ENVIRONMENTAL HEALTH AND SAFETY
THE UNIVERSITY OF UTAH

Lessons Learned

Chemical Spill in HEB

What Happened:
On Wednesday October 27, 2021 a lab worker was doing routine chemical preparation for chemical experiments in the Henry Eyring Building when there was a spill of 6 molar (M) Hydrochloric Acid (HCl). The lab worker was pouring a 6L volumetric flask of 6M HCl into a secondary container, the volumetric flask slipped from their gloved hands, causing the heavier bottom end to drop and shatter on the side of the lab bench. This resulted in the release of 6M HCl on the floor and injuring the worker's finger with the broken glass. Below are some of the factors that contributed to the incident:

- A large volumetric flask (Figure 1) was used to mix the chemical.
- The liquid was added to another container on a benchtop while using a small venting device.
- The flask and glove were slightly saturated taking away needed friction for holding the flask properly.

What Went Right:

- Proper PPE was used during the incident.
- Bicarb soda was easy to access and used immediately on the spill.
- Lab worker removed all contaminated items.
- Fume hoods were opened immediately for venting.
- Lab worker called their supervisor and got out of the lab space.
- First aid kit was available and easily accessible.
- Lab worker quickly cleaned their cut hand.

Lessoned Learned:
This incident highlighted the importance of using safety measures when working with large volumetric flasks to prepare chemical solutions. Using these large containers creates a potential spill hazard that may lead to injuries. Lessons learned from the incident include:

- Using smaller volumetric flasks can help the worker have a better grip of the flask and avoid slip and breakage of the flask.
- Completing the procedure inside a chemical fume hood can reduce the potential for any chemical fumes.
- Using an absorbent pad would mitigate any leakage or saturation on the outside of the flask.

Preparing for spills in your area:
Review the general Chemical Spill Clean-up Procedures. https://oehs.utah.edu/resources/chemical-spill-clean-up-procedures

Reference your lab's Chemical Hygiene Plan and SOPs for specific spill clean-up information for the materials used in your lab.

Reporting:
Report any incidents and/or near-misses to EHS so lessons learned can be generated and shared. https://oehs.utah.edu/incidentnear-miss-report

Report injuries using the appropriate form below

Employee form: https://www.hr.utah.edu/forms/lib/E1.pdf

Student (i.e. in a class, not part of a paid position) form: https://riskmanagement.utah.edu/intranet/insurance/incident-accident-info.php