

Name of Procedure	ACU Chemical Management Procedure
Governing Policy	ACU Work Health, Safety and Wellbeing Policy
Description of the Procedure	Supports staff and others to safely manage, use and dispose of hazardous chemicals.
Procedure applies to:	<input checked="" type="checkbox"/> University-wide <input type="checkbox"/> All Staff <input type="checkbox"/> All Students <input checked="" type="checkbox"/> Staff, Students and Contractors
Procedure Status	<input type="checkbox"/> New Procedure <input checked="" type="checkbox"/> Revision of Existing Procedure
Approval Authority	Vice-Chancellor
Governing Authority	Chief Operating Officer
Responsible Officer	Director Human Resources
Approval Date	02 December 2015
Effective Date	02 December 2015
Date of Last Revision	01 May 2018
Date of Next Review	04 May 2020
<i>* Unless otherwise indicated, this procedure will still apply beyond the review date.</i>	
Related Legislation, Policies, Procedures, Guidelines and Local Protocols	<p><i>Model Work Health and Safety Act/Regulations 2011</i> <i>Occupational Health and Safety Act 2004 /Regulations 2017 (VIC)</i></p> <p>Model Code of Practice: Managing risks of hazardous chemicals in the workplace</p> <p>ACU Delegations of Authority Policy and Register ACU WHS Risk Management Policy ACU WHS Risk Management Procedure ACU WHS Risk Management Procedure ACU WHS Risk Assessment Form ACU Incident, Hazard Reporting, Investigations and Corrective Actions Procedure ACU WHS Risk Assessment Form for Practical Activities/Research ACU WHS Inspection Checklist for Laboratories.</p> <p>Access these laboratory and other tools from: http://www.acu.edu.au/policy/hr/health_safety_and_well-being</p> <p>Access the online <i>Chemwatch</i> inventory management system, including WHS risk assessment and credo modules (mixing processes), from: http://ir.chemwatch.net/chemwatch.web/</p>

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1. Overview

ACU is committed to maintaining and continuously improving its Work Health and Safety Management System (WHSMS or framework) and managing its significant WHS risks, including the risks which are associated with hazardous chemicals.

Some of the ways that these WHS and governance risks are managed, include:

1.1 Maintaining chemical registers

Chemical registers should be maintained, inclusive of SDS libraries, within *Chemwatch* (a chemical hazard information and risk assessment service) and in a hard copy format.

1.2 Applying safe work practices

Staff members, including laboratory technicians, who handle chemicals should apply safe work practices and be competent in risk assessment and the management of risks, and should be appropriately trained, instructed and supervised. Any users of these chemicals, including students, should also be instructed about safe work practices and have ready access to the chemical registers, including relevant SDS, and safe work instructions which are maintained by organisational units.

1.3 Conducting WHS Inspections of laboratories and other work areas

Organisational units using chemicals, classified as either hazardous or dangerous goods, must also undertake regular WHS inspections and WHS risk assessments of chemical inventories to ensure that hazards and risks are identified and managed.

1.4 Planning purchases

Organisational units should plan their purchases of chemicals to ensure that they both meet requirements and minimise any disposal costs which may be associated with either chemicals that are no longer needed or have expired.

1.5 Labelling chemicals

Other compliance requirements include ensuring that chemicals within the original and subsequent containers used are correctly labelled. These labels can be sourced via the *Chemwatch* database.

1.6 Managing storage risks

Chemicals should also be used and stored safely to ensure that compatible chemicals are stored together, flammable or corrosive cabinets are used, and standard refrigerators are not used for flammable liquids.

2.7 Considering other requirements

Larger storage areas that are holding dangerous goods in [significant quantities](#) must contain placards (above 50-100 kilograms or litres) and the relevant State WHS regulator should be notified if ACU is holding more between 500 -10,000 kilograms or litres of these goods on one of its sites. Additionally, manifest reports will also be produced whenever ACU holds quantities of dangerous goods that exceed threshold levels.

Appropriate spill containment equipment should be available to support organisational units should be prepared to effectively respond to emergencies.

More detailed procedures are outlined in Section 2 to 16.

2. Training

2.1 Inductions

Staff members, students, visitors, volunteers and contractors that enter, work, or learn within teaching laboratories, chemical storage and preparation areas should be appropriately inducted into these areas to ensure that they are committed to applying emergency response procedures, identifying and managing risks, submitting reports of incidents, injuries, and hazards within [riskware](#); and contribute to the maintenance of the WHSMS and safe working and learning spaces.

2.2 Chemical Management Training

Training should be provided to laboratory and relevant facilities management or other staff members, which provides guidance about safe work practices that are associated with using, storing and disposing of hazardous chemicals and dangerous goods, legislative requirements, the use of the *Chemwatch* database, chemical registers (including SDS libraries), labelling requirements, the ACU WHS risk management methodology and emergency responses. Staff and students (and where relevant contractors and visitors) should also be trained in waste management and should be competent in spill containment.

Task	Trainees	When	Action Owner	Senior Management /Management ¹
Provide a laboratory induction to students, delivered online and/or 'face-to-face'.	Students	When first exposed to teaching laboratories	Teaching Staff/Research Supervisor	Oversight
Laboratory Induction	Contractors/ Sub-contractors	When first exposed to a laboratory or chemical storage area	Facilities Management (FM) staff to coordinate with Laboratory Staff	
Laboratory Induction	Staff members	When first exposed to the laboratory environment	Nominated Supervisor/ Manager	
Maintain records of the training delivered	Students and staff	Whenever training is conducted	Teaching Staff or Laboratory Supervisor/ Manager	Oversight
Co-ordinate the delivery of chemical management training	Staff members	Refresher training, which is scheduled at least every twelve months or whenever there are either changes in the workplace legislative requirements	Nominated Supervisor/ Manager	Allocate Budget and provide oversight

¹ Examples of Senior Management or Management roles include positions such as National Head of School, Deputy Head of School and Research Institute Heads of Centres.

