

**HEALTH, SAFETY AND WELLBEING - HAZARD ALERT**

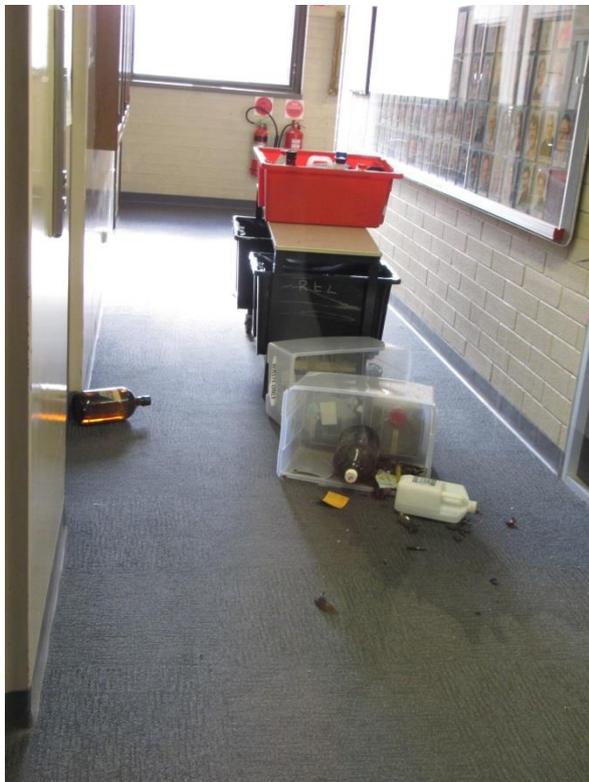
**17 June, 2015**

**TO ALL STAFF AND STUDENTS USING TROLLEYS TO TRANSPORT CHEMICALS**

**1. Summary of the incident**

At approximately 1:00pm on 10<sup>th</sup> June 2015, a worker was transporting a large quantity of chemicals on a trolley. The load was correctly segregated and banded, however the trolley was overloaded. The trolley was being pushed along a soft carpeted surface, and this additional drag on the castors levered them from the trolley's legs, causing the front of the trolley to hit the ground. The jolt dislodged the load and caused two bottles of ammonia to smash on the ground, resulting in a partial evacuation of the building and a clean-up by the MFS.

While no-one was injured in this particular incident, the outcome could have been quite different if the accident had involved incompatible chemicals, fragile or valuable plant, an ignition source or any number of other factors.



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## 2. Contributing factors

- The trolley was very heavily laden but had no defined load rating to guide the operator.
- The trolley was being pushed along a soft (carpet) surface which allowed the castors to dig in slightly, thus increasing the rearward horizontal force on the castors.
- The trolley was an older design where the castors were only held into the steel frame with shallow plastic plugs.
- The bund containers were sitting loosely on flat shelves with nothing to restrain the load.

## 3. Recommended actions to mitigate the risk of a recurrence

Older-style trolleys like the one in the incident are still used around the University and are not ideally suited for transporting chemicals. A number of designs are now available which are much better suited for this task, for example:



We recommend the following actions:

- Consider current and projected usage of trolleys and the terrain they need to traverse.
- Inspect trolleys in your area and decide if they are still appropriate for use. Consider replacing older-style trolleys if you have any doubts about their suitability.
- If you decide to replace your trolley we recommend sourcing purpose-built trolleys which have:
  - A solid, secure construction.
  - A load rating suitable for the task and displayed on the trolley.
  - Large wheels with a firm rubberised surface, precision bearings and bearing-supported swivel casters securely connected to the frame (large wheels are better on soft or uneven surfaces).
  - Bunding containers incorporated into the design of the trolley.

## 4. Tips on transporting via trolley

- Take care when traversing soft or uneven surfaces;
- Trolleys should be stable under load and have wheels large enough to negotiate uneven surfaces (such as expansion joints and floor drain depressions) without tipping or stopping suddenly;
- Bottles should not be placed near the edge of the trolley;
- Bottles should not be touching each other or other glassware during transport;
- Caution must be observed when rolling the trolley over door sills or other possible obstructions; and
- Incompatible chemicals should not be transported on the same trolley.

More information on chemical transport is available in the Chemical Safety Management Handbook Chapter <http://www.adelaide.edu.au/policies/3049/?dsn=policy.document;field=data;id=5197;m=view>

If you require any further guidance, please contact your [HSW Faculty Manager](#).

Gerald Butfield  
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 HUMAN RESOURCES BRANCH

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