all University activities, including at any off-site locations and field work.
b. A current SDS must be obtained from the manufacturer, importer or supplier or through the ChemWatch system.
c. The SDS must be obtained before the chemical is used for the first time.
d. SDSs must be readily accessible to all workers, students and where relevant others who use or may be exposed to the hazardous chemical.
e. SDS sheets must be available to the Emergency Services (Fire, Police and Ambulance) or anyone else who may be exposed to, or may be required to treat people working with hazardous chemicals (e.g. first aiders).
f. If only electronic copies are used via ChemWatch to maintain SDS, all workers and students in the area must know how to access and use the ChemWatch system.
g. For hazardous chemicals where the ChemWatch **Hazard Alert Code is 4** a hard copy of the SDS must also be kept in the location (e.g. Laboratory) where that chemical is used.
h. Where SDS sheets are kept as hard copies these must be kept current, that means they must be no older than 5 years from the date of issue.

11. Emergency preparedness

11.1. Emergency planning

a. The University has developed emergency response procedures for hazardous chemicals (also see Appendix A).
b. Where required under the WHS Regulations, an emergency plan must be prepared for the workplace when Schedule 11 hazardous chemicals exceed the applicable threshold
c. The Emergency Plan must be developed in consultation with workers, Emergency Services and other organisations where relevant.

11.2. Emergency and safety equipment

a. Emergency and safety equipment (e.g. spill kits) must be available for containing and cleaning up spills.
b. Equipment must be readily accessible to workers and others if an emergency arises.

c. Equipment must be signposted, inspected and maintained in accordance with the manufacturer's instructions and relevant Australian Standards.
d. Fire protection, firefighting and other related emergency equipment must be available and suitable for the types of hazardous chemicals at the workplace with regards to the type and quantities in which they are used, handled or stored.

11.3. Local emergency practices

a. Areas that use hazardous chemicals must be familiar with the local emergency response procedures and equipment available for responding to spill, leak, fire, explosion or other emergency situation. Where relevant, this includes:
   i. evacuation assembly points
   ii. emergency power, gas and electrical shut off buttons
   iii. the location and use of spill kits
   iv. the location of safety showers and eye wash stations
   v. first aid facilities
   vi. fire extinguishers and blankets.
b. Workers, students and others must be informed of and trained in local emergency response procedures.
c. Emergency response information for specific hazardous chemicals, including spill management requirements, can be found in the Hazardous Chemical Manual.

12. Accident/incidents involving chemicals

a. All incidents or accidents involving hazardous chemicals must be reported in FlinSafe and investigated in accordance with the Accident, Incident and Hazard Reporting and Investigation Procedures.
b. A notifiable incident for hazardous chemicals is any incident that:
   i. involves an uncontrolled leak, release or escape of a hazardous chemical/substance, or
   ii. where a person receives medical treatment within 48 hrs of exposure to a chemical/substance
   iii. involves a fire or explosion.
c. These notifiable incidents must be reported immediately to University Security and/or the Associate Director, Work Health and Safety.

See Notifiable Incident Flow Chart for more information.

13. Purchasing hazardous chemicals

a. Before purchasing chemicals, the worker must:
   i. obtain the SDS, check the hazards, precautions for use and the storage requirements to determine if the chemical should be eliminated or be substituted for a safer alternative, where practicable.
   ii. if a safer alternative is not reasonably practicable, determine all additional controls needed to be implemented and document these in risk assessment and an SWP
   iii. determine the minimum quantity required for the experiment or research project. Quantities purchased must be limited to operational requirements, must not be increased solely for cost-effectiveness reasons, and must not exceed applicable legal storage limits for the hazardous chemical concerned
   iv. check if the chemicals are classified under any of the following:
      - controlled substances (includes scheduled poisons)

- dangerous substances
- prohibited and restricted carcinogens
- chemicals of security concern, including sensitive ammonium nitrate and explosives
- prescribed or precursor chemicals (includes schedules 8 and 9).

b. If the above classes of chemicals are to be purchased, then specific permits or licensing is required and must be obtained and held by the University prior to purchase. Staff required to purchase the above categories of chemicals for the first time must check with the WHS Unit to ensure they are covered by the relevant permit.

c. Permits/licenses must be approved by the University (in most cases this will be the Vice-President (Corporate Services)), or where they are issued to an individual, they must be approved by the worker's supervisor.

d. A copy of all permits (including those issued to individuals) must be provided to the WHS Unit.

e. Where staff obtain chemicals under a permit/licence, they must adhere to requirements specified on those permits/licences regarding restrictions of use, secure storage, appropriate disposal and record keeping.

f. No chemicals should be obtained via personal means.