3. Supervision

Nominated Supervisors/Managers and teaching staff members are also responsible for ensuring that working and learning areas are safe from chemical exposures or dangerous goods risks. They should also plan for emergencies

Task	When	Action Owner	Senior Management /Management
Supervision of staff to ensure that: <ul style="list-style-type: none"> • Safety Data Sheets (SDS), including one mini SDS, and safe work instructions are readily accessible and complied with; • Personal Protective Equipment (PPE) is worn, when required; • Emergency responses are effective, including providing the right spill control equipment; • WHS risk assessments are conducted regularly (Refer to Section 7) and complied with and • Staff members comply with chemical management regulations. 	Ongoing	Nominated Supervisor/ Manager	Oversight
Ensure that students have access to and are familiar with the relevant SDS and safe work instructions for any chemical that is used, they are adequately supervised, and they are familiar with emergency response procedures.	Ongoing	Teaching Staff	
Ensure that students are avoiding the consumption of food and drinks in laboratories and preparation areas .	Ongoing	Staff, including Teaching and Laboratory Staff	
Ensure that visitors, including tradespeople, are appropriately supervised and are familiar with chemical hazards.	Ongoing	Relevant Technical/ Laboratory Staff in consultation with Local Facilities Manager or Delegate	Oversight

4. WHS Risk Assessments

WHS risk assessments should be conducted to assess the hazards and risks which are associated with hazardous chemical, including Australian Dangerous Goods. Risk assessments should be conducted whenever organisational units are proposing to purchase or use new chemicals, in the planning phases of teaching development or research projects, and prior to setting up new chemical storage areas. Risk assessments should also be conducted to improve emergency response planning. Risk management reviews should also be scheduled every six months, within high risk environments such as laboratories, and to review hazards and risks, and the effectiveness of treatments (risk controls).

WHS risk assessments are not required whenever hazards and associated risks are well known and can either be easily resolved or effective treatments are being applied.

No.	Task	When	Responsibility	Senior Management /Management
1.	<p>Schedule a risk assessment to assess whether staff members, students, contractors or visitors could be potentially exposed to health and dangerous goods hazards and risks.</p> <p><i>Note: Consider conducting a generic risk assessment if you are assessing hazardous chemicals that are identical in characteristics, properties, potential hazards and risks (which will be used in the same way).</i></p>	Refer to the paragraph above.	Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff (in consultation with Nominated Supervisor/Manager)	Ensure that relevant risks are assessed and managed.
2.	<p>Are you conducting a WHS risk assessment for a single chemical?</p> <p>YES: One or two WHS risk assessments should be conducted, using <i>Chemwatch</i> (conducting separate assessments for health and dangerous goods risks²). This assessment should be conducted in consultation with anyone that will apply treatments and/or is familiar with any work processes that are being assessed for hazards and risks. Proceed to Step 3</p> <p>NO: I am either assessing:</p> <ul style="list-style-type: none"> Hazards and risks associated with practical activities or a research project (use the ACU WHS Risk Assessment Form for Practical Activities/Research). Proceed to Step 2.1 An entire mixing process (if you are not using <i>Chemwatch's</i> Credo Module), categories of dangerous goods, storage risks, emergency responses or other more complex assessments (use the ACU WHS Risk Assessment Form). Proceed to Step 2.1 	Whenever risk assessments are conducted	Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff (in consultation with Nominated Supervisor/Manager)	

² Both assessments are only be required if a hazardous chemical is also classified as an Australian Dangerous Good (ADG).

No.	Task	When	Responsibility	Senior Management /Management
2.1	<p>Start to conduct the WHS risk assessment in consultation with anyone that is familiar with the work processes, is a subject matter specialist or will apply treatments in laboratories or teaching spaces or within work processes.</p>	<p>Whenever risk assessments are conducted that either:</p> <ul style="list-style-type: none"> • assess an entire mixing process; • support the development of new course content that will be applied in teaching laboratories; • involves the use of chemicals in a research project; and • support the use of chemicals for a work process. 	<p>Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff</p>	
2.2	<p>Begin to assess hazards by reviewing the label and SDS of the hazardous chemicals and/or dangerous goods, and other relevant reference materials, and assess the hazards associated with their use, storage and disposal. Assess: who could be exposed to immediate (dangerous goods) or longer-term hazard(s) and risk(s), hazard severity and level of potential exposure(s), and the sources or processes that contribute to the safety or environmental risk(s), and document this assessment (using a ACU WHS Risk Assessment Form)</p>		<p>Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff</p>	
2.3	<p>Assess the risk rating (based on applying any applicable, existing treatments to the management of the risk/s) which may be applied to this or other chemical substances. Use the risk rating table within Appendix A of one of ACU's WHS Risk Assessment Forms. Is the Risk Level Acceptable (Ideally equal to /less than Moderate (3)? YES. Proceed to 2.5 NO. Proceed to 4</p>		<p>Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff</p>	
2.4	<p>Develop Treatments (risk controls) to Manage Risks (Referring to Appendix E and F for Guidance). Apply the Hierarchy of Risk Control (Appendix F) when treatments are chosen; higher level treatments (risk controls) should be used to manage higher level risks. Also, continue to engage other staff, students or contractors about the choice of these treatments that will be applied in working and learning areas.</p>		<p>Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff</p>	

No.	Task	When	Responsibility	Senior Management /Management
2.5	Reassess the risk rating , using the risk rating table, which is referenced from Appendix A of either the ACU WHS Risk Assessment Form for Practical Activities or ACU WHS Risk Assessment Form.		Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff	
2.6	Has the risk rating been reduced to a level of Moderate (3) or below? YES. Proceed to 2.8 NO. Proceed to 2.9		Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff	
2.7	Coordinate the 'sign off' of the WHS risk assessment and the treatments (risk controls) and ensure that relevant Teaching Staff endorse any treatments that will be applied within teaching facilities.		Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff (Authorised by Nominated Supervisor/Manager and/or Relevant Teaching Staff).	
2.8	Submit a detailed risk assessment plan, for 'sign off', which outlines a range of controls that reduce the risk rating down to Moderate 3 or below.		Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff	Authorise
3.	Develop safe work instructions or higher-level treatments (supported with training and verbal instruction) that will be applied by everyone, including teaching staff, who will handle or manage the chemical, or mixing process.	If treatments are needed to handle/ manage the product	Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff (Overseen by Nominated Supervisor/Manager)	
4.	Review whether all significant risks have been identified and the effectiveness of existing treatments	Every Six Months	Staff Members, including Relevant Technical/Laboratory, Research and Teaching Staff (Overseen by Supervisor/Manager)	Oversight

Access the WHS Risk Assessment Form for Practical Activities/Experiments and WHS Risk Assessment Form from www.acu.edu.au/whspolicy

5. WHS Inspections

Staff members should regularly inspect chemical storage areas, at least every three to six months, to verify that hazards and risks are being managed.

