



H A R V A R D U N I V E R S I T Y
UNIVERSITY OPERATIONS SERVICES

ENVIRONMENTAL HEALTH AND SAFETY

To: Leonard Solomon
DEAS/Physics/EPS Safety Committee Chair

From: Charles P. Lichtenwalner Howard Herman-Haase
Mark Collins

CC: Michael Labosky Rob Stanhope
Stuart McNeil Ed Jackson
Mike Paterno

Date: October 6, 2006

Re: Results from 2006 EH&S laboratory safety inspections

Summary

Laboratory inspections of 42 research groups in 158 rooms in 11 buildings were conducted by the EH&S Department and the DEAS/Physics/EPS Laboratory Safety Committee members June 19 - September 28, 2006. Thanks to the safety committee members for their assistance in scheduling the inspections using the online scheduling tool, the inspections proceeded smoothly (from an EH&S standpoint).

Trends:

No immediately dangerous situations were noted. Most safety officers were very knowledgeable about the health and safety issues of materials, equipment and processes in their area. However, there appeared to be very few corrections to the items noted in the 2005 safety inspections report.

Common Problems:

1. Numerous problems with compressed gas cylinders were noted. Unused cylinders should be returned to the supplier – not stored in labs. Storage of compressed gas cylinders with regulators attached is not appropriate. Cylinders should be stored with the valve protective cap in place. A cylinder cart does not provide adequate support for compressed gas cylinders and is only meant for transportation.
2. Many laboratories continue to have tripping hazard and walkway obstruction problems from wires and tubing on the floor and strung across walkways.
3. Laboratories should conduct periodic chemical inventories and remove or dispose of unused chemicals. This is particularly important for compressed gas cylinders since most suppliers have monthly demurrage charges.

4. We have noted a few cases where eyewashes or eye/face washes are not binocular and may not meet the American National Standards Institute (ANSI) requirements. We believe it is important that laboratory users activate the plumbed eyewashes weekly and report any problems such as low or excessive pressure, air, or sedimentation in the water to the building manager for correction.

5. Emergency egress pathways were blocked in several labs. A number of emergency eyewashes and showers had access blocked. Building managers might consider striping the floor or other methods to alert occupants of the need to maintain clearance.

6. Several labs had uncovered electrical junction boxes. Electrical plugs and outlet strips on the floor of labs creates a potential (pun intended) for shock hazard of wet floors.

Results

The issues noted in the inspection, sorted by laboratory group can be found in the attached report.

EH&S Lab Inspections

PI Anderson

Date 07/24/06

Written Dept. Safety Policies and/or SOPs? No

Health & Safety Information about Chemicals? Yes Web

Lab Cleanout? Frequency? No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	SB04	Lab User	General Safety	Missing electrical switch plate Tank is a confined space - Confined space should be signed/precautions reviewed.
Mallinckrodt	126	Lab User	Compressed Gas/Cryogenics	(3) Nitric oxide cylinders in hallway uncapped (protective cylinder caps should be in place on cylinders in storage).
			Electrical	Replace old desk lamp - electrical/safety
			Emergency Preparedness	HF first aid - calcium gluconate has expired on 5/06
			General Safety	Limit extension cords. Extension cords are intended for temporary use only. Emergency shower should have three foot clearance.

EH&S Lab Inspections

PI Aziz / Spaepen

DEAS

Date 07/10/06

Written Dept. Safety Policies and/or SOPs? Yes *Lab*

Health & Safety Information about Chemicals? Yes *Little chemical usage - use MSDS*