14. Labelling

a. All hazardous chemicals, including those purchased or produced either directly or as a by-product of work in the University, must be classified and correctly labelled in accordance with the Code of Practice Labelling of Workplace Hazardous Chemicals and the Globally Harmonised System of Classification and Labelling of Chemicals (GHS).

b. Those purchasing chemicals must only accept chemicals from manufacturers/suppliers which are correctly labelled. Labels must:

i. be in English

ii. having an Australian supplier or manufacturer identified

iii. have a product identifier (name or CAS number)

iv. have all required hazard statements and pictograms clearly on the label.

c. Chemicals imported into Australia must comply with applicable requirements under the Australian Industrial Chemicals Introduction Scheme (AICIS). Refer to Procedure 27 Imported Chemicals for further requirements relating to the importation of industrial chemicals.

d. When a hazardous chemical is transferred or decanted from a supplier's container and is not used immediately, the container must be labelled in accordance with the Code of Practice Labelling of Workplace Hazardous Chemicals including all relevant hazard information and hazard signage (pictogram).

e. Re-used containers must have the old label defaced, removed or totally covered with the new label.

f. Food and beverage containers (e.g. drink bottles, jars) must **never** be used for hazardous chemical storage.

g. Waste containers containing hazardous chemicals must have clear and appropriate labels including all the items listed above in b.

h. Hazardous chemicals contained in an enclosed system (e.g. a pipe or piping system) must be identified by a label, sign or markings on the pipework in accordance with *AS 1345-1995 Identification of the contents of pipes, conduits and ducts.*

15. Hazardous Chemicals Register

a.Each laboratory/workshop/area that uses chemicals must maintain a hazardous chemical register on ChemWatch which includes:

i. a list of all hazardous chemicals used, handled or stored and a SDS (preferably the Vendor SDS)

ii. the maximum quantities held or used in that area.

b. Registers must be readily accessible to workers, students and others involved in using, handling or storing hazardous chemicals and to anyone else who is likely to be affected by a hazardous chemical in the area.

c. If people in the area do not have access to ChemWatch, then a hard copy must be available.

d. Registers must be updated as new hazardous chemicals are introduced to the workplace and/ or when the chemical is discontinued and disposed of.

e. Registers at a minimum are to be reviewed every **12 months** to check they reflect the current chemical storage in the area.

f. Chemical registers must be available to Emergency Services if requested.

g. Contractors who use hazardous chemicals must keep, a hard copy of their register and SDS of the hazardous chemicals being used, on-site in a safe location.

16. Hazardous chemicals manifest and placarding

a. Where quantities of Schedule 11 hazardous chemicals exceed the manifest quantities specified in the WHS Regulations, the University must prepare and maintain an up-to-date manifest of hazardous chemicals (see WHS Regulations – Schedule 11).

b. Manifests must be available to Emergency Services personnel as required.

c. The University must ensure that outer warning placard(s) are prominently displayed at the workplace in the required locations if the total quantity of a Schedule 11 hazardous chemical or hazardous chemical DG Class is stored in quantities that exceed placarding thresholds.

17. Induction, training and supervision

a. Supervisors must provide relevant workers and students with a local Work Health and Safety induction for the local area workplace and identify any hazardous chemicals or processes they will use.

b. Sufficient information, training and supervision must be provided to enable users to work safely with hazardous chemicals. This must include information about the nature of the hazard and the controls in place to manage the risks. This must also include the information contained in the relevant Risk Assessment and Safe Work Procedure.

c. The local area must keep training records in accordance with WHS Record Keeping.