These WHS inspections will support organisational units to identify that these and other hazards are being managed:

- Chemicals are not being stored above eye height;
- All labels are legible and applied to all containers;
- Emergency evacuation procedures and contact lists are accessible and up to date;
- Chemical registers are truly reflective of all chemicals held;
- Safe manual handling practices are applied within these areas; and
- Chemical storage containers, shelves and cabinets are free of signs of deterioration.

These WHS inspections should also identify whether: chemicals are in a stable condition, including ensuring that they are stored in an appropriate solution and which chemicals that should be disposed of.

Task	When	Action Owner	Senior Management /Management
Ongoing inspection of facilities during regular work procedures, including ensuring that these areas are returned to normal after practical activities.	Ongoing	Staff, including Relevant Technical/Laboratory Staff	Oversight
Conduct formal WHS Inspections of laboratories, using the ACU WHS Inspection Checklist for Laboratories or a relevant checklist, and associated storage areas.	At least every three to six months	Staff, including Relevant Technical/Laboratory Staff	Oversight

[Click here](#) to assess the WHS Checklist for Laboratories.

6. Maintaining Chemical Registers

WHS and dangerous goods regulations outline requirements for maintaining chemical registers. These registers must be reflective of all chemicals which are held and classified as either hazardous and/or dangerous goods. The hard and soft copy registers, including SDS libraries, and any associated safe work instructions should also be readily accessible to staff, students and other people that manage or handle chemicals.

Each organisational unit is required to apply a standard naming convention to the folders that they maintain within *Chemwatch* to support the development of manifest folders, which detail the maximum volumes of hazardous chemicals and Australian Dangerous Goods, which are stored at each site and within specific rooms or storage areas.

Naming convention:

Parent folder: Insert the name of the campus location and organisational unit e.g. North Sydney – Arts

Sub-folder: Name of Building and Floor e.g. James Carroll Building Level 2

Sub-folder: Name of Room e.g. 2.3

Sub-location folder: Name of storage space within room e.g. Corrosives Cabinet

Reviewing chemical registers

Step	Task	When	Action Owner	Senior Management /Management
1.	Review chemical registers, both 'hard copy' and <i>Chemwatch</i> versions, to ensure that they are reflective of all chemicals held.	Every six months	Staff, including Relevant Technical/ Laboratory Staff (Overseen by Nominated Supervisor/Manager)	Oversight
2.	Submit a brief report to your nominated Supervisor/Manager to confirm that the review of the register has been completed on <i>Chemwatch</i> and hard copy registers have been updated.	Every six months	Staff, including Relevant Technical/ Laboratory Staff	Oversight

Chemical inventories are maintained within the manifest section of *Chemwatch*. These parent folders, for each organisational area that holds chemical inventories, are located below the campus name within the *Chemwatch* file directory. Section 10, Site Manifests, provides guidance on the University's convention for the storage of records.

7. Site Manifests

A manifest will be prepared when the quantity of dangerous goods on a site exceeds the quantities listed in WHS regulations, which will shape the notifications that are made to WHS regulators in the applicable state. These manifests will guide emergency services to ensure that they can respond effectively to any potential chemical emergency.

Manifest Requirements

Step	Task	When	Action Owner	Senior Management /Management
1.	Review chemical inventories, managed on <i>Chemwatch</i> , to ensure that the inventory listing of chemicals, including Australian Dangerous Goods (ADG), are accurate.	15 January and 15 June (closest working day after this date)	Laboratory and Local FM Staff	Oversight
2.	Provide site plans, detailing specific room numbers of ACU managed properties which have been recently acquired.	Mid-June and January	Local Facilities Manager or Delegate	
3.	Produce a <i>Chemwatch</i> manifest report that details the maximum volumes of dangerous goods which are held by ADG Class or Category, within each room and the total volumes at each ACU managed site which exceed the thresholds for producing Manifest reports.	Every six months (1 st July and 1 st February)	WHS Staff, HR	
4.	Update the manifest reports that are stored in Hazmat boxes within ACU managed buildings	Every six months (1 st July and 1 st February)	WHS Staff, HR in Consultation with Local FM or Delegate	
5.	Update Building Managers, overseeing properties that are not managed by ACU, about any changes in either classes (ADG) of dangerous goods held or volumes.	Every six months (1 st July and 1 st February)	Local Facilities Manager or Delegate	Oversight
6a.	Contact Emergency Services with an update about any changes in volumes of classes of dangerous goods that are held on each sit, which exceed the 'Manifest Level' and site contacts.	Every six months (15 th July and 15 th February)	Local Facilities Manager or Delegate	Oversight
6b.	Contact local WHS regulators with an update about the changes in volumes of dangerous goods that are held which exceed 'Manifest Level'.	Every six months (15 th July and 15 th February)	WHS Staff (HR)	
7.	Ensure that Hazmat boxes are installed whenever ACU takes on the management of a new site.	Ongoing	Local FM or Delegate	Oversight

8. Managing Hazards in Chemical Storage Areas

Some of the safety considerations that should be applied in chemical storage areas include:
 Avoid potential spills by ensuring that oils are not stored in dropper bottles (*A safer alternative is to use schott or nalgene bottles and ensure these containers are labelled*);

- Do not store chemicals above eye height;
- Apply caution when you are moving chemicals and assess the risks associated with handling and moving these chemicals (See Section 7, WHS Risk Assessments); and
- Return chemicals promptly to storage rooms after they have been used.

Refer to Appendix E for more guidance about safe management practices within chemical storage areas.

9. The Purchasing Process and Inventory Updates, Chemical Registers

WHS considerations should be integrated into the purchasing process. WHS risk assessments should also be completed prior to purchasing some chemicals as this process will shape the controls that are developed to manage chemicals. Safety equipment and additional storage equipment may need to be acquired prior to the delivery of some chemicals.