Lab Cleanout? Frequency? No

Bldg	Room	Responsibility	Area	Issue	
McKay	405	Lab User	Compressed Gas/Cryogenics	Cylinders of flammable gas should not be stored in hallway wooden closets	
				Cylinder of chlorine gas dated 2002 found in gas cabinet. Recommend replace corrosive gas cylinders every year or more frequently.	
	406			Forming gas and N2 cylinders in use on cylinder cart. Recommend cylinders in use be secured with cylinder clamps - not used on cylinder carts	
				Recommend hard-walled tubing for furnace connections - not rubber or polymeric	
				Lab stool is not an appropriate support for electronic equipment	
				Rubber furnace connections are old, stiff and cracked. Replace before next use.	
				Electrical	Electrical sockets should not be lying on floor Remove boxes stored above circuit breakers
				Fire Safety / Facilities	Consider instructing new researchers on furnace and thermal safety or lab experiment safety review before setting up next furnace. Furnace has burnt thermocouple connector. Replace before use.
				General Safety	Exhaust tubing crimped on furnace center of room
				Repair cover on vacuum pump pulley before use Exhaust bubbler liquids dried out. Fill before next use.	
410	Building Manager	Electrical	Water on floor by fan/coil unit. Repair or maintain.		
			Emergency Preparedness	Replace ceiling tiles	
413	Lab User	General Safety	Chain hoist in lab - no annual inspection sticker.		
			Electrical	Uninsulated connectors on lab apparatus. All connections >48VAC or >60VDC should be insulated or shielded. Relay rack cover removed exposing electrical connections	
417	Fixed	Compressed Gas/Cryogenics	Argon cylinder and regulator on cylinder cart. Strap to wall or table		
421	Lab User	Chemical Use	Moved organic acid container to acid storage without nitric acid		
			Biosafety	Call for disposal of full sharps containers	
		Compressed Gas/Cryogenics	Tygon tubing tied to compressed gas cylinder valve is not an appropriate support for vacuum chamber sample positioner		

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	421	Lab User	Electrical	Install cover or insulate connections to evaporation chamber
			Ventilation	Dicing saw exhaust to positive pressure side of exhaust fan - could push saw exhaust back into equipment
	424	Building Manager Lab User	General Safety	Chain hoist does not have annual inspection
			Electrical	Covers removed heat exchanger and vacuum system
	427		Emergency Preparedness	Re-route or provide protection for wires and hoses on floor
			Compressed Gas/Cryogenics	Compressed gas tubing running 5' off floor across aisle is not appropriate
	502		General Safety	Cover/guard needed on ends of grinding wheels
			Chemical Use	Unmarked beaker inside hood (most likely compressor oil and water)
				Unmarked bottle under hood (most likely compressor oil)
			Compressed Gas/Cryogenics	Small cylinders of propane not in use should be stored in flammable cabinet rather than on bench.
	510		Emergency Preparedness	The chemical spill kit in the hallway outside lab 502 is half empty. Recommend replenishing kit.
			General Safety	Secondary exit in Lab should be accessible (fire egress). Blocked by cart/equipment.
	510A	Building Manager	Compressed Gas/Cryogenics	Stored cylinders of compressed gas should be stored with cylinder caps when not in use.
	512		Emergency Preparedness	No eyewash station in lab.
516	Lab User	Ventilation	Hood has failed recent testing 6/20/2006. Hood must be repaired.	
		Emergency Preparedness	No eyewash station in lab.	
516		General Safety	HF in hood - no calcium gluconate in immediate area.	
		Equipment / Processes	Reduce general cutter - watch sharps on work bench. Secure low hanging cables in aisle. Tygon tubing should not be used with a flammable gas (Hydrogen). Hard walled tubing only.	

EH&S Lab Inspections

PI Capasso

DEAS

Date 08/02/06

Written Dept. Safety Policies and/or SOPs? Yes

Health & Safety Information about Chemicals? Yes *drawer for MSDSs*

Lab Cleanout? Frequency? Yes *2x/year*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Cruft	312	Lab User	Biosafety	Uncapped syringes on optic bench
			Chemical Use	Label contents of can with "flammable" sticker Recommend squeeze bottles of volatile liquids be kept in tray to contain drips Test tube with unlabeled liquid on optic bench
	312A		Emergency Preparedness	Update emergency response door sign
			Chemical Use	Emergency eyewash station bottle beyond expiration date Unlabeled liquid container on floor
<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	121	Lab User	Emergency Preparedness	Update emergency response door sign
	121A	Building Manager	Electrical	Outlet strip mounted on back wall of hood used for flammable liquids is a spark source. Move to exterior of hood.
		Lab User	Chemical Use	Label all liquid containers. (Unlabeled squeeze bottle and beakers noted on bench and in hood.) Contact Cathy Thomas to discuss cyanide use. (Gold plating done in lab.) Recommend do not store organic and oxidizing acids in same secondary containment (acetic and nitric).
	121B		Emergency Preparedness	Air in eyewash line. Recommend weekly flush of eyewash lines.
			Compressed Gas/Cryogenics	Recommend cylinder protective cap on all cylinders in storage. Remove regulator and replace protective cap on froming gas cylinder