18. Facilities and amenities

a. When a new laboratory or other area using chemicals is built or the facility is upgraded, it must be brought, where reasonably practical, into compliance with AS 2982. and the AS/NZS 2243 series.

b. Laboratories, studios, workshops and other areas where chemicals are used or stored must display appropriate signage at the entrance(s) stating the hazards, access requirements and any controls (e.g. PPE) that are applicable.

c. Separate hand-washing facilities must be provided in each laboratory/workshop/area where chemicals are used.

d. Food or drink must **not** be stored or consumed inside areas where hazardous chemicals are stored or used.

a. There must be access to appropriate spill kits of suitable size and type to manage spills.

b. Areas must have access to first aid kits which are appropriate to the risks involved. See First Aid Procedures for details.

c. Emergency safety showers and eye wash stations must be accessible where hazardous chemicals are used in a way or quantity that poses a risk. They must be positioned at a distance of no more than 15 metres or 10 seconds travel from any position in the laboratory where hazardous chemicals are used.

d. These eye wash and safety shower facilities must be flushed, checked and maintained. See First Aid Procedures for details.

e. Where fumes or airborne contaminants are generated, either through use or storage of chemicals, the area must have in place adequate controls to:

    a. prevent risk to health or safety from the contaminants

    b. maintain atmospheric contamination below any set workplace exposure limits

    c. prevent the risk of fire or explosion.

f. Ventilation systems such as fume cupboards or local exhaust ventilation (LEV), where required as a control, must be used, tested and maintained in line with the manufacturer's recommendations and following the relevant standards:

    a. Ducted fume cupboard must comply with AS/NZ 2243.8

    b. Recirculating (ductless) fume cabinet must comply with AS 2243.9

    c. LEV, such as extraction arms, hoods and slots, must be designed and maintained to reduce contaminants below workplace exposure limits

    d. have a label affixed to the unit to indicate that they have been tested within the last 12 months.

g. If a risk assessment has identified a potential health and safety risk from asphyxiation, toxicity or flammable environments arising from normal operations or unintended release (e.g. leak or spill), appropriate air monitoring devices and alarms must be installed, tested and maintained.

h. Adequate facilities to hang or store PPE in a clean and usable manner (such as adequate hooks for lab coats) must be available.

19. Prescribed equipment

a. Prescribed equipment must only be possessed or supplied where there is a reasonable excuse, in accordance with section 33LA of the *Controlled Substances Act 1984* (SA). Equipment held by the University must be used only for legitimate authorised research, teaching or other approved University activities.

b. Prescribed equipment must be stored securely to prevent unauthorised access, use or removal. Access must be restricted to authorised personnel.

c. Any loss of any prescribed equipment, suspected unauthorised access or use, or other security concern involving prescribed equipment must be reported to the WHS Unit.

d. Prior to disposal of any prescribed equipment, it has to be made inoperable and unrepairable. Disposal mush be arranged in accordance with applicable legislative requirements and University procedures.

20. Health monitoring

a. Health monitoring must be provided to workers or students engaged in ongoing work that involves using, handling or storing hazardous chemicals when a risk assessment has identified a **significant health risk** due to potential exposure to hazardous chemicals. Refer to the Workplace and Health Monitoring Procedures

21. Hazardous chemicals and pregnancy

a. . Workers and students who may use, or be exposed to, hazardous chemicals identified in their SDS as posing a risk during pregnancy or lactation (including teratogenic, embryotoxic, fetotoxic, or reproductive toxic effects) must seek appropriate medical advice before commencing work with those chemicals.

b. The risks associated with these chemicals must be included in the risk assessment process.

c. If a risk assessment identifies that these chemicals pose a risk, the person should declare their pregnancy to their supervisor/ manager at the earliest possible time, with the understanding that the matter will be kept as confidential as possible.

d. Workers and students should minimise their exposure to chemical materials by fully cooperating with any efforts to reasonably and sensibly modify their duties to reduce these risks.

e. They should immediately report any suspected significant exposures to their supervisor/ manager or the WHS Unit and their Doctor.

f. Supervisors/ managers are required to facilitate, in accordance with current workplace agreements, reasonable modification of duties in accordance with special needs during pregnancy or breast-feeding.