Step	Task	When	Action Owner	Senior Management /Management
1.	<p>Are you replacing chemicals that you currently use? Yes. Go to Step 9 No. Go to Step 2</p>	Pre-purchase	Staff, incl. Relevant Technical or Laboratory Staff (Authorised by Nominated Supervisor/Manager)	
2.	<p>Do the chemicals that you propose to purchase have?</p> <ul style="list-style-type: none"> • Specific licensing, notification or additional security requirements; • A classification of a restricted or prohibited substances; • Air monitoring requirements or health surveillance requirements; or • Requirements for additional door signage or building placard requirements. <p>YES: Proceed to Step 3 NO: Proceed to Step 4</p>	Pre-purchase	Staff, including Relevant Technical/ Laboratory Staff	Oversight
3.	Conduct a WHS risk assessment (refer to Section 7) to assess the implications of purchasing materials which fit into the categories outlined in Step 2.	Pre-purchase	Staff, including Relevant Technical/ Laboratory Staff (Authorised by Nominated Supervisor/Manager)	
4.	Assess whether to purchase the material(s), based on the risk assessment above and an assessment of the budgetary, reporting and safety implications outlined in Step 2.	Pre-purchase	Staff, including Relevant Technical/ Laboratory Staff (Authorised by Nominated Supervisor/Manager)	
5.	<p>Has the purchase been approved? Yes. Proceed to Step 6 No. Do not Proceed with the Purchase</p>	Pre-purchase	Staff, including Relevant Technical/ Laboratory Staff	Authorise
6.	Ensure that special safety and storage equipment have been delivered and installed, if required, prior to the delivery of chemical(s).	Pre-purchase	Staff, including Relevant Technical/Laboratory Staff (Authorised by Nominated Supervisor/Manager)	Oversight
7.	Ensure that suitable containers are available for dilutions or decanting and they comply with WHS labelling regulations.	Pre-purchase	Staff, including Relevant Technical/Laboratory Staff (overseen by Nominated Supervisor/Manager)	

Step	Task	When	Action Owner	Senior Management /Management
8.	Add the relevant SDS for the chemical to your SDS library within the chemical register (<i>Chemwatch</i> and 'hard copy' version). Also add or insert the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) for GHS and Australian Dangerous Goods (ADG) classifications.	On delivery	Staff, including Relevant Technical/Laboratory Staff	
9.	Apply learnings from the WHS risk assessment, undertaken during Step 3, to produce verbal and/or written safe work instructions, which is applied by anyone that interacts with the chemical substance or that may need to respond to an emergency.	On delivery	Staff, including Relevant Technical/Laboratory Staff (Overseen by Nominated Supervisor/Manager)	Oversight
10.	Ensure that the SDS, including the one page summary which is sourced from <i>Chemwatch</i> is available to anyone that is exposed to the chemical.	On-delivery	Staff, including Relevant Technical/Laboratory Staff (Overseen by Nominated Supervisor/Manager)	
11.	Use the original container supplied by the manufacturer, whenever possible. If not, ensure that all containers are labelled (<i>these labels can be downloaded from Chemwatch</i>).	On delivery	Staff, including Relevant Technical/Laboratory Staff	Oversight

10. Labelling Chemicals

Labels, *accessible via Chemwatch*, must be attached to all containers that contain hazardous chemicals and dangerous goods. The scope of this legal requirement also extends to pipelines – inclusive of gas lines, immersion tanks and reaction vessels. There are limited exemptions to this legal requirement.

Labels with expiry dates or date of purchase should also be attached to chemical containers. This will assist organisational units to identify chemicals that should be disposed of.

Task	When	Action Owner	Senior Management /Management
Ensure that all containers that contain hazardous chemicals or dangerous goods are labelled with the contents and GHS logos. This labelling should also be applied to pipelines - including gas lines, immersion tanks and reaction vessels.	Ongoing	Staff, including Relevant Technical/Laboratory staff	Oversight
Regularly inspect labels in chemical storage and laboratory areas to verify that all containers contain legible labels	Every six months	Staff, including Relevant Technical/Laboratory staff	Oversight
Keep labels on empty containers if they have not been rinsed and/or purged of vapour	Ongoing	Staff, including Relevant Technical/Laboratory staff	
Remove or spray paint over labels that are attached to cleaned, rinsed and purged containers and dispose of containers that are no longer needed.	Ongoing	Staff, including Relevant Technical/Laboratory Staff	
Will any chemicals, which are being transferred into another container(s), be used immediately? Yes. You will not be required to label the container(s) if the container is thoroughly rinsed and purged of vapours, immediately after use. No. Ensure that the container is labelled (labels can be accessed through <i>Chemwatch</i>).	Ongoing	Staff, including Relevant Technical/Laboratory Staff	

Note: Labels that apply to mixing processes can be sourced via *Chemwatch's* Credo Module.

See Appendix A for more information.

11. Requirements: Facilities Management (FM), Suppliers, Contractors, Sub-contractors, and Vendors

11.1 FM

Local Facilities Managers and their delegates should also maintain a chemical register within location specific folders within *Chemwatch* that are reflective of the chemical substances (hazardous and dangerous goods), which are held by FM on the local campus. This chemical register, including SDS libraries, and associated safe work instructions should also be outputted into a hard copy format.

11.2 Suppliers, Contractors, Sub-contractors and Vendors

All ACU vendors, contractors, sub-contractors and suppliers that hold hazardous chemicals or dangerous goods on the University's premises for more than five consecutive days must maintain a chemical register that is reflective of these chemicals substances which are held. These registers, including SDS libraries, and safe work instructions must be readily accessible within chemical storage and handling areas.

These organisations, ranging from cleaning companies to maintenance and construction firms, must also ensure that hazards and risks associated with chemical substances are managed and WHS risk assessments are conducted whenever these risks and associated treatments are unknown or cannot be easily resolved. Their staff any sub-contractors should also be trained in safe systems of work, including chemical management. The safe work instructions will be guided by these risk assessments and the safety information that is accessed via SDS and chemical labels. SDS libraries should be readily accessible to anyone that is handling, managing or disposing of chemicals. These organisations are also required to consult with ACU about hazards and risks.

Other requirements include ensuring that chemical containers are recycled or disposed of in compliance with the instructions on SDS. These organisations must ensure that spill kits are available for spill containment and ensure that manufacturer's labels are attached to hazardous chemical containers. Suppliers, contractors, sub-contractors and vendors will also be briefed about emergency response procedures by local Facilities Management staff and these parties will consult with each other about hazards and risks

Task	When	Action Owner
Ensure that all vendors review their chemical registers on a regular basis, at least annually, and they are applying safe systems of work to manage risks associated with the chemicals that are held 'on site'.	Annually	Local Facilities Manager
Submit an email to Associate Director Properties and Facilities Management with an update about the completion of the annual review of registers and safe work instructions, which are maintained by FM and ACU's business partners, including canteens.	Annually, 1 st July (first working day, on/after this date)	Local Facilities Manager
Ensure that chemical registers are set up 'on site' whenever new suppliers, vendors or contractors bring chemical substances 'on site' for more than five days.	Ongoing	Local Facilities Manager

12. Emergency Equipment

Staff members, students, contractors and visitors should be prepared for emergencies, including chemical incidents and spills. Emergency equipment should also be purchased to assist organisational units/Research Institutes to respond to emergencies and align these and other emergency protocols with the ACU Critical Incident Management Policy.

