

Research Laboratory Closeout: A systematic approach for workplace safety and health

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Introduction:

Research laboratories at the former School of Nursing and Singapore General Hospital (SGH) were relocated to make way for the SGH Campus Development Plans. SingHealth IBC & Research Laboratory Safety Office (RLSO) collaborated with laboratory users and administrators to ensure proper laboratory closeout as part of the relocation process.

Objective

Successful decontamination of equipment/fixture

Proper decommission of laboratory equipment

Safe removal of hazardous materials

To ensure safety and health of new occupants or personnel performing infrastructural alteration works

Methodology: Laboratory Closeout Inspection

Before

SingHealth IBC & RLSO:

- ❖ Assist in conducting risk assessment for relocation

Workplace Risk Assessment Register									
Activity	Location	Frequency	Severity	Control Measures	Responsible Person	Completion Date	Reviewed By	Reviewed Date	Reviewed Status
Relocation of Research Laboratory	SGH IBC	Once	High	1. Conduct risk assessment 2. Develop and implement control measures 3. Monitor and review control measures	SGH IBC	2014/06/10	SGH IBC	2014/06/10	Completed

Research Laboratories:

- ❖ Take stock of equipment & materials
- ❖ Decontaminate equipment/fixture
- ❖ Decommission laboratory equipment
- ❖ Remove hazardous materials

During

- ❖ Utilize comprehensive checklist

SINGHEALTH CORPORATE OFFICE	
Checklist for Research Laboratory Closeout	
Notification for Closeout (To be completed by the Principal Investigator/lab Manager/EHS Coordinator)	
Researcher/Closeout Officer (Name)	End date of project/employment contract
Relocation of Research Laboratory	Relocation of Principal Investigator (PI)
Relocation to new research laboratory/department	Please indicate exact location of new site:
Name of Principal Investigator	Signature/Date
Name of Research Laboratory/Department	
Exact Location(s) of Laboratory Space	

- ❖ Identify hazards and ensure appropriate disposal or decontamination methods
 - Biological agents
 - Chemicals
 - Radioactive materials
 - Sharps
 - Equipment & Fixture

After

- ❖ Maintain relevant records
 - Laboratory closeout checklist
 - Waste disposal records
 - E-condemnation forms
 - Decontamination certificates
 - Radiation contamination inspection reports

Singapore General Hospital	
Radiation Contamination Inspection	
Department: NCC	Section/Room: SON Block C / Laboratory of Oncoproteomics
Date: Thursday 19 June 2014	
This letter is to state that the above mentioned room was used for radioactive work. In line with the provisions and moving to the Academic, the room and its contents were sealed for any radioactive materials. The surface has been decontaminated and the room is now safe for occupancy. The surface has been decontaminated using a Vapor Hydrogen Peroxide (VHP).	
Regd. Signature: Mr. Lee Wei Liang	

Results:

From 2013 to 2015, Safety Officers from SingHealth IBC & RLSO assisted in the closeout of a total of 93 research laboratories. Proper decontamination of research equipment, apparatus and laboratory fixtures was carried out and unwanted hazardous materials safely disposed.



Before



After



Before



After

Conclusion:

The laboratory closeout process by SingHealth IBC & RLSO provides a systematic approach to manage the vacation of research laboratories, from advising the tenants on the required procedures, to keeping the relevant stakeholders notified on any arising safety issues. The comprehensive coverage not only manages the potential safety and health risks, but also ensures the process complies with relevant legal requirements and institutional policies. By assessing each laboratory individually, processes like decontamination or special waste treatment would be implemented only where needed, thereby reducing costs.