NOTICE

RSC's ANNUAL CLEAN-UP

Monday 13th until Friday 17th November 2023

A thorough clean-up of all laboratories, instrument rooms, service areas, workshops, storage areas, offices, kitchenettes and communal areas must be carried out across buildings 136, 137 and 138. Each team or research group is required to cease all experimental work from Monday 13th November to carry out the clean-up. Communal areas (kitchenettes, shared office spaces, meeting rooms eg) will be assigned to groups.

All tasks listed below must be completed by all areas, where relevant.

Please refer to the relevant static RA for the annual clean up process (Figtree Task Assessment) as there have been a number of minor incidents during past clean up events. In the event of a chemical spill, RSC will follow the chemical spill response procedure in the RSC Emergency Response Plan (access *via* the <u>RSC WHS Noticeboard</u> under section "RSC Emergency Response"), including the current Designated First Aid Officers (listed under the ECO for each building).

CLEAN-UP (13th – 17th November)

All work shall cease until the essential tasks have been addressed appropriately in each area. Group members shall check with their academic group leaders or Team Leaders, whether the condition of their workplace meets the below requirements before any work can be resume (not necessarily at the end of the week; can be earlier). Academic Group Leaders shall inspect the lab, office and communal areas before allowing any work to be resumed. A range of inspection items required by <u>ANU's WHS</u> <u>Management System Handbook (chapter 4.1)</u> have been incorporated in the below clean-up inspection checklist.

This Checklist must be signed off by the Group/Team Leader responsible for the area/s scanned and emailed back to the RSC Safety, <u>rsc.safety-officer@anu.edu.au</u> by COB on Monday 20th November. Please also add a new "RSC Clean Up sticker" to the door hazard sign (entrances) to Facilities. Available from RSC Safety or Building Operations.

For any assistance, please contact:

- rsc.facilities@anu.edu.au (Building Operations)
- <u>rsc.admin@anu.edu.au</u> (Asset Management and other)
- Michael.Hill@anu.edu.au (Workshop / equipment repair)
- <u>rsc.safety-officer@anu.edu.au</u> (Limited availability for safety matters)

RCD Testing Building 137 (13th – 17th November)

Please be aware that RCD testing will be carried out from 7-11am each day during clean up week. This means that one electrical circuit after the other will be tripped and reset, i.e. there will be **brief periods of sudden power disruption at the sockets** (general purpose outlets, GPOs).

RSC B137 RCD Testing						
DB Number	Wing	Level	RCD	Time	Time	
Monday 13th Novenber						
DB1	North	1	116	180	7:00	
EDB1	North	1	34	30	10:00	
DB2-1A	North	2	6	30	10:30	
				Finish	11:00	
	Τι	iesday 14th	Novembe	er		
DB3-1	North	3	72	90	7:00	
EDB3	North	3	21	30	8:30	
DB3 North	North	3	52	60	9:00	
DB3.1A	North	3	7	30	10:00	
Lab-DB5	South	1	21	30	10:30	
				Finish	11:00	
	We	dnesday 15	th Novem	ber		
Lab DB4	South	1	15	30	7:00	
Lab DB3	South	1	27	30	7:30	
Lab DB2	South	1	31	30	8:00	
Lab DB1	South	1	15	30	8:30	
EX-DB1	South	1	10	30	9:00	
DB1-2 Lights	South	1	38	30	9:30	
ED1-1 Power	South	1	53	60	10:00	
	Finish 11:0			11:00		
	Th	ursday 16t	h Novembe	er		
EDB2-1	South	2	18	30	7:00	
DB2-3	South	2	55	60	7:30	
DB2	South	2	86	120	8:30	
DB2-2	South	2	16	30	10:30	
				Finish	11:00	
Friday 17th November						
DB2-3A	South	2	8	30	7:00	
EDB3-1	South	3	20	30	7:30	
DB3-3	South	3	52	60	8:00	
DB3- Chassis 1	South	3	50	60	9:00	
DB3- Chassis 2	South	3	32	60	10:00	
DB3-3A	South	3	5	30	10:30	
				Finish	11:00	



Map of the drop off points for the week of "RSC Clean Up week"

For all clean-up activity, please remember that a high volume of hazards such as hazardous chemicals, sharps, dust etc. will be encountered. Ensure that all standard laboratory principles are applied, including suitable PPE such as lab coats, safety glasses, gloves, and solid footwear. PPE such as lab coats, safety glasses, disposable gloves, cut-resistant gloves, and dust masks is available at RSC stores.