22. Storage

a. All hazardous chemicals must be stored in quantities as low as reasonably possible (this includes waste) and must not exceed quantities allowed by the legislative requirements of minor storage and as per Australian Standards requirements for laboratories and workshops.

b. Where applicable, storage conditions must also meet those outlined in the SDS and, where relevant, any permit/licence requirements.

c. Chemical storage location must meet the following requirements:

   i. segregation of incompatible chemicals must be observed to prevent uncontrolled chemical reactions

   ii. chemicals must be stored in closed, appropriately labelled containers

   iii. food or drink must not be stored in the area

   iv. the location must not jeopardise the safety of any other areas in the building and must not impede access or egress or fire-fighting operations

   v. the storage area must be adequately ventilated to ensure there is no build-up of vapours

   vi. the storage area must be kept locked and access restricted to authorised personnel

   vii. there must be adequate spill provisions available

   viii. chemicals must be stored in a labelled cupboard or on labelled shelf and not on the floor unless appropriately bunded.

d. Where specialised storage facilities such as chemical cabinets are required, these must be

constructed and physically labelled in accordance with the specific Australian Standard relevant to that dangerous goods class (e.g. AS 1940 for flammables, AS 3780 for corrosives) The location, volume limitations and operational segregation of these cabinets must comply with AS/NZS 2243.2.

e. Time and temperature sensitive chemicals must be stored in a manner to ensure they remain stable and procedures must be in place to regularly confirm their stability.

f. All out-of-date hazardous chemicals must be disposed of regularly to reduce the overall risk potential.

g. Flammable or combustible chemicals must be stored away from ignition sources.

h. Where areas have hazardous chemicals above quantities as specified in WHS Regulations – Schedule 11, the areas must display and maintain the relevant placards.

i. Bulk chemicals must be stored securely and must be supported and bunded to prevent any damage to containers or release to the environment.

j. Dangerous substances, prohibited and restricted carcinogens, controlled substances (scheduled poisons), cytotoxic drugs and substances classified as chemicals of security concern must be stored to manage any potential risks, be in a secure and lockable location and workers may have to maintain registers of use as per the relevant legislation, standard or code of practice.

k. Gas cylinders must be segregated and stored securely as per the Hazardous Chemicals Manual.

23. Permits and Licences

22.1. Dangerous Substances License

a. The University is required to maintain a licence to keep dangerous substances. This includes **Class 3, (Flammables), Class 6 (Toxics), and Class 8 (Corrosives**). These materials must be stored only in quantities and conditions specified on the licence.

b. Quantities should be kept to an absolute minimum required.

c. Local areas must notify the WHS Unit if there are significant changes to the storage location or chemical volumes of these classes of substances.

22.2. Prohibited and Restricted Carcinogens

a. The University must not purchase, store, handle or use prohibited or restricted carcinogens (as listed by SafeWork SA) unless prior authorisation has been granted from the Regulator.

b. Every worker or research higher degree student wishing to use a prohibited or restricted carcinogen must complete a Prohibited or Restricted Carcinogen Worker Registration Form, obtain relevant approvals and forward the completed documentation to the WHS Unit who will submit the application to SafeWork SA on the University's behalf.

c. When prohibited or restricted carcinogens have been approved for use, it must only be used for the purposes of genuine research or analysis, in the location and by the individuals as outlined in the information supplied with the application submitted to SafeWork SA.

d. See the Hazardous Chemicals Manual for the information required when applying for the permits.

e. Some restricted carcinogens are also cytotoxic and there are further requirements for their management, use and handling.

f. When the approved user of a prohibited or restricted carcinogen concludes their work with these substances or the University, their manager/ supervisor must notify the WHS unit so a *statement of exposure* can be provided to the individual.

g. Prior to the approved user concluding their work with the prohibited or restricted carcinogen they must organise the disposal of the chemical by a registered waste contractor as the permit and materials are not transferable.

h. Records of use and disposal must be kept as per the record keeping requirements.

