

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

Serene GOH, Valerie CHONG, TEO Watson, WEE Yong Hao, NG Chai Lim, Cindy GOH SGH Office of Safety Network and SingHealth IBC Office



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

m	I LADMANTALINE BOOK	ATEM							Legent				
	erfront :			Combuted t	ly : control of Taxon cont	nevi	Approved By : (Approved By)	od at	Nata PT Tourise Activity (E) Conducting Activity Non-Routine Autority (IRI) Conducting Activity and	wholer his wait Pe		nd (perding)	Conciliana :
-	e of Workplace / Localice :								Conditions				-
(eription of Principal Activitie	1		1					Note All. Rate to doc. D10 Plot Evaluation for risk	eveluation orbei			
	d of Sept. Principal breesing			MA Compete	ne Person				hara #1: Dispusar of wasts by Houseteaping staff EHS flok Assessment Register				
	ne of Research Project Equip Scotlars/Securch Label	ment / facility :		Date Review	**		bate Approved (Original Assessment (Mrs. W)	Not Review 1	Me within 3 pr	nara tron Cate	RISP/CHRS
		MATES.					VALUATION.						Autore Pla
	Process & Activities	Location of Activity	Equipment & Securities Materials Required	Reatine / Box. reatine Activity [®]	Competency/ Qualifications Required	Environments Aspect / Selety & Realt Resert		Description of Environmental Impact / Safety & Health Hos	Existing Risk Control (if any)	Literathoosed Score	Sevenity Score		fequired!
100	MATORINITIES CONTINUE												
												No.	
				_		_	-			_	_	16.	-

Research Laboratories:

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

During

Utilize comprehensive checklist

or Closeout				
Research Project	/	End date of project / employment contract:		
Resignation of Pr Investigator (PI)	ncipal Please indicate new sit transferred (if applicab		te where project will be blej:	
Relocate to new laboratory/space	esearch	Please indicate exact location of new site:		
			Signature/Date	
al Investigator				
ch tution				
	or Clossout and by the Principal End / Termination Research Project Employment Employment Employment Employment Investigation(P) Investigation	or Closeout ed by the Principal Investige End 1 Termination of End 1 Termination of End 1 Termination of End 1 Termination Engleyment Contract Resignation of Principal Investigation (P) Relocated to newresearch Islowatoryhp ace at Investigator ch	ed by the Principal Investigator L.A. Manager EH Day 1 Terminador Day 1 Te	

- 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

Mi.	Singapore General Hosp Singhealth		Contamination Inspectio	No. 500 GEES VINIS Place ADM GEES VINIS SUPPRINCE COUNTY Program Column Storel Supprince Stellan watersplicationing	22 Apr 2014 National Heart Contro of Singapore Pre Ltd 5 Ringsight Drive Singapore 160608 Attention Mr. Callyn Kam
Depar	ment	NCC			Dear Callyn,
Sectio	n/Room	SON Block	C / Laboratory of Onco	proteomics	Letter of Statement for Surface bio decontamination of Fume bood using Vapor
Date:		Thursday 11	9 June 2014		Hydrogen Peruside
noving adionu Radiati	to the Academia, I clides especially 5 on Survey owing survey mete	he room and its is ulphur 35, Phosph ns and well counts Survey Mater (5)	denuclide work. In line with uso ortents were tested for any trac- sorous 32, Phospharus 33 and is or were used to assay the labora (09167)	amounts of remaining some 125.	surface his decontaminated on the 22 Agr 2014 to per requested by Customer. The surface his decontamination stellad used in Vapor Hydrogen permitler (VHP). Regards,
Die red	 Multichan lation measureme 	nts and wipe test t	x1015253) calibrated Daily an eauth are shown as below in ta and Wipe Yest Results		We
Die red	 Multichan lation measureme 	nts and wipe test t	results are shown as below it ta		Mr Lee Wei Lining Technical Support
he red	Multichan listion measurement on Measurement on	Survey Meters of Survey Meters of Mass Radiation Exposure	esults are shown as below in ta and Wipe Test Results		Technical Support Guin Science Pte Ltd Bit 1025, Pacir Panjung Road
The red Fable 1	Multichan lation measurement on Bare Background Reading	Survey Meters of Survey Meters of Mase Radiation Exposure (pffethe)	esults are shown as below in ta and Wipe Test Results		Technical Support Giiu Science Pte Ltd

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.





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.