EH&S Lab Inspections

PI CNS

DEAS

Date 08/24/06

Written Dept. Safety Policies and/or SOPs? Yes *With equipment*

Health & Safety Information about Chemicals? N/A

Lab Cleanout? Frequency? N/A

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	106A	Building Manager	Electrical	Cover open electrical junction box Replace outlet plate
		Lab User		Raise power strip off floor
	106B	Building Manager	General Safety	Recommend repair floor Replace ceiling tile Re-route telephone line hanging from ceiling Repair hole in wall
		Fixed Lab User	Electrical General Safety	Raised power strip off floor Consider more appropriate vibration isolation pads for Haskris cooler
		Building Manager		Repair holes in wall
	106C 106D	Lab User		Repair hole in wall, install door stop Pump oil secondary container overhangs edge of table
	106E	Building Manager		Repair hinge on hood cabinet door - right hand side
		Lab User	Chemical Use	H3PO4 bottle has salts or other particulate covering the container. Identify and clean or remove as hazardous waste
	106K		Emergency Preparedness	Update contact information or date on emergency response door sign
		Building Manager	General Safety	Replace ceiling tile

EH&S Lab Inspections

PI Crozier

DEAS

Date *08/03/06*

Written Dept. Safety Policies and/or SOPs? *Yes*

Health & Safety Information about Chemicals? *N/A*

Lab Cleanout? Frequency? *N/A*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Pierce	B11	Building Manager	Fire Safety / Facilities	Remove tape covering fire detector
		EH&S Technicians	Lasers / Non-ionizing Rad	EH&S Radiation Protection Group should contact Crozier to discuss issues related to undergraduate laser laboratory
		Lab User	Chemical Use	Label all liquid containers
			Electrical	Raise electrical connections off floor
			Fire Safety / Facilities	Do not use a combustible (cardboard) box to cover hot lab equipment (lamp)

EH&S Lab Inspections

PI DEAS Instructional Labs

DEAS

Date 07/17/06

Written Dept. Safety Policies and/or SOPs? No

Health & Safety Information about Chemicals? Yes *On-line*

Lab Cleanout? Frequency? No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Pierce	G11	Lab User	Electrical	Spliced cord on vacuum pump should be replaced
			General Safety	Spliced power cord should not be used. Spliced cord on grinder should be replaced Grinder should be fitted with plexiglass grinder Belt on pumb should be guarded

EH&S Lab Inspections

PI Doyle

Physics

Date 08/21/06

Written Dept. Safety Policies and/or SOPs? Yes *Training written in lab notebooks*

Health & Safety Information about Chemicals? Yes *Online MSDS*

Lab Cleanout? Frequency? Yes *3x/year*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>	
Lyman	23C	Building Manager	Compressed Gas/Cryogenics	O2 sensor in fault mode - repair	
		Lab User	Emergency Preparedness	Emergency exit blocked. Recommend striping floor to denote door swing	
	24	Building Manager Lab User		Compressed Gas/Cryogenics	Ammonia stored in "inert gas" storage area
					Recommend do not store compressed gas with regulator installed. Store with valve protective cap
	24B	Building Manager Lab User		Electrical	H2 sensor in alarm - replace or calibrate
					Ammonia (lecture bottle) cylinder mounted horizontally. Danger of delivering liquid ammonia instead of gas.
	24D	Building Manager Lab User			Raise power strip and plug/socket off floor - shock hazard
					Footstool is not appropriate support for electronic equipment
	24F	Building Manager Lab User		Compressed Gas/Cryogenics	Oxygen sensor in alarm mode. Replace or calibrate
				Chemical Use	Eyewash filter clogged
	29	Building Manager Lab User		General Safety	Can of "ChemGrip" appears to be over pressurized and leaking at the seam - dispose
				Compressed Gas/Cryogenics	Equipment stacked precariously in cabinet
31	Building Manager		Chemical Use	Two O2 sensors in fault mode - repair	
			Compressed Gas/Cryogenics	Unlabelled gallon container under vibration isolation table	
			Emergency Preparedness	Glass bottles on floor should be placed on bench or in secondary container	
			General Safety	Raise power strips and plug/sockets off floor - shock hazard	

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Lyman	31	Building Manager	Emergency Preparedness	Move cryomech or provide proper wall penetration to allow doors to close in event of a fire
		Lab User	Chemical Use	Replace covers on controllers
			Compressed Gas/Cryogenes	Clean up spilled oil and absorbent 15 cylinders of MAPP gas appears excessive quantity - reduce
				Recommend placing all vacuum pumps on trays to contain oil spills
			Emergency Preparedness	Move Cryomech to allow doors to close in event of fire
			General Safety	Wires and cryo cooler lines on floor create trip hazard