22.3. Controlled Substances – Scheduled Drugs & Poisons

22.3.1. Permit for research, instruction or training permit to possess

a. **Schedule 2, 3, 4, and 7** substances require special permits issued by SA Health.

b. The University holds site-wide permits issued to the Vice-President (Corporate Services) and held by the WHS Unit. For staff who manufacture, purchase, possess, use, or store these **Schedule 2, 3, 4, and 7** chemicals, it must be only for research, instruction or training and under the conditions of the permit.

c. Staff using the chemicals covered by these permits must:
   i. complete a risk assessment and safe work procedure that is authorised by the manager/ supervisor of the work
   ii. keep a record of the scheduled poisons in ChemWatch
   iii. comply with all conditions specified on the permit, including security and record keeping requirements of use and disposal
   iv. report any anomalies immediately in accordance with the SA Health *Suspected Theft or Loss of Drugs or Substances from Licence or Permit Holders*.

d. Breaching the University's permit conditions is an unlawful act that risks the immediate revocation of the University's licence, which would entirely cease the University's legal right to purchase and hold scheduled substances.

22.3.2. Regulation 25 Chemicals

a. Regulation 25 chemicals are also controlled under the SA Health permit – *Research, instruction, Training or Analysis Permit to possess*. This list of Regulation 25 Chemicals has additional requirements including:
   i. they must be recorded in ChemWatch and a local laboratory register is to be maintained, accurately displaying the volumes held in the area. These volumes must be reviewed annually
   ii. they must have a Risk Assessment and Safe Work Procedure
   iii. each year, users will be required to confirm the location and the amount for each Regulation 25 chemical with the WHS Unit. This is then notified to the Department of Health to facilitate the renewal of the University permit.

22.3.3. Individual permits for Schedule 8 and 9 controlled substances

a. Any staff member requiring Schedule 8 and 9 controlled substances for research purposes must apply for an individual permit from SA Health. This permit allows the holder to purchase specified substance(s) only. Other persons wishing to have access to these materials when working or studying on the same research project must be individually listed on the permit before access to the substance(s) can be granted.

b. All conditions on the permit must be adhered to.

c. A copy of the permit and any variation must be provided to the WHS Unit.

d. A permit issued to a person is not transferrable. Where a staff member or a higher degree by research student leaves, that substance must either be appropriately disposed of and recorded, or a new permit must be applied for by the new owner of that substance.

e. Records for these substances must be kept as per WHS record keeping.

f. Permit holders must renew their permits annually.

24. Chemicals of Security Concern

Where areas contain chemicals identified by the Australian Government as *chemicals of security concern,* they should, where reasonably practicable, adhere to the requirements outlined in the National Code of Practice for Chemicals of Security Concern.

25. Explosives (not including SSAN)

a. The University has a site license for the storage of explosives. In addition, individual staff who wish to use explosives must also apply for a personal permit via SafeWork SA. These must be renewed annually.

b. All projects using explosives must be approved by the relevant College Vice-President and Executive Dean.

c. Detailed Risk Assessments and Safe Work Procedures must be completed and all identified controls implemented.

d. Strict restrictions apply to explosives issued under the permit in relation to purchasing, quantities, use, storage, security and record keeping. Storage must be in an approved cabinet, restricted access and with appropriate signage. See SafeWork SA for further details.

e. Any staff member who is intending to use explosives for research or educational purposes must contact the WHS Unit, prior to purchasing to make sure they are covered by relevant licensing.