Technical Officers and/or Laboratory Managers should assist Executive Deans, HOS, SHOS, DHOS or Directors of Organisational Units/Research Institutes with advice about the types of spill control and emergency equipment that should be purchased to ensure that incident responses are effective. These requirements should also be determined by conducting formal risk assessments, which take account of chemical substances held, SDS, and the threats that ACU should prepare for.

Task	When	Action Owner	Senior Management /Management
Emergency contact lists and emergency response information should be placed in chemical storage, preparation and training spaces.	Ongoing	Staff, including Relevant Technical/Laboratory Staff (Overseen by Nominated Supervisor/Manager)	Oversight
Spill kits are supplied for chemical storage areas. <i>Refer to below for more guidance</i>	Before use of area	Local Facilities Managers/ Managers of Organisational Units or Research Institutes	
Suitable first-aid facilities and fire - fighting equipment should be supplied near chemical storage areas.	Ongoing	Local Facilities Management Team	
Staff members and students should familiarise themselves with their emergency response scenarios and threats.	Ongoing	Staff, including Relevant Technical/Laboratory Staff	
Supply respirators, gloves and ventilation to chemical storage areas whenever the need for this equipment has been identified by a risk assessment or within safe work instructions.	Ongoing	Nominated Supervisors/Managers	Oversight and Authorise Expenditure

Note: Serious and dangerous incidents and fatalities must be reported to the WHS (OHS) regulator in the state where an incident has occurred in. Reports of these and other incidents should also be logged in riskware.

Other spill equipment that may be purchased by organisational units:

- Material to contain or absorb a spill, such as dry sand or any product listed on SDS;
- Specific absorbents that will be stored close to where the chemical is used (e.g. sodium carbonate for acids);
- Warning signs and spill barriers (see Section 16);
- Containers for waste storage;
- Leakage overdrums or other containers for placing leaking containers;
- Clean-up equipment (e.g. mops, buckets, shovels);
- Chemical reagents;
- Telephones located near where hazardous substances or dangerous goods are used; and
- Emergency shower and eye wash.

13. Signage

Task	When	Action Owner	Senior Management /Management
A small GHS logo or dangerous goods diamond should be displayed at the door of every room where hazardous chemicals or dangerous goods are used.	Ongoing	Local Facilities Manager	Oversight
Placards must be placed at storage locations, rooms, buildings, and site entrances if WHS regulation placard quantities are exceeded.	Once quantities have been exceeded	Local Facilities Manager	Oversight
Place a 'Danger - Flammable Liquids' sign in areas where there is flammable liquids are frequently decanted, or infrequently whenever more than 50 litres is decanted	Ongoing	Local Facilities Manager	Oversight

[Click](#) here for more information about these placarding requirements.

14. Chemical Preparation/Mixing

Staff members, including Laboratory and Technical Staff, should conduct a WHS risk assessment, in consultation with relevant teaching staff or researchers, prior to mixing chemicals. The development of treatments, which are applied during the mixing process, should be guided by the risk assessment, reference materials, SDS, chemical labels and *Chemwatch's* Credo Module.

During the chemical preparation and mixing process, only use the minimum quantities of the chemicals that are required. You should also consult the relevant safety data sheet (SDS), chemical label and other reference materials, including *Chemwatch* resources such as the Credo Module.

Some of the treatments that may be developed include substituting a chemical for safer alternatives, applying physical treatments (risk controls) that reduce, suppress or contain substances, or limit the area of contamination and/or safe handling procedures. Personal protective equipment (PPE), such as gloves and dust masks, should also be used if it is a safety requirement that is specified within the relevant SDS.

Some safety precautions include:

- Close containers of flammable products;
- Don't open containers that appear to be swollen;
- Use devices to assist you to safely pour chemicals;
- Ensure that the device can support the full weight of the container and will allow you to safely control the pouring process;
- Avoid re-using empty containers as they may contain hazardous residues; and
- Apply a cleaning protocol that reflects the chemicals that are used (e.g. acid bath wash, acetone wash).

Also remember to:

- Close caps and lids tightly prior to storage;
- Ensure that you are complying with labelling requirements;
- Containers used by students in practical classes should be cleaned using appropriate methods;
- All containers of controlled/stored products should have the manufacturers' label attached to the container and have date of purchase written on them; and
- Remaining working concentrations of chemicals should be labelled and returned to the chemical storage area.

15. Spill Control

WHS Risk assessments should help shape organisational units' responses to any potential spills of chemical substances.

Spill control equipment should be accessible, and the spill kit should typically contain absorbent materials and protective equipment. Some of the options that are available to reduce the risks of spills include storing chemicals in a spill tray (a plastic tub or a more sophisticated tray), in a cabinet with a built-in sump, behind a bund (an area with a small wall to prevent the flow of liquid) or on a banded pallet, which contains a built-in sump.

Responding to a spill or an incident

Step	Task	When	Action Owner	Senior Management /Management
1.	Determine whether it is safe to control the spill Yes. Proceed to Step 9 No. Proceed to Step 2	Spill occurs	Staff, including relevant Laboratory/Technical Staff	Authorise
2.	Call Triple (o) 000 and 8888 (internal) or 1300 794 452	Spill is not containable	Staff, including Relevant Laboratory/ Technical Staff	Oversight
3.	Evacuate and secure the immediate area	Spill is not containable	Associate Director Properties and Facilities or delegate to oversee security response	Oversight
4.	Notify the relevant Associate Vice Chancellor (AVC) or Campus Dean (CD)	Spill is not containable	Associate Director Properties and Facilities or delegate to oversee response	
5.	Determine whether the management of the emergency should be managed by the Incident or Critical Incident Response Group.	Spill is not containable	Associate Vice Chancellor/Campus Dean in consultation with COO	
6.	Ensure that staff members/students involved in the incident are available to advise Emergency Services and the site is preserved (if a serious or dangerous, or a fatality has occurred).	Spill is not containable	Associate Director Properties and Facilities or delegate to oversee response	
7.	Contact the relevant person on your campus who will notify the WHS regulator in your state and EPA NSW: Manager Work Health Safety ACT, QLD and VIC Campuses: local Facilities Manager or WHS Officer	The incident is a serious, dangerous incident or has resulted in a fatality	Associate Director Properties and Facilities or delegate to oversee security response	
8.	Incident or Critical Incident Response Group will be formed to manage the incident. Do not Proceed to Step 9.	Spill is not containable	Critical Incident Response Group	
9.	Two trained staff, wearing Personal Protective Equipment, will be allocated to clean up the spill	Spill can be contained by ACU staff members	Staff, including Relevant Laboratory/Technical Staff (Overseen by Nominated Supervisor/Manager)	
10.	Absorb any free liquids, collect any solids and/or ventilate the area	Spill can be contained by ACU staff members	Staff, including Relevant Laboratory/Technical Staff	

