1.0 OBJECTIVE

This document provides guidelines on how spills and accidental releases arising from handling, transportation and storage of chemicals are to be handled.

2.0 SCOPE

This guideline applies to laboratories and facilities under the purview of NUS that are engaged in the use, storage, transportation and delivery of chemical materials and supplies.

3.0 RESPONSIBILITIES

3.1 Principal Investigator

The PI is responsible for:

a. Assessing the incident and the course of action required to control the incident effectively.

b. Ensuring that an incident report is submitted to the relevant parties such as Head of Department, Deanry or OSHE.

c. Implementing any corrective measures as stipulated by the Head of Department, Deanry or OSHE.

3.2 Deanery

The Deanery is responsible for establishing procedures for:

a. Reporting incidents of chemical spillage to the OSHE.

b. Inform other faculty staff if the incident is not confined within the laboratory.

c. Assess the incident report to determine the effectiveness of response and remedial measures by the PI.

d. Communicate lessons learnt to other departmental staff.

4.0 DEFINITIONS

Chemical incident: Any spillage or incidents occurring due to chemicals.

SCDF/ HazMat: Singapore Civil Defense Force’s HazMat wing

MOM: Ministry of Manpower

NEA: National Environmental Agency
5.0 PROCEDURES

5.1 Response Plan

Every faculty / department must develop a response and mitigation plan to respond to chemical spills/releases. The emergency plans should contain the following elements:

a. How to contain the chemical spill/ release, including using the appropriate absorbent material for liquids and ventilation methods for vapours.

b. The type of response in relation to the spill (please refer to the flowchart)

c. Activation of emergency response team, if available.

d. Wearing of appropriate PPE

e. How to give first aid for injuries resulting from exposure to chemicals.

f. Signage to warn others of the hazards.

g. Notification to other departmental staff, faculty safety & health officer, OSHE and external agencies, if necessary.

h. Evacuation procedures.

i. Reporting and investigation procedures

j. Storage and disposal of absorbents and other materials used in the spill.

5.2 Spill Response Kit

To effectively contain any spilled chemicals, each laboratory should purchase and maintain suitable spill kits. The contents of the spill kit should, contain, at minimal the following:

a. Appropriate absorbent to soak up the chemical

b. Appropriate Personal Protective Equipment such as gloves, boots, face shield, etc.

c. Waste disposal bags

d. Signage and labels

e. Thongs to put up sharps such as glass pieces
5.3 Flow chart for Chemical Spill Response

If any Chemical Spill occurs inform PI or Faculty Safety & Health Office or coordinator

Refer to MSDS and follow the emergency procedure

Assess the risk
Low, Med, High
Small, medium, large

Small spills
(which may be contained by lab personnel)

Contain the spill by using spill kits

Dispose the wastes through licensed waste collectors
Refer to waste disposal SOP

Medium level spills
(which need evacuation of lab / floor)

Inform FSO/ OSHE and nearby occupants

Evacuate the specific lab/ floor

Large spill
which require evacuation of the building

Inform FSO/ OSHE/ Campus security / SCDF

Assess the wind direction/ Evacuate the building by ER Team

Contain spill with spill kits and dispose through licensed collectors

Confirm lab is ventilated and all risks cleared

FSO assess and clear for resume work

SCDF/ FSO take appropriate action and clear for continue work.
5.4 Notification Procedures

a. The PI is responsible for notifying the relevant personnel in NUS about the spill. Please refer to SOP on incident reporting (OSHE/SOP/GL/02) for the appropriate reporting procedures.

b. The PI or his designate is responsible for compiling an incident report.

c. Medium and large spills are defined as those requiring evacuation of the laboratory as the laboratory's spill control resources are insufficient to effectively contain the spill.

6.0 RECORDS

a. Incident reporting forms
b. Investigation reports

7.0 REFERENCES

a. SOP for Chemical Waste Disposal (OSHE/SOP/CS/01)
b. SOP for Accidents/Incidents Reporting and Investigation (OSHE/SOP/GL/02)

8.0 APPENDICES

Nil