26. Security Sensitive Ammonium Nitrate (SSAN)

a. The University currently holds a gazetted exemption from the requirements of the *Explosives (Security Sensitive Substances) Regulations.* This is subject to the University complying with the following conditions:

   i. all purchases, use and disposal of security sensitive ammonium nitrate must be recorded in an auditable format and kept for a period of at least five years

   ii. all records will be made available to a gazetted Inspector of Explosives on request within 14 days

   iii. all quantities of security sensitive ammonium nitrate must be kept in a secure manner (stored in a suitable container, appropriately labelled as SSAN, in a locked receptacle such as a cabinet) and be accessible only by the registered person/s

   iv. used only for specified research or educational purposes

   v. no more than **3kg** of security sensitive ammonium nitrate is to be kept in any laboratory or other area of use at any time

   vi. any loss or theft of security sensitive ammonium nitrate is classified as an incident and must be reported immediately to the WHS Unit who will inform SafeWork SA and South Australia Police (SAPOL).

b. All processes of storage, handling, use and disposal must be documented in a Risk Assessment and approved by the area manager/supervisor.

27. Export and import of chemicals

a. Areas which directly import or export chemicals must ensure compliance with applicable requirements under the Australian Industrial Chemicals Introduction Scheme (AICIS), including registration, chemical categorisation and any applicable assessment or authorisation requirements.

b. All imported chemicals must have labels in accordance with GHS labelling requirements as per SA *Work Health and Safety Regulations 2012*.

c. Before importing chemicals, a worker must determine whether additional permits, approvals, declarations or import conditions apply based on the chemical's composition, intended use, country of origin and applicable Australian import controls. This includes checking requirements administered by the Department of Agriculture, Fisheries and Forestry (DAFF) through BICON where relevant, and the Australian Border Force (ABF) or other relevant regulators where applicable.

28. Manufacturing of research chemicals

a. If staff or higher degree students in the University manufacture or directly import chemicals, they have a duty to prepare an SDS, even if the chemical is only for research, sample analysis or becomes a waste product.

b. Where it is not feasible to comply with the WHS Regulations in terms of SDS requirements, then an SDS must be prepared and meet, as a minimum, the following:

   i. be written in English

   ii. have an Australian business name and contact details

   iii. state full identification and hazard information if available - where it is not available, a precautionary approach should be taken

   iv. state chemical identity, structure or composition as far as is reasonably practical

   v. state any known and suspected hazards

   vi. state precautions that must be taken in using, handling or storing the chemical, to the extent that such precautions have been identified.

29. Waste management

a. A decision on the correct method of disposal of any chemical waste generated must be made in consultation with the SDS and included in the associated risk assessment and the relevant safe work procedure (SWP).

b. All waste containers must be suitable for the chemical waste type and must be appropriately labelled, including all relevant hazard warning and pictograms.

c. Chemical waste must be appropriately stored and segregated to ensure any risks to health or safety are managed.

d. Chemical waste must be removed by an operator licensed by the relevant authority (Environmental Protection Agency [EPA]).

e. The University must supply the licensed operator with a waste manifest. The operator will complete a Waste Transport Certificate unless an alternative has been organised via the EPA (e.g. online tracker).

f. Waste manifests must be kept by the area that organises the waste collection as per WHS record keeping requirements.

30. Record keeping

a. The following records must be maintained and kept up to-date for work with hazardous chemicals by the laboratory/studio/workshop/area using the chemicals.

b. It should be noted records must be kept for significant periods of time, if not permanently – see WHS record keeping and includes for:

   i. Hazardous Chemicals Register (using ChemWatch) and associated SDSs

   ii. risk assessments

   iii. Safe Work Procedures

iv. specialised emergency procedures (e.g. spill kit use or cyanide first aid)

v. training records

vi. registers as required under permits for Controlled Substances, SSAN and explosives materials. (these must document purchase, use and disposal)

vii. maintenance records of any controls that are the responsibility of the lab/ workshop/ studio.

c. The following records must be kept by the area that schedules inspections, testing or maintenance work e.g. Property Facilities and Development (PFD) for:

i. fume hoods

ii. local ventilation and biosafety cabinets

iii. monitoring / gas sensors

iv. annual safety showers and eye wash testing

v. any other infrastructure used to control the risks of hazardous chemicals.

d. The WHS Unit must keep records for the following relating to hazardous chemicals:

i. register of any permits/licenses issued to the University or its workers

ii. health monitoring records (where monitoring is required)

iii. notifiable and other reported incidents.

e. All of the above records must be made available to auditors or the regulators upon request and kept as per the WHS Record keeping requirements.