Step	Task	When	Action Owner	Senior Management /Management
11.	Collect, label and dispose of spill residue as hazardous waste	Spill can be contained by ACU staff members	Staff, including Relevant Laboratory/Technical Staff, overseen by Nominated Supervisor/Manager	
12.	Decontaminate the affected area and equipment	Spill can be contained by ACU staff members	Staff, including Relevant Laboratory/Technical Staff	Oversight
13.	Log a report of the incident within riskware	Once the area has been decontaminated.	Staff, including Relevant Laboratory/Technical Staff	

16. Disposal of Laboratory Waste

Waste disposal processes should contribute to both the maintenance of a safe working and learning spaces and should be environmentally responsible. A licensed contractor will be used to ensure that waste is disposed of in an appropriate way.

Chemical waste is treated in line with its physical and chemical properties. Therefore, segregating waste is crucial to avoid unwanted reactions, including the production of toxic gases and explosions. If hazardous waste is stored temporarily, spill containment should also be available.

Hazardous waste **should not be allowed** to enter drains and dilution if there is not an acceptable alternative to appropriate disposal.

Decision Making Processes to Support the Reuse or Disposal of Waste

Step	Task	When	Action Owner	Senior Management /Management
1a	<p>Are there unused chemicals left over from a mixing process that can be reused in another process? Yes: Proceed to Step 2 No: Dispose of any unused chemicals; ensuring that the hazards and risks associated with incompatible or reactive chemicals are managed. Refer to page 24.</p>	Ongoing Ongoing	Staff, including Relevant Laboratory/ Technical Staff (Overseen by Nominated Supervisor/ Manager)	
1b	<p>OR</p> <p>Are there any unused chemicals from a research project? Yes: Can any of these chemicals be reused? Yes. Proceed to Step 2 No. Proceed to Step 5 No: No further actions are required</p>		Researchers (Authorised by Nominated Supervisor/Manager)	
2.	<p>Are any of these chemicals reactive? Yes: Proceed to Step 3 No: Proceed to Step 4</p>	Ongoing	Researchers	
3.	Submit a report to either your research supervisor or Nominated Supervisor/Manager which details the hazards associated with each chemical, reactive chemicals, risks associated with storing or reusing chemicals and the volume/quantity of chemicals.	At the completion of research projects / completion of mixing process.	Researchers (Authorised by Nominated Supervisor/Manager)	Authorise
4.	Liaise with the Laboratory Manager or Technical Officer within your School or Institute and Local Facilities Manager to coordinate the safe transfer and storage/and or disposal of chemicals (<i>see procedure on the next page</i>), including segregating incompatible chemicals.	At the completion of research projects /completion of mixing processes	Researchers	Oversight

Storage and Disposal Processes

Step	Task	Action Owner	Senior Management /Management
1.	Ensure that waste that will be stored will be placed in a secure area and any potential spills can be contained. The decisions about storage or treatments should be guided by risks assessments, SDS, chemical labels and other reference materials.	Staff, including Relevant Laboratory/Technical Staff (Oversight by Nominated Supervisor/Manager)	Oversight
2.	Is it safe to treat any of the waste streams 'on site' (acidic, alkaline or oxidising wastes, only)? No. Proceed to Step 3 Yes. Treat 'onsite, whenever it is feasible. Proceed to Step 3.	Staff, including Relevant Laboratory/Technical, in Consultation with Nominated Supervisor/Manager	Oversight
3.	Treat wastes and ensure that: <ul style="list-style-type: none"> No remaining hazardous residues remain (achieved through triple rinsing or evaporation) Lids have been removed Labels have been removed or defaced 	Staff, including Relevant Laboratory/Technical	Oversight
4.	Is any of the waste comprised of intact or broken glassware, sharps or chemical packaging? Yes. Proceed to Step 5 and ensure that any contaminated glassware is placed in a sturdy container with a plastic liner No. Proceed to Step 7	Staff, including Relevant Laboratory/Technical	
5.	Are any of these chemical wastes compatible? Yes. Proceed to Step 9 No. The waste includes classes of incompatible chemicals such as flammable liquids, toxic and corrosive substances. Proceed to Step 6.	Staff, including Relevant Laboratory/Technical (Overseen by Nominated Supervisor/Manager)	
6.	Continue to reference SDS, labels and reference materials to reduce the risks associated with dangerous reactions occurring during storage by separating these classes of chemicals. Proceed to Step 8.	Staff, including Relevant Laboratory/Technical (Overseen by Nominated Supervisor/Manager)	
7.	Segregate compatible materials for reuse and recycling purposes	Staff, including Relevant Laboratory/Technical	
8.	Ensure that waste containers have been labelled, with estimates of concentrations, where possible, and storage date. Proceed to Step 9.	Staff, including Relevant Laboratory/Technical	
9.	Send an email to laboratory staff and organisational areas to notify them of the bi-annual (six monthly), centrally funded, pick up of chemical waste for disposal	Manager Work Health and Safety or Delegate	
10.	Organisational units should work with local FM staff to transfer chemical waste to local School of Science storage areas and ensure that they comply with labelling requirements and safe work instructions.	Staff, including Relevant Laboratory/Technical	Stay Informed

Refer to Appendix D: Waste Classification and *Safety in Laboratories AS/NZS 2243.3 and 2243.4* and the [National Standard](#) (NOHSC: 1015 (2001), *Storage and Handling of Workplace Dangerous Goods*. Note: All clinical and biological wastes should be classified as contaminated and the collection of this waste is not addressed in this procedure.

17. Maintaining Legislation References

Hard copy or digital reference materials should be maintained by organisational areas, which include legislation, codes of practice and other information.

A list of relevant documents can be found in Appendix B.