EH&S Lab Inspections

PI Edwards

DEAS

Date *09/06/06*

Written Dept. Safety Policies and/or SOPs? *Yes in binder*

Health & Safety Information about Chemicals? *Yes in binder*

Lab Cleanout? Frequency? *Yes Monthly*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	216	Building Manager	Fire Safety / Facilities	Uncover fire detector head
		EH&S Technicians	Ventilation	Fire detector needed in humidity controlled room New hood installed needs registration and testing
	411	Lab User	Biosafety Electrical Fire Safety / Facilities	Biohazard waste container full - empty Replace cover on gas monitor Fire extinguisher blocked

EH&S Lab Inspections

PI Gabrielse

DEAS

Date 07/19/06

Written Dept. Safety Policies and/or SOPs?

Yes Some SOP for filling nitrogen - oven

Health & Safety Information about Chemicals?

Yes Web - on-line

Lab Cleanout? Frequency?

No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Jefferson	160	Lab User	Compressed Gas/Cryogenics	Fluorine gas cylinder unsecured
			Fire Safety / Facilities	Keep fire exit clear at all times - exit obstructed by equipment
	161	Building Manager	Ventilation	Hood alarms are not operational
		Lab User	Compressed Gas/Cryogenics	Secure 3 cylinders of hydrogen
			Emergency Preparedness	HF first aid - calcium gluconate has expired - replace
			General Safety	Remove old batteries - universal waste

EH&S Lab Inspections

PI Golovchenko

Physics

Date 08/14/06

Written Dept. Safety Policies and/or SOPs?

No Recommend written procedure for use of nanotube ovens and evaporator

Health & Safety Information about Chemicals?

Yes Online MSDS

Lab Cleanout? Frequency?

No 1/year. More frequent cleanouts recommended

Bldg	Room	Responsibility	Area	Issue
Jefferson	158	Building Manager	Fire Safety / Facilities	No heartbeat noted on fire detector
		Lab User	Electrical	Shield all connections >48VAC or >60VDC
	163	EH&S Technicians	Ventilation	Hood test beyond annual inspection date
		Lab User	Chemical Use	Chromic/sulfuric acid bottle label decayed - relabel or dispose
	167	Building Manager	Compressed Gas/Cryogenics	Double strapped gas cylinders blocking egress hallway outside lab
			Electrical	Install blank circuit breaker to cover open circuit breaker slot
			Fire Safety / Facilities	Do not block hallway doors open separating fire zones
				Seal wall penetrations to corridor
		Lab User	Chemical Use	Glass flask on floor should be raised or placed in secondary containment
			Compressed Gas/Cryogenics	H2, CH4 cylinders double strapped to single clamp
			Electrical	Raise power strip and plug/socket off floor - shock hazard
				Insulation or shield needed for Variac connections
			Lasers / Non-ionizing Rad	Remove laser warning sign if Class IIIB or IV lasers no longer in use

EH&S Lab Inspections

PI Hau

DEAS

Date 08/17/06

Written Dept. Safety Policies and/or SOPs? N/A

Health & Safety Information about Chemicals? Yes *Binder in Lyman 116*

Lab Cleanout? Frequency? Yes *Every 2 years*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Cruft	109	Lab User	Compressed Gas/Cryogenics	Multiple cylinders should not be ganged unless in stanchions or other support structures
	110		Electrical	Recommend raise power strips and plug/sockets off floor - shock hazard
	111	Building Manager Lab User		Replace shield for laser power supply
	116		General Safety Chemical Use Emergency Preparedness	Replace ceiling tile Label squeeze bottles Eyewash blocked

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Lyman	23	Building Manager	Electrical Fire Safety / Facilities	Severa junction boxex on ceiling without covers Fire extinguisher dated Nov 01
		Fixed Lab User	Electrical Emergency Preparedness	Raised power strip off floor Blocked eyewash

EH&S Lab Inspections

PI Hoffman

Physics

Date 06/29/06

Written Dept. Safety Policies and/or SOPs? *No Not yet operational*

Health & Safety Information about Chemicals? *N/A*

Lab Cleanout? Frequency? *N/A*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Pierce	G13	Lab User	Compressed Gas/Cryogenics	<p>Do not connect polymeric tubing to threaded connector with hose clamp - use barbed fitting or compression hose fitting.</p> <p>Do not use regulator as flow control device, Recommend install valve after regulator</p> <p>Determine if experimental apparatus room and pit can develop and oxygen deficient (<19.5%) atmosphere. If so, develop equipment (preferred) or procedures to prevent.</p> <p>Do not connect various diameter hoses without an adapter. Recommend same diameter hose throughout run.</p>
			General Safety	<p>Pit ladder should extend above floor (contact EH&S Safety for OSHA requirement). Consider replacing portable ladder with a fixed ladder.</p>

