Procedure: Photographic laboratory safety

Purpose

To set out the procedure for safety in photographic laboratories at ANU.

Procedure

Introduction

1. This procedure has been developed by The Australian National University (ANU) to facilitate efficient photographic laboratory operations that are safe and minimised the risks to people and the environment.

Responsibilities

Director or Delegated representative:

2. Director or nominee has the following responsibilities under this procedure:
   - providing, and maintaining appropriate facilities and resources to ensure a safe and healthy work environment
   - establish working arrangements, particularly in relation to ‘working alone’; and
   - providing proper resources as needed to ensure safe working practices.

Supervisor

3. Supervisor responsibilities includes:
   - ensure that all necessary training and supervision is provided to staff, students or visitors working with chemicals and in photography areas
   - conduct a risk assessment when working with dangerous or hazardous chemicals
   - document all proposed work
   - maintain working arrangements for darkrooms, photographic laboratories and work alone
   - to maintain and operate the photographic laboratories in compliance with this procedure and legislative requirements
• encouraging the use of personal protective equipment when needed; and
• ensuring a safe system of work implemented for the storage and handling of all chemicals.

Staff, Students and Visitors

4. Staff, student and visitor in photographic laboratories have a general duty of care to work in a way that minimise risk to themselves or any other person. This includes:

• undertaking photographic operations in compliance with the established practice of the relevant area
• undertaking photographic operations in compliance with these procedure
• using suitable facilities and resources to ensure a safe and healthy work environment; and
• reporting any incident or potentially hazardous situation through the University notification system.

Types of laboratories and design

Wet photographic laboratories

5. Chemical (wet) photography processing requires manipulation of photographic film, papers and chemicals in a light sensitive environment.

6. Regular laboratory inspections should be conducted to identify hazards. Detailed information on laboratories inspections are outlined on University’s OHS webpage.

7. Some hazards identified while working in wet photographic laboratories are:

• **Weighty containers** (like heavy liquid developers, etc.) must be stored on sturdy, easily accessible shelves, preferably at waist height to reduce chemical spillage, splashes and manual handling risks.

  See: [Chemical Management procedure](#) for storage, labelling and handling requirements for chemicals.

• **Waste Disposal**: The recommended method for disposal of photographic chemicals is pre– treatment on site then with some water– based chemicals, dilution and discharge to sewer. Pre–treatment requires:

  • recovery of silver from all fixing and bleaching operations; and
  • pH balancing, where necessary to a pH of between 6 – 9.
See: ANU Hazardous waste disposal procedure for chemical waste disposal management.

- **Movement in dark (dark rooms):** Laboratory floors and aisles should be kept clear of unwanted material and obstructions to reduce the occurrences of slips, trips, falls and impacts.

- **Working alone (isolation):** Working alone increases risk of delayed assistance in the event of an emergency e.g. medical aid. People working alone in photographic laboratories must follow local arrangements have approval by their supervisor.

- **Ventilation:** Photographic processing may result in the production of chemical fumes, high humidity from processing solutions and wash baths, and heat from lighting and equipment. Ventilation of photographic laboratory operations is needed to remove contaminates and maintain an acceptable working environment. Extraction of the contaminated air and introduction of clean and fresh air into the processing rooms is required.

- **Silver Recovery:** Silver should be recovered from fixing solutions and bleaches prior to disposal to sewer. Silver is commonly recovered by electrolysis and recycled. All fixer and bleach solutions should be transported to a University facility for silver recovery and disposal.

**Digital photographic work areas**

8. The process of digitizing an image, manipulating it and converting the digitized image to print, slide or other media. Digital printers produce the hardcopy image.

9. Some hazards of working in digital photographic work areas are:
   - electricity
   - bright lighting
   - computer use/ Overuse Syndrome
   - printer inks
   - UV curing of inks
   - Empty printing ink cartridges should be recycled. Contact ANU green for more information.

**Photographic Laboratory Design**

10. Since the needs of photographers and other are diverse, a photographic
laboratory or darkroom should be designed with the assistance of experienced staff and the Work Environment Group. Special consideration should be given to:

- ventilation
- storage
- waste disposal
- fire safety and emergency requirements; and
- digital photographic work areas should be set up according to operators need to reduce the overuse injuries. Contact local area OSLOs for more information on work station assessments.

Contact OHS Branch for advice on laboratories requirements.

Training

- All persons working in a photographic laboratory should have appropriate training in the technical and occupational health and safety aspect of their work.
- In particular, they shall be made familiar with work practices of the particular laboratory, and relevant Safety Data Sheets (SDS) of chemicals.

See: ANU Safety courses and Chemical Management Procedure

Emergency procedure

11. This part covers:

- chemical Spill
- fire/ Explosion; and
- first Aid.

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| Chemical Spill      | Follow the procedures in Chemical Management Procedure.  
                      | Note: Any serious injury to a person should be treated immediately. |
| Fire/ Explosion     | Follow the procedures in ANU emergency procedures. |
First Aid needed

Follow the procedure as outlined in Safety Data Sheet for the chemicals. Additional first aid requirement can be found in University's First Aid, Provision for services.

Note: Every budget unit should have a first aid attendant to deal with an emergency situation.

Security arrangements

12. Photographic (wet) laboratories are considered hazardous locations under the University's procedure for the control of access to hazardous and restricted locations. Only authorised person should have access to a photographic laboratory.

Note: Trade personnel or visitors must be accompanied by an authorised person except for emergency services personnel in an emergency situation.

Incident notification

13. All incidents or hazardous situations must be reported using the University's Online Incident Notification system. The reporting of incidents, accidents, significant exposures and dangerous occurrences assists the university community in avoiding repeated incidents.