18. Glossary of Terms

Term	Definition
ADG code	The Australian Dangerous Goods (ADG) Code
AICS	Australian Inventory of Chemical Substances
AS/NZS	Australian Standard/New Zealand Standard
Chemwatch	Proprietary software used to store safety data sheets about chemical hazards, print labels, conduct WHS risk assessments, maintain chemical registers and generate manifests to document volumes of ADG by Class. http://jr.chemwatch.net/chemwatch.web/account/login?ReturnUrl=%2fchemwatch.web%2f and email hr@acu.edu.au to request your location-specific organisational login details from the WHS team. Login details for students: Domain name: acu User name: Everyone 4 Password: Every19614
Dangerous Goods	Substances and articles that present immediate risks to life, health and/or property when transported or stored - classified into nine classes (1-9) as described in the Australian Dangerous Goods Code (ADG Code).
GHS	Globally-Harmonised System – developed by the United Nations to establish a uniform methodology for the classification and labelling of hazardous chemicals.
Hazardous Area	The area close to a source of flammable liquid where there is a high risk of ignition or explosion because of the presence of flammable vapours. The hazardous area can sometimes include an entire room.
Hazardous Chemical	Substances that present immediate and/or long-term risks to life, health and/or property when used - classified by the GHS.
NICNAS	National Industrial Chemical Notification & Assessment Scheme.
Safety Data Sheet (SDS)	A document published by the distributor or manufacturer to inform users about the risks associated with the use of a hazardous substance, previously called an MSDS (material safety data sheet).

19. Further Guidance

Any staff member who requires assistance in understanding this procedure should initially speak to their Nominated Supervisor who is responsible for the implementation and operation of these arrangements in their work area. Should further information or advice be required, staff should visit [Service Central](#).

Appendix A: Labelling Chemicals and Pipelines

All containers (big and small, including water) will be labelled with the contents. This includes samples for analysis and non-hazardous chemicals for research purposes.

The original, labelled container will be kept where practicable. Other containers include dropper bottles, reagent bottles, reaction vessels, wastes, and specimen jars.

Other labelling requirements:

- All products that have an expiry will be labelled with the date;
- Labels must be applied to pipelines (including gas lines);
- Labels will remain on all empty containers that have not been rinsed &/or purged of vapour; and.
- Labels will be removed or spray-painted from all cleaned, rinsed & purged containers.

Refer to AS 1345 Identification of the Contents of Pipes, Conduits and Ducts.

A sample label (with other optional information) is shown below.

Distilled Water
WT Demineralised Water Decanted on 25 February 2015, manufacturer's expiry date 17 April 2016 Manufacturer's warning: Not for use in therapeutic devices Manufacturer's warning: Not suitable for drinking

Labels describing content and GHS logos

All containers with hazardous chemicals should be labelled with the contents & GHS logos. This includes samples for analysis & hazardous chemicals for research purposes. Some older label systems will also be legal until 2017.

A sample (with other optional information) is shown below.

Isopropyl Alcohol
AnalaR Normapur Propan-2-ol Decanted on 25 February 2015 Batch number 12C130509 Specification guaranteed until March 2017 Re-order code 20842.298


Appendix B: Regulations Controlling Chemical Use

- There are regulations for Schedule 4 & Schedule 8 poisons & therapeutic goods, and radioactive substances.
- All substances must be listed on the Australian Inventory of Chemical Substances (AICS).
- The University must be registered with NICNAS if it introduces unlisted chemicals.
- Chemicals of security concern must be handled in accordance with the code of practice.
- There are controls on chemical weapons and precursor chemicals.
- Safeguards are required for certain radioactive substances (uranium & thorium).

Consult the relevant State legislation that applies to your campus and/or work or learning location

- *Occupational Health and Safety Regulations 2007* (VIC)
- *Drugs, Poisons and Controlled Substances 2006* (VIC)
- *Dangerous Goods (Storage and handling) Regulations 2012* (VIC)
- *Work Health and Safety Regulations 2011* (ACT/NSW/QLD)
- *Medicines, Poisons and Therapeutic Good Regulations 2008* (ACT)
- *Dangerous Substances (General) Regulations 2004* (ACT)
- *Poisons and Therapeutic Goods Regulations 2008* (NSW)
- *Health (Drugs and Poisons) Regulations 1996* (QLD)

Commonwealth Legislation

Standard for the Uniform Scheduling for Medicines & Poisons (SUSMP-Poisons Standard), a legislative instrument for the purposes of the *Legislative Instruments Act 2003*

Applicable standards/Codes of Practice

- AS 1894 The Storage and Handling of Non-Flammable Cryogenic and Refrigerated Liquids
- AS 1940 The Storage and Handling of Flammable and Combustible Liquids
- AS 2507 The Storage and Handling of Pesticides
- AS 2714 The Storage and Handling of Organic Peroxides
- AS 3780 The Storage and Handling of Corrosive Substances
- AS 4326 The Storage and Handling of Oxidising Agents
- AS 4332 The Storage and Handling of Gases in Cylinders
- AS/NZS 4452 The Storage and Handling of Toxic Substances
- AS/NZS 4681 The Storage and Handling of Class 9 Dangerous Goods
- AS/NZS 60079.10.1 Classification of Hazardous Areas-Explosive Gas Atmospheres
- AS/NZS 2243 Safety in Laboratories (series)
- AS 1345 Identification of the Contents of Pipes, Conduits and Ducts
- AS/NZS 2243 Safety in Laboratories (series)
- AS 1345 Identification of the Contents of Pipes, Conduits and Ducts
- AS/NZS 1596 The Storage And Handling of LP Gas
- National Code of Practice for Chemicals of Security Concern
- Managing Risks of Hazardous Chemicals in the Workplace Code of Practice
- Labelling of Workplace Hazardous Chemicals Code of Practice
- Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice
- Hazardous Substances (Code of Practice 24) (VIC)

Some Examples of Other Compliance Requirements

- Guide for the Notification of Dangerous Goods on Premises
- The Chemical Weapons Convention A Guide for Industry Producing, Using or Trading Chemicals
- NICNAS Handbook for Notifiers
- A list of safety equipment & protective equipment
- A chemical register for the site and associated safe work instructions, which is replicated online within *Chemwatch*
- Australian Dangerous Goods Code (ADG Code)
- Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Appendix C: Chemical Waste Disposal

Chemical waste is treated according to its physical and chemical properties therefore the segregation of waste products is crucial. The mixing of incompatible materials in waste streams can result in unwanted reactions, such as the production of toxic gases or explosions. It is the responsibility of the person performing the activity to include chemical waste disposal in risk assessments and produce procedures for disposal prior to conducting experimental work.

The safety data sheet (SDS) and labels must be consulted for appropriate disposal methods when conducting the risk assessment for any work that involves the use of chemicals.