EH&S Lab Inspections

PI Howe

DEAS

Date 08/07/06

Written Dept. Safety Policies and/or SOPs? N/A

Health & Safety Information about Chemicals? N/A

Lab Cleanout? Frequency? Yes 1/term

Bldg	Room	Responsibility	Area	Issue
60 Oxford St.	319	Lab User	Fire Safety / Facilities	Door blocked open - cannot be closed in event of a fire
	320	Building Manager	General Safety Emergency Preparedness	Blocked air gun pressure must be no more than 30psi (OSHA 1910.242(b)) Eyewash pressure too high Sign states activation of eyewash alerts operation center, but operations center did not receive alarm
	321	Lab User	Electrical Ventilation Electrical Fire Safety / Facilities	Replace cover junction box Consider damper or fan shut off (energy savings - not safety issue) for canopy hood Shock hazard (wet floor) from power strip on floor and electronics not designed for floor use Fire extinguisher blocked

EH&S Lab Inspections

PI Instrument Design Lab

DEAS

Date 09/13/06

Written Dept. Safety Policies and/or SOPs? N/A

Health & Safety Information about Chemicals? Yes *MSDSs on-line*

Lab Cleanout? Frequency? N/A *New workshop space*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Cruft	111	Lab User	Chemical Use	Glass bottle of acetone stored on floor should in secondary containment.

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	111	Lab User	General Safety	Re-mark bottles - difficult to read (plastic bottle near welding area) Lathe machine guarding should be explored.

EH&S Lab Inspections

PI Jacobsen

DEAS

Date 07/19/06

Written Dept. Safety Policies and/or SOPs? No

Health & Safety Information about Chemicals? No *On-line*

Lab Cleanout? Frequency? No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	211	Building Manager	Electrical	Electrical cover plate missing (add plastic cover plate)
			Emergency Preparedness	Emergency shower needs to be tested.
			General Safety	Replace fluorescent lights (Lead Room & Acid free room)
	211A	EH&S Technicians	Biosafety	Old pipette box
			Lab User	Electrical
		228	EH&S Technicians	Ventilation
Hall	Lab User	Building Manager	Compressed Gas/Cryogens	Secure cylinders
			Emergency Preparedness	Need to add evacuation map at elevator

EH&S Lab Inspections

PI Langmuir

EPS

Date 09/28/06

Written Dept. Safety Policies and/or SOPs? *Yes Recommend inform new lab users safe work practice procedures*

Health & Safety Information about Chemicals? *Yes*

Lab Cleanout? Frequency? *Yes*

Bldg	Room	Responsibility	Area	Issue
Hoffman	114	Lab User	Electrical	Power strip on floor possible shock hazard
			General Safety	Water hose crimped - possible failure - Lambda physik power supply
	115	Building Manager	Emergency Preparedness	Eyewash pressure too high
			Lab User	Numerous unlabeled containers of unknown liquids under hood and by window
		Building Manager	Emergency Preparedness	Update emergency response door sign
				Recommend weekly flow test of emergency eyewash
	117A	Building Manager		Red/Green Alarm stick - neither lamp lit - possible bulb failure
	117B	Lab User	Chemical Use	Labels fading on som squeeze bottles
		Building Manager	Fire Safety / Facilities	No sprinkler in equipment closet opposite 117B
	120		Electrical	Replace cover junction box
Emergency Preparedness			Recommend GFCI within 6' of sink Sprinkler blocked in hallway outside room 120	

EH&S Lab Inspections

PI Mahadevan

DEAS

Date 09/27/06

Written Dept. Safety Policies and/or SOPs?

N/A No significant safety procedures or hazardous chemicals

Health & Safety Information about Chemicals?

Yes MSDS online

Lab Cleanout? Frequency?