(A)	(A) Tasks to be completed by all research groups / areas where relevant					
Gro	up Leader (GL):		Labs/offices checked (list all that have been checked):			
		Task		Comments	Checked by GL (Initials)	
1	ELECTRICAL EQU	JIPMENT				
	 a) Electrical eq equipment, and examine necessary ac b) Check the te team has tes c) Equipment v and either s to be used. [d) Only the real allowed for p 	uipment and other general items (both RSC and personal items) mu ed for faults (cracks, heat damage ction taken for repair/disposal. esting tags on a few items – does sted and tagged in your area? And with "Do not use" or "danger" tag ubmitted for repair or disposed o d heavy-duty heat guns with tem use in experimental areas.	both office and laboratory ist be thoroughly cleaned , exposed wires), and the it appear that the testing within date? gs must not be used at all f. Travel adapters are not			
2	BUILDING INFRA	STRUCTURE				
	a) Please repor laboratory a ticketing sys Operations t	rt faulty switches, power points, li and office fittings in need of mai stem (<u>https://servicedesk.anu.edu</u> to action.	ght fittings and any other ntenance using the SHM .au/sp). For RSC Building			
3	EMERGENCIES A	ND EGRESS				
	 a) Remove all b) All corridors and must no c) All doors, fir emergency l Sprinkler he d) Fire extingu visible, and a e) Floors are e protected. [f) Hand washing 	superfluous materials from floors (wet & dry) and passageways are of be obstructed or have trip hazar rst aid equipment, and emergency buttons, etc.) must be clearly visi ads are exposed (i.e. not obstructe ishers: correct type for work in the accessible even and free from slip/trip hazaro ng facility is generally clean and tio	s, desks, lab benches etc. emergency exit pathways ds in them. systems (safety showers, ble and freely accessible. ed) e area, signposted, clearly ds. Openings in floors are			
4	FUME CUPBOAR	RDS (FCs) AND LAMINAR FLOW CAE	BINETS (LFCs)			
	 a) It is a complete thoroughly annual clean underneath ensure any removed fron have sharp ensure and specific man c) All FCs/LFCs d) FCs are not an annual clean and thoroughly and the sharp endotes and the specific man annual clean and the specific man annual clean annual clea	iance requirement that all fume c at least once a year, so this mus n-up and includes all surfaces, fume cupboard base plates. Rer material (foil, pipette tips, septa) on sinks inside the fume cupboard. edges. It is recommended you use h stops are in place and only ren pipulations within the FC require th are clean and tidy.	upboards are cleaned out t be done as part of the sinks, sashes, and area nove the base plate and that could block sinks is Careful: Older base plates cut-proof gloves noved temporarily where is			

	e) Following cleaning of fume cupboards, GLs to sign and attach RSC Clean Up Week Sticker (available from Technical Services)				
5	WASTE				
	 a) Arrangements must be made for the disposal of all waste. Waste for disposal must be appropriately labelled (including DGC – use Chemwatch to generate labels). Open or broken containers will not be accepted for disposal – all chemical material must be fully contained. b) Ensure all waste containers (including those remaining in labs) are appropriately labelled (sharps, flammable/halogenated liquids, glass waste, silica waste, aqueous waste, biohazards etc.) c) Bio-hazard waste bins and bags are available (if required). 				
6	CHEMICAL STORAGE				
	 a) Keep chemicals outside chemical storage cabinets to an absolute minimum. Benches must not be used for chemical storage. b) Keep a particular eye on solvent loads. Stockpiling of solvents to avoid more frequent trips to the stores is not permitted. c) Cabinets underneath sinks are not suitable for chemical storage, including washing acetone/ethanol. d) Ensure all chemicals are appropriately bunded to avoid the spread of chemical spills in the event of primary container breakage. Bunding for cabinets is available from RSC Safety if required. e) Check all chemical storage areas to ensure incompatible dangerous goods classes (DGCs) are segregated. Mark storage trays (bunds) with the DGC that it's for (preferably using a coloured DGC sticker/label). f) Several oxidising cabinets were distributed in 2019/2020. Please maximise their use to keep oxidisers separate from other chemicals. g) Nitric acid (oxidising acid) must be segregated and stored away from all other chemicals. Several corrosive cabinets for nitric acid storage have been distributed in the RSC on each level. h) All experimental areas are free of food and drink. i) Chemicals should not be kept on floors. Where this is not avoidable due to, e.g., equipment configuration (such as HPLC waste), all such chemicals must be bunded and labelled correctly. j) Ensure chemical cabinets are clean, tidy, and serviceable. k) Ensure chemicals are stored under appropriate conditions (e.g. refrigerated where needed, or ventilated, away from sunlight etc.) i) All shelves, cupboards, and drawers must be cleaned thoroughly. 				
7	GENERAL STORAGE				
	 a) Heavy items stored below shoulder level. b) Items are stored in a way that doesn't allow them to easily fall/break c) Cardboard boxes are inappropriate for storage of chemicals – replace with plastic containers/boxes d) Cardboard boxes shouldn't be used for storage in a laboratory environment. 				
8	BENCHTOP OVENS FOR DRYING GLASSWARE				
	 a) Ensure a catch tray at the bottom is in place – do not use without such tray (unplug and mark "out of operation" until base tray is in place). b) These ovens are not intrinsically safe – ensure that all flammable materials are kept away from it. Glassware with solvent residues must not be put inside or on top of the ovens. c) Only inert solids such as silica, alumina, KBr, molecular sieves etc. are allowed in these ovens and must be clearly labelled. 				
9	SAFETY DATA SHEETS (SDS)				
	a) All hazardous chemicals require an up-to-date vendor/manufacturer SDS (<5 years old). These must be recorded in ChemWatch.				