31. Responsibilities

Vice-President (Corporate Services)	a. As the holder of University permits/licenses relating to hazardous chemicals, ensure that processes are in place to meet regulatory compliance.
Vice-Presidents and Executive Deans of College and Portfolio Heads	Ensure that: a. these procedures are implemented in their College/Portfolio, and b. there are adequate resources for effective hazardous chemicals management in their College/Portfolio.
Managers /Senior Staff	Ensure that: a. hazards associated with chemical use in their areas of responsibility are identified, risk assessed and that risk control measures are implemented, documented, monitored, regularly reviewed and maintained b. consult workers and where practicable their elected Health and Safety Representatives (as relevant) throughout the risk management process c. approve the completed risk assessment for their area of responsibility d. appropriate training, instruction and supervision is provided for the safe use of chemicals e. Hazardous Chemicals Register is available (ChemWatch) and up to date for their area and access to SDSs is available for all the required chemicals that are used in their area of responsibility

Managers /Senior Staff	f. their area complies with the purchasing, monitoring, security, disposal and record keeping to meet legislative requirements and these University procedures g. that they are aware of emergency protocols and practices h. that any accident/ incidents and hazards involving hazardous chemicals are reported into FlinSafe i. report any security or safety issues to senior managers.
Demonstrators/Activity supervisors/Lab mentors	Ensure that: a. chemicals are being used in a safe manner and as per the Risk Assessment & Safe Work Procedure b. adequate instruction and supervision is provided that they are aware and follow all emergency protocols and required emergency responses c. all accidents/incidents and hazards are reported into FlinSafe d. report any security or safety issues to supervisors.
Work Health and Safety Unit	Ensure that: a. permits for prohibited and restricted carcinogens are completed and submitted to SafeWork SA (or relevant regulator in each jurisdiction) b. investigate all notifiable and reported incidents and maintained investigation reports/ records and any notification to Regulators as required and ensure these are reported to Managers via the WHS FlinSafe reporting system c. maintain a register of issued permits/ licenses to the University for hazardous chemicals d. maintain records of any health monitoring (where relevant) that have been organised by the WHS Unit to meet regulatory requirements.
Workers/ Staff/ Students and others in the workplace	a. Comply with these procedures and follow all instructions and directions relating to the acquisition, use, handling, storage and disposal of hazardous chemicals. b. Undertake all training as specified by the University or Supervisor. c. Follow all emergency protocols and required emergency responses. d. Report immediately any incident involving hazardous chemicals to their manager/supervisor and report any such incident in FlinSafe within 24 hours. e. Report any inappropriate use of hazardous chemicals to their line manager, supervisor, Health & Safety Representative and/or the WHS Unit.

32. Related Procedures and Links

Work Health and Safety Policy

Work Health and Safety Management System

Hazardous Chemicals Manual

First Aid Procedures

Emergency Management Procedures

33. Legislative framework

South Australia

Work Health and Safety Act 2012

Work Health and Safety Regulations 2012

Controlled Substances Act 1984

Controlled Substances (Controlled Drugs, Precursors and Plants) Regulations 2014

Controlled Substances (Poisons) Regulations 2026

Explosives Act 1936

Explosives (Security Sensitive Substances) Regulations 2021

National Codes and Standards

Code of Practice – How to manage work health and safety risks

Code of Practice: Managing risks of hazardous chemicals in the workplace

Code of Practice: Labelling of workplace hazardous chemicals

National Code of Practice for Chemicals of Security Concern

Cytotoxic Drugs and related waste 2015

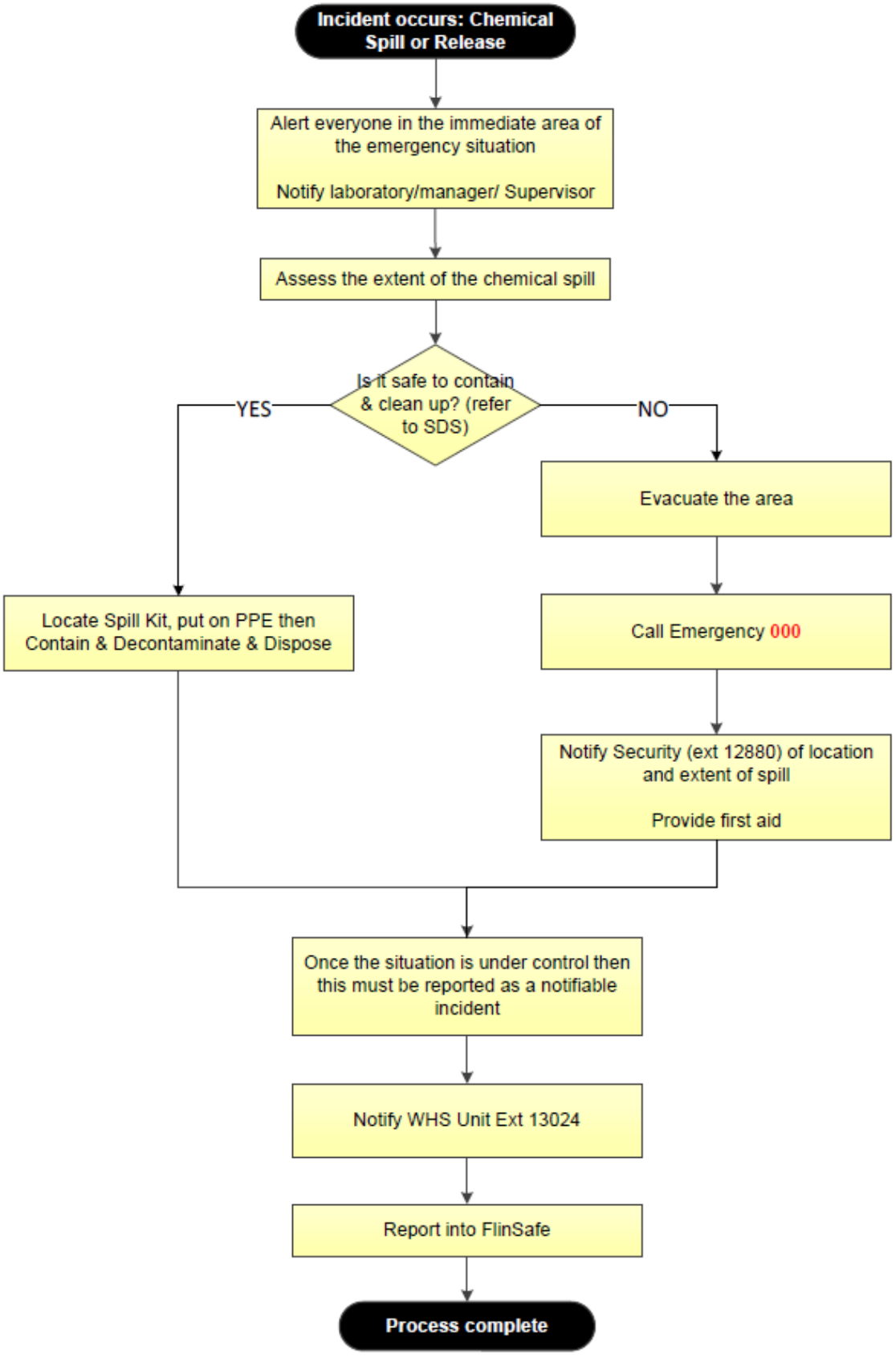
For Australian Standards Users must refer Standards Australia for the latest version. **A listing of relevant Australian Standards can be found in the Hazardous Chemicals Manual.**

Note – equivalent legislation applies in each State and Territory.

Approval Authority	Vice-President (Corporate Services)
Responsible Officer	Director, People and Culture
Approval Date	
Effective Date	
Review Date*	
Last amended	
CM file number	CF11/2198
* Unless otherwise indicated, this policy or procedures still apply beyond the review date.	

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APPENDIX A – CHEMICAL SPILL EMERGENCY RESPONSE



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