N/A Lab recently opened

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
60 Oxford St.	328	Building Manager	Emergency Preparedness	Sign states eyewash alerts operations center but no alarm received Eyewash flow blocked left diffuser
			Fire Safety / Facilities	Some sprinklers blocked by utilities in ceiling
		EH&S Technicians	Chemical Use	Provide information for spill equipment for flammable liquids (pads)
		Lab User		Label all containers with liquid contents Moved acid stock solution out of flammable solvent secondary containment

EH&S Lab Inspections

PI Marcus

DEAS

Date 06/19/06

Written Dept. Safety Policies and/or SOPs? *No*

Health & Safety Information about Chemicals? *Yes MSDS in Room 213*

Lab Cleanout? Frequency? *No*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	213	Building Manager	Ventilation	Check manufacturer recommendation for filter change. Display indicates filter 63% full when unit is turned on.
		Lab User	Chemical Use	Store nitric acid away from flammable liquids or place in secondary containment.
	C2.18	Building Manager	Electrical	Hood should be operating when using acetone Add additional electrical outlets to eliminate need for extension cords and/or power strips.
		Lab User		Rheostat should be enclosed to prevent accidental exposure to energized systems. Cords should have strain relief to eliminate strain on connections

EH&S Lab Inspections

PI Martin

DEAS

Date *06/28/06*

Written Dept. Safety Policies and/or SOPs? *Yes*

Health & Safety Information about Chemicals? *Yes* *MSDS - database*

Lab Cleanout? Frequency? *Yes*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	324	Lab User	Emergency Preparedness	Complete information in emergency response guide.
	325		Haz Waste	Sodium Hydroxide waste container is open (HPLC connection is recommended)
	326		Equipment / Processes	Tube furnace extends beyond work bench area into walking aisle. Tube furnace blocked by chair – unit could be accidentally struck.
	Aerosol Lab		General Safety	Vacuum hose on floor can be a trip and fall hazard

EH&S Lab Inspections

PI Mooney

DEAS

Date 08/09/06

Written Dept. Safety Policies and/or SOPs?

Yes Posted by equipment

Health & Safety Information about Chemicals?

Yes Binder in ESL 415

Lab Cleanout? Frequency?

Yes Once/year when defrosting freezer

Bldg	Room	Responsibility	Area	Issue	
ESL	121	Building Manager	Electrical	Replace cover on electrical outlet	
			Emergency Preparedness	No inspection tag on emergency shower	
				Eyewash pressure marginally low	
			Fire Safety / Facilities	Remove fire extinguisher sign from side of hood	
					Fire extinguisher on floor by hood has not been recently inspected. Remove or inspect and hang.
		Fixed	Emergency Preparedness	Safety shower blocked by box. Consider striping floor and posting warning not to block safety shower	
		Lab User	Compressed Gas/Cryogens	Nitrogen cylinder not in use should be stored with valve protective cap	
	Chemical Use		Recommend secondary containment for film processor chemicals - especially waste containers		
		401	Building Manager	Fire Safety / Facilities	Fire detector removed - replace
		415	Building Manager	Emergency Preparedness	No "heartbeat" noted on fire detector
	Lab User			Biosafety	Full broken glass container. Dispose and replace
				Chemical Use	Glass bottles on floor should be on bench or shelf. If stored on floor should be in secondary containment
					Do not store hearing protectors in chemical hood exposing them to chemical vapors and aerosols
		419			Unlabeled liquid vials on bench
	Compressed Gas/Cryogens			Nitrogen cylinder not in use should be stored with valve protective cap	
	Emergency Preparedness			Incubator in alarm condition with audible alarm silenced. Do not allow equipment to remain in alarm mode.	
	420	Building Manager	Chemical Use	Glass waste flasks on floor should be in secondary containment	
			Electrical	Outlet strip on floor poses possible shock hazard	
		Lab User	Ventilation	Unknown function of open exhaust duct in lab. Provide information on function and appropriate damper position.	
			Chemical Use	Unlabeled spray bottle	

EH&S Lab Inspections

PI Mukhoppadhyay

EPS

Date 06/28/06

Written Dept. Safety Policies and/or SOPs? Yes

Health & Safety Information about Chemicals? Yes *On web*

Lab Cleanout? Frequency?

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	233	Building Manager	Fire Safety / Facilities	Fire extinguisher inspection beyond date (2002)
		Lab User	General Safety	Hang fire extinguisher Muffin fans unshielded creating rotating parts hazard. Install enclosures or cage. If projection lamps surface temperature can exceed 60C lamps should be shielded
	236	Building Manager	Emergency Preparedness	Eyewash pressures unequal in binocular eyewash
			General Safety	Recommend towel dispenser by sink for hand washing and drying
		Lab User		Replace mercury thermometer in Blue M Oven with one without mercury

EH&S Lab Inspections

PI Museum Basement Labs

EPS

Date 09/20/06

Written Dept. Safety Policies and/or SOPs? Yes *instructions on each machine*

Health & Safety Information about Chemicals? N/A

Lab Cleanout? Frequency? Yes *once every 3 mos.*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
MCZ	049	Building Manager	Fire Safety / Facilities	if door between 049 & 059 is a fire door, then seal openings above door
	052		Electrical	replace cover on electrical outlet
			General Safety	recommend remove plastic on light fixtures
		Lab User	Emergency Preparedness	replace eyewash solution

EH&S Lab Inspections

PI Narayanamurti

DEAS

Date 06/21/06

Written Dept. Safety Policies and/or SOPs?