The preferred method of chemical waste disposal is to use a licensed waste contractor (such as Toxfree Australia), which will be procured by a Laboratory Manager on behalf of ACU, to ensure that waste is disposed of in a safe and environmentally responsible way. In some instances, it may not be possible to dispose of the waste through waste contractors, as they may not have the relevant licence or treatment facilities. In this instance, the waste generator will investigate alternative methods of disposal. If it is not possible to dispose of appropriately, the activity should not be performed.

Waste must be properly labelled, stored in a suitable container, and housed appropriately prior to collection. Arrangements must be in place for waste to be collected regularly by the licensed waste contractor for appropriate off-site treatment. Some wastes need to be tracked to ensure proper disposal.

In some circumstances, chemical waste may be treated in-house, but only if the material(s) convert to a non-hazardous product. Approval from the local water authority is required before anything is disposed within a sewer. Under no circumstances should *hazardous waste* be allowed to enter drains. Dilution is not an acceptable alternative to appropriate disposal.

All chemical waste containers must be labelled with the contents (including estimates of concentration where possible) and the date of generation.

Appendix C: Waste classification

Some frequently generated waste streams are listed below:

Waste type	Description
Non-hazardous (No DG class) Waste tracking code D300 (salts)	Waste that has no dangerous goods class. For example, inorganic salts such as sodium sulphate and ammonium chloride.
Flammable Liquids (DG Class 3) Waste tracking code G110	Includes solvents such as acetone, ethanol and acetonitrile, mixtures and by-products from synthetic reactions. Sometimes, volatile solvents are mistakenly thought to be flammable. Refer to the SDS for verification.
Oxidising agents (DG Class 5.1) Hazardous waste	Includes nitrates such as ammonium nitrate and hypochlorites such as calcium hypochlorite.
Organic Peroxides (DG Class 5.2) Waste tracking code E100	Organic peroxides may be either solid or liquid. They are typically thermally unstable and likely to react dangerously with other substances.
Unidentified Chemicals Identify before disposal	Applies to research samples not easily-identifiable because of inadequate labelling, or other reasons.
Contaminated glassware or containers with trace amounts of DG Class 6.1 Waste tracking code N100	Must be sealed in plastic containers or pails.
Halogenated Solvents (DG Class 6.1) Waste tracking code G150	Generally, these have chloro-bromo or fluoro-atoms attached. Any contaminants must be identified on the label.
Toxic (DG Class 6.1) Hazardous waste	Includes acrylamide (code M260), ethidium bromide, phenol (code M150)/chloroform, cadmium (code D150) and mercury batteries (code D120), mercaptoethanol waste (code M260), solid paraformaldehyde and other toxic wastes.
Aqueous preserved samples (Ethanol/Formaldehyde) Hazardous waste if >24% ethanol Waste tracking code K100	Includes biological samples in ethanol, formaldehyde or similar biological fixative. Samples that are in ethanol (24% or higher) are classified as class 3 flammable liquids.
Corrosives (DG class 8) Solid or Liquid Hazardous waste Waste tracking codes B100 & C100	Includes acids and alkalis, which react violently when mixed and which are sufficiently volatile to give off vapour irritating to the eyes and nose. Acids and alkalis should be separated.
Laboratory waste miscellaneous Waste tracking code T100	Waste chemical substances from research and development or teaching activities, including those which are not identified and/or are new and whose effects on human health are not known
Aqueous waste contaminated with organics (DG Class 9) Waste tracking code J120	Describe all contaminants and their relative concentration

Appendix D: Guidance about Using Chemicals

Chemical storage

A storage location will be allocated for all chemicals, and all chemicals should be promptly returned to those locations after use. Bulk chemicals should always be housed in the chemical storeroom or cabinets for dangerous goods, such as corrosive cabinets or flammable liquids cabinets.

You should also keep incompatible materials away from each other, unless mixing is part of your work.

No food or drinks is permitted in areas that are used for keeping chemicals

Flammable liquids

Flammable liquids should never be stored in standard refrigerators due to the risk of explosions occurring. Ignition sources – such as electrical equipment, power points and light switches - should be removed from defined hazardous areas or special equipment should be used to reduce the explosion risks.

The requirements of hazard area zoning are detailed in AS/NZS 60079.10.1.

Classification of Hazardous Areas-Explosive Gas Atmospheres is required for more than 1 litre in an open container for continuous use, more than 5 litres for occasional use, more than 25 litres when decanting, or more than 100 litres in closed containers. The *hazardous area* near minor storage of flammable-liquids is 300 mm. The *hazardous area* that is near a flammable-liquids storage cabinet is 3 metres horizontally and 1 metre vertically. *Hazardous areas* need zoning drawings, special equipment, a verification dossier to prove compliance, and

Laboratory Gases

Affix chains to all gas cylinders and store outside, if feasible.

Refer to AS 4332 and AS/NZS 1596 for *The Storage and Handling of LP Gas* for LPG in cylinders.

Radioactive Substances

Comply with the radiation safety regulations if radioactive substances are used

Placarding, Site Manifest, Licensing, Notification & Additional Security

Gain the authorisation of the relevant State WHS regulator for the use of prohibited or restricted carcinogens

A site manifest is required for some dangerous goods (>500-10 000 kg/L) and WHS regulator notifications are required for some dangerous goods (>500-10 000 kg/L). Additional security is required for Schedule 4 and Schedule 8 poisons/therapeutic goods, chemicals of security concern, chemical weapons and/or precursors.

Appendix E: WHS Risk Assessments and the Development of Treatments

Considerations:

- Identify whether any safer processes or substances can be used;
- Consider options for the safe movement and disposal of hazardous chemicals;
- Assess whether chemicals that could become unstable in storage should be recycled or disposed of;
- Consider how staff members or students interact with hazardous chemicals;
- Consult the relevant SDS and label for safety information and recommended controls;
- Ensure decanted substances have a label attached to the container (available via *Chemwatch*), unless the container is thoroughly cleaned, immediately after use;
- Consider the likely shelf life of a product and schedule regular inspections of chemical inventories to ensure that all chemicals are stable;
- Consider whether Personal Protective Equipment (PPE) or special fire-fighting equipment is needed;
- Identify whether any reactive chemical hazards are present and/or incompatibilities;
- Assess which, if any, chemicals are flammable and provide safe storage options, such as flammables cabinets;
- Assessing whether hazardous areas are appropriately protected from hazards such as ignition sources; and
- Determine the types of spill-control equipment that is needed.

Consult the Hierarchy of Risk Control when Developing Treatments