	b) If you hold chemicals that are not yet on ChemWatch, initiate the process of having them uploaded. See <u>RSC's ChemWatch Guide</u> for details.	
10	MERCURY VACUUM GAUGES	
	 a) Mercury vacuum gauges have been phased out at RSC. If you still have one or more in your area, please ensure residual mercury is contained fully (i.e. cap the outlet at the back) and prepare for disposal (double-bag). b) If your group intends to keep using them, please complete a static RA for its use first and notify <u>rsc.safety-officer@anu.edu.au</u> and <u>rsc.trainingofficer@anu.edu.au</u> once the RA is finished. 	
11	SINKS AND DRAINS	
	 a) Ensure you minimise potential for ANY hazardous material (including flammable liquids) going down drains. Keep hazardous chemicals away from sinks. b) Containers for rinsing acetone must be housed in bunding, same as base baths and acid baths. c) Ensure bunding is free of cracks/holes: replace if you notice damage. d) HAZARDOUS CHEMCIALS MUST NOT BE RELEASED INTO DRAINS. Oils, pipette tips, sample vials, lids etc. destroy the pH dosing system – prevent those from entering drains. Non-hazardous (!) aqueous solutions must be at pH 6-8 before released into drains. If in any doubt about composition of such aqueous solutions dispose via PSC chemical 	
	waste stream instead. Heavy fines and maintenance costs can occur.	
12	 REFRIDGERATORS/FREEZERS (ALL EXPERIMENTAL AREAS) a) Refrigerators/freezers must be cleaned out and defrosted. b) External signage with contact details and hazard information must be reviewed and updated where needed (template available from the WHS Noticeboard). c) All chemicals stored in fridges and freezers must be labelled appropriately. d) Chemicals that have exceeded their typical shelf life are to be disposed of. e) Non-intrinsically safe fridges/freezers are labelled "Not intrinsically safe - no storage of flammable materials. No food or drinks to be stored". Check their contents and ensure no flammable materials are contained within. f) All intrinsically safe fridges/freezers labelled "Intrinsically safe chemical fridge/freezer. No food or drinks to be stored". NOTE: Any fridge with internal thermostat is NOT intrinsically safe. NOTE: It is critical that the cooling cycle for chemicals is not interrupted as this may increase risk of adverse reactions such as autoxidation or spontaneous polymerisation. Therefore, keep chemicals cool at all times (decant into another fridge/freezer, or use ice where appropriate). Don't allow chemicals to sit at room temperature for extended periods of time. 	
13	MANUAL HANDLING AND WORKSTATIONS	
14	 a) Are workstations set up ergonomically to suit prolonged lab/workshop use, e.g., chairs height-adjustable/the appropriate height and free of damage? b) Are carrying devices effective, safe, and functional? c) Wire carriers are no longer used for chemical transport (please dispose). Use non-perforated rubber carriers. d) Trollies used for transporting chemicals have bunding on them so spills can't spread and run onto the floor. 	
14	a) Clean surplus glassware is thoroughly cleaned and made available to	
1	other groups (consider teaching or research groups that have only been	

	established recently). Glassware can be made available on the "free to good home" drop off/collection zone (only during clean up week), near Store and the dock (please note, unclaimed glassware will be disposed
	 b) Use red, labelled buckets for broken glass waste. c) Excess glassware that is unwanted should be disposed of in broken glass waste.
15	CHEMICAL/BIOLOGICAL CONTAINERS AND LABELLING
	 a) Examine all chemicals/biological materials to decide what is kept, relocated, combined, re-bottled, or disposed of
16	SIGNAGE
	a) Update/review all emergency contact details (New Templates in 2023, available on the WHS Noticeboard):
	 i. Emergency contact details on fridges/freezers; ii. Details/user lists outside laboratory doors (see sketches of the lab in the document holders just outside the labs); iii. Emergency contacts and hazard details outside high-hazard labs/areas.
	Templates for all three signage types are on RSC WHS Noticeboard under "Templates": <u>http://chemistry.anu.edu.au/whs-safety-noticeboard</u>
	 b) Check other signage in the area – still relevant and current, suitable for the hazards in the area? Free of damage and readable? c) Remove old COVID related signage. d) Are reactions and equipment containing hazardous chemicals labelled (e.g. HPLC feed and waste bottles, risk assessments displayed for reactions left on over-night or running in reaction chambers such as the UV chamber or in microwaves, pressure lab, furnaces etc.)
17	PERSONAL PROTECTIVE EQUIPMENT (PPE)
	 a) Review holdings of lab coats: Dispose of the ones that are not usable anymore, return all usable, washed lab coats that you don't need for the number of people in your area to the RSC Stores. b) Inspect all other PPE in your area. Dispose of/replace anything that's damaged or no longer suitable for use (gloves, safety glasses, shields, hearing protection, laser glasses, etc.) and arrange replacement if needed. c) Ensure PPE fits well (talk to your supervisor if you have questions) d) Is hearing protection available for areas where noise is above nuisance level? Supervisors to arrange if hearing protection is needed. e) Noise levels above 85 dB must be assessed. Leave comments and talk
	to supervisor and WHS Manager if this may be the case.

18	FLAMMABLE CABINETS				
	 a) Check the runners on flammable liquid cabinets. Ensure the cabinets open all the way. Talk to the Facilities team if that's not the case. In some cases, the bearing balls could have moved out of alignment, which can be reset by opening the shelves with a bit of force a few times (while empty of chemicals). b) Make sure that all group members are aware that these cabinets are to be opened fully at each use (i.e. not only half way, enough to just get the bottle out). Otherwise misalignment of the ball bearings can occur and over time lead to the runners seizing up. 				
19	UV AND LASER				
	 a) All laser setups have a completed RA and SWP signed off by the supervisor. The RA number is indicated on the laser setup. b) Appropriate warning signs and emergency contact details are displayed on the doors. c) Laser gaggles are free of damage damaged gaggles are remeved and 				
	replaced.				
	d) Is adequate shielding provided? (e.g. interlocks, protective shields, beam stops).				
	e) All hand-held UV lights for TLC viewing are located within viewing chambers/housing.				
	 f) Appropriate warning labels on all laser and UV sources. g) Access to laser labs is restricted and controlled. 				
20	COMPRESSED GASES				
	 a) Any gas cylinders not actively being used are to be relocated to dedicated gas storage areas. b) Fume cupboards and gas cabinets are not meant for storage of gases that are not in use. c) Gas cylinders in labs, particularly outside of fume cupboards, must be avoided wherever possible. The dedicated gas cabinets must be used instead. d) Where gas cylinder in labs cannot be avoided for some reason, volumes must be kept to a minimum, particularly for flammable, corrosive and toxic gases (e.g. use small enough cylinder to fit inside a fume cupboard). e) All gas cylinders must be restrained (secured to wall, trolley or bench). G clamps with chain/rope are not appropriate. f) Empty gas cylinders have been removed from lab areas for return/disposal. Full and empty cylinder are not mixed up. 				
21	RISK ASSESSMENTS (RAs), SAFE WORK PROCEDURES (SWPs)				
	 Approval of Static RAs Figtree Are all Risk Assessments related to your groups activities approved in Figtree? The relevant supervisor will have to review their RAs and approve them (in Figtree). Guidance that steps supervisors through the approval process can be found here. Please use this as an opportunity to review all RAs to ensure they are still accurate and reflect the actual processes that are covered by the RAs. Notifications will come through in an order triaged to prioritise those RAs that are due or overdue for review (required every 2 years for RAs with a residual risk rating of "medium"). 2. Ensuring all new static RSs are written directly in Figtree. We have put together this user guide on how this is done. Any questions with the new Task Assessment process can be directed to rsc.safety- officer@anu.edu.au Group leaders are to ensure that RAs for equipment/processes under their control are reviewed in line with the handbook. Examples are:				

	Solvent distillations	
	 Experiments using pressure equipment (hydrothermal, pressure reactor) 	
	 Equipment emitting hazardous radiation (UV, X-Ray, laser, microwave) 	
	Centrifuges	
	• Gas usage (e.g. CO)	
	Autoclaves	
	 Processes involving open flames 	
	Mechanical equipment/machinery such as presses, lathes, or mills	
	Biological processes	
	Lasers and laser facilities	
	Please discuss this with your group/team members and consider it when reviewing your equipment and processes.	
	Equipment requiring a RA should have the static RA number/Task Assessment Key number displayed at the equipment or have a lab register/list of all the static RA numbers listed posted in a clearly visible location in the lab (Templates for both can be found on the WHS Noticeboard, RA sticker template <u>here</u> ; RA lab register <u>here</u>)	
23	SHARPS	
	a) Ensure sharps are stored safely (not exposed).	
	b) Scalpel blades are prohibited in the RSC. Please search your areas and	
	dispose of any scalpel blades in the appropriate yellow sharps	
	containers. Retractable knives are available from the RSC store.	

CHANGED WASTE DISPOSAL TIMES during Clean up Week

To account for the increased load of chemical waste that is expected, the following arrangement will be in place for waste disposal through the clean-up week:

- Monday 13th November, 15:00 16:00
- Tuesday, 14th November, 15:00 16:00
- Wednesday, 15th November, 15:00 15:45
- Friday, 17th November, 14:30 15:00

All waste must be fully contained (i.e. no broken or leaking containers, no exposed chemicals), and clearly labelled. Aqueous waste must indicate the pH on the label.

LABELLING OF CHEMICALS

All new chemicals arriving at the RSC must have GHS compliant labelling. Chemicals we are currently holding must have either GHS compliant labels (a lot of them already do since they have been bought within the last 3-4 years) or meet the minimum requirements outlined in the Code of Practice for "Labelling of Workplace Hazardous Chemicals". Those requirements are:

- Written in English;
- Product identifier (including all ingredients if it is not a neat chemical), i.e. IUPAC name, CAS name, or technical name;
- Hazard pictogram (GHS or ADG; not the old European pictograms) or hazard statements consistent with the classification of the chemical;

If you find chemicals without a label, either dispose of them as unknown solid/liquid or analyse the material and then re-label the containers with full labels (use ChemWatch to easily populate labels with H/P statements etc.). Do not affix labels based on assumptions.

If you find chemicals with a printed label that is not GHS compliant but is in English and shows the product identifier and the manufacturer, affix the correct Dangerous Goods Class (DGC) diamond sticker(s) to the container (check current SDS unless you are certain about the DGC). Wipe the container prior to affixing the DGC sticker since dust and grease will result in the label coming off easily. Stickers can be retrieved from the front reception. Please do not take huge amounts and then have them lying around in the lab not being used as we will not have enough across the RSC for all labs to do this.

Examples of GHS pictograms:

Examples of DGC pictograms:





If you find chemicals with badly worn labels that are hard to read, replace them with a full label (ChemWatch). A label printer to print labels individually is located near the printer on L1 in building 138.

NOTE: Minimum labelling requirements are only sufficient as long as (*i*) the chemicals do not leave the RSC, and (*ii*) all workers handling the chemicals are aware of the associated hazards (i.e. have done a thorough risk assessment). Under other circumstances, the full label is required (i.e., in addition to the above: hazard and precautionary statements; Australian business name, address and telephone number of the manufacturer/importer; first aid; emergency procedures). So if you receive chemicals from outside the RSC, they must be labelled to GHS compliance, and if a chemical is transferred to another budget unit (school), then you have to ensure that a GHS compliant label is affixed. Non-hazardous substances also have to be labelled, either with the commercial label or a ChemWatch label, or with a "Non-hazardous chemical" sticker that states what is in the container, a date, and the user.

INSPECTIONS

Building inspections will be held over: 20th November – 8th December 2023.

Inspections of all areas (offices, service areas, workshops, biochem and chem labs) will be done using ANU prescribed templates for <u>low-risk</u> (offices) and <u>high-risk</u> (workshops, experimental) area inspections once supervisors have signed off on their areas. The full ANU inspection checklist can be accessed *via* the <u>ANU WHS Management System Handbook</u>.

STOCKTAKE OF CHEMICALS

It is anticipated that a RSC School Wide stocktake of the chemical inventory will begin in early 2024.