Yes Lasers and equipment

Health & Safety Information about Chemicals?

Yes On-line

Lab Cleanout? Frequency?

No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	303	Building Manager	General Safety	Connect eyewash drain to building plumbing.
		Lab User	Electrical	Exposed electrical conductors should be shielded or insulate if greater than 48 VAC ac or 60VDC
			PPE	Contact EH&S regarding regulations dealing with respirator use.

EH&S Lab Inspections

PI Norcross

Physics

Date *08/23/06*

Written Dept. Safety Policies and/or SOPs? *Yes Part of training package*

Health & Safety Information about Chemicals? *Yes Binder on wall*

Lab Cleanout? Frequency? *Yes Daily*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Lyman	032	Building Manager	Electrical	Cover HVAC controller box
			General Safety	Contractors i.e. electrical leave floors cluttered. Consider policy improve housekeeping.
	032F-A (mech		Emergency Preparedness	Consider reversing doors to facilitate closing
			General Safety	Remove building materials or provide storage racks
				Identify source of water by heat exchangers and fix leaks

EH&S Lab Inspections

PI Parker

DEAS

Date *09/11/06*

Written Dept. Safety Policies and/or SOPs? *Yes Binder in lab*

Health & Safety Information about Chemicals? *Yes MSDSs in lab*

Lab Cleanout? Frequency? *N/A New lab space*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	405	Building Manager	Fire Safety / Facilities	Fire doors should be on automatic door closures - doors observed open between labs with wood blocks.
		Lab User	Chemical Use	Place bases in secondary containment

EH&S Lab Inspections

PI Pearson

DEAS

Date *09/14/06*

Written Dept. Safety Policies and/or SOPs? *Yes*

Health & Safety Information about Chemicals? *Yes MSDSs supplier*

Lab Cleanout? Frequency? *N/A New lab - less than 5 years*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	328 331	EH&S Technicians	Ventilation	2 Chemical hoods - not registered Vented bio hoods (Baker)

EH&S Lab Inspections

PI Pershan

DEAS

Date 08/07/06

Written Dept. Safety Policies and/or SOPs? *No Recommend develop procedure for HF work*

Health & Safety Information about Chemicals? *No*

Lab Cleanout? Frequency? *Yes Intermittently*

Bldg	Room	Responsibility	Area	Issue	
McKay	312	Building Manager	Emergency Preparedness	Eyewash pressure too low	
			Fire Safety / Facilities	Seal wall penetrations	
		EH&S Technicians	Ventilation	Annual hood test beyond expiration date	
			Chemical Use	Glass carboy on floor should be placed on bench or inside secondary containment	
		Lab User	Emergency Preparedness	Replace drench hose with binocular eyewash	
			General Safety	Chemical refrigerator overhangs window ledge and appears to be only marginally stable Plastic box is not appropriate support for hot plate	
	314		Chemical Use		Car batteries on floor appear to not have been used for a long time. Recommend remove if no longer needed, else check liquid level, recharge and place in secondary containment to contain acid spills
				Compressed Gas/Cryogenics	Do not store compressed gas cylinder with regulator. Replace valve protective cap. Cardboard box holding small cylinders is collapsing
					Remove empty cylinders Foot rest shelf under lab bench is not appropriate storage for lecture bottles
			Emergency Preparedness	Update emergency door sign	
			General Safety	Restock screws and nuts or place in container to prevent scattering on floor	
			418	Building Manager	Electrical
General Safety	Replace ceiling tiles				
Lab User	Electrical	Remove or shield bare light bulb on wall Distilled water cardboard box is not an appropriate support for electrical outlet strip Raise electrical connectors off the floor			
	General Safety		Dress cords and tubing on floor and dangling from wire trough away from walkways Equipment stacked precariously Replace covers on Neslab cooler Unshilded muffin fans on relay rack		

EH&S Lab Inspections

PI Prentiss

DEAS/Physics

Date *09/14/06*

Written Dept. Safety Policies and/or SOPs? *No*

Health & Safety Information about Chemicals? *Yes On-line*

Lab Cleanout? Frequency? *No*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Jefferson	150A	Lab User	Compressed Gas/Cryogenics	Stored cylinders should be capped when not in use.
			Emergency Preparedness	Emergency shower blocked (cardboard boxes - supplies)
	150B			Move flammable liquid cabinet to the right - too close to the fire pull station
	150D		General Safety	Increase flow of eyewash - air in line.
	150E		Haz Waste	Monitor housekeeping
			Ventilation	Sharps container is full - unit should be replaced.
				Mark refrigerator - No Food - No flammable storage

EH&S Lab Inspections

PI Samuel

DEAS

Date 08/16/06

Written Dept. Safety Policies and/or SOPs? No

Health & Safety Information about Chemicals? Yes *Web & EH&S web page*

Lab Cleanout? Frequency? No *Lab is three years old - limited chemicals*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
60 Oxford St.	410	Building Manager	Emergency Preparedness	Emergency eyewash station needs to be flowed - a significant amount of air is line.
		Lab User		Emergency shower is obstructed by wooden desk. Recommend 3 ft clearance under shower head. Unit should be tested this month (8/05 - last tested)
			General Safety	Do not store any flammable materials inside the none rated Frigidaire refrigerator/freezer. Add signage to unit Small quantity of alcohol in freezer (removed during inspection). Watch electrical cords on floor - trip & fall hazard.

EH&S Lab Inspections

PI Schrag

EPS

Date 07/13/06

Written Dept. Safety Policies and/or SOPs? *Yes On lab manager's computer*

Health & Safety Information about Chemicals? *Yes in file cabinet*

Lab Cleanout? Frequency? *Yes post project*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>	
Hoffman	333	Building Manager	General Safety	Replace hood panel	
		EH&S Technicians	Haz Waste	Experimental apparatus has effluent pumped to drilled hole rubber stoppered container	
		Lab User	Electrical	Wires exposed (no secondary insulation) on ICP power connector	
	336	Building Manager	Emergency Preparedness	Emergency Preparedness	Second means of egress from lab is blocked by cryo container
			Chemical Use	Chemical Use	Unlabeled squeeze bottles
		Lab User	Electrical	Electrical	Wires exposed (no secondary insulation) on UPS plug
			Haz Waste	Haz Waste	Pump oil container labeled "waste" should be closed, have haz waste sticker and placed in SAA
	337	Building Manager	Emergency Preparedness	Emergency Preparedness	Recommend replacing drench hose with binocular eyewash
		Lab User	Biosafety Chemical Use	Biosafety Chemical Use	Broken glass container full. Replace HF found under hood. Remove or, if used, develop SOP and provide calcium gluconate

EH&S Lab Inspections

PI Silvera

Physics

Date 08/28/06

Written Dept. Safety Policies and/or SOPs?

Yes On Equipment

Health & Safety Information about Chemicals?

No Recommend instruct students on chemical hazards including cyanides

Lab Cleanout? Frequency?

Yes Move 3 months ago

Bldg	Room	Responsibility	Area	Issue
Lyman	127	Lab User	Compressed Gas/Cryogenics	Replace aged/cracked rubber tubing before use
			Electrical	Lab stool is not appropriate support for a power supply Raise electrical outlets off floor
			General Safety	Recommend rated lifting hardware - not nylon rope - for hoisting
	130	Building Manager EH&S Technicians	Electrical	Replace covers on junction boxes
			Ventilation	Determine if raising hood increases supply to lab Register hood Lyman 130
		Lab User	Chemical Use	If respirators are used, contact EH&S for evaluation, training and fit testing. Contact medical for evaluation Contact Cathy Thomas (EH&S) for cyanide use training Unmarked chemical bottle next to CN H2PO4 container perched on edge of secondary container
			Electrical	Replace expired calcium gluconate tube Keep 3' clearance around circuit breaker panel - especially do not store flammable solvents next to panel
			Emergency Preparedness	Update emergency response door sign
			Haz Waste	Do not mix acetic acid and nitric acid in same secondary container
	131	Building Manager	Electrical	Install ground fault circuit interrupters within 6' of sink
			Emergency Preparedness	Corrosives used in lab. Recommend an eyewash and emergency shower
		Lab User	Biosafety Compressed Gas/Cryogenics	Empty full sharps container Replace guard on vacuum pump Improve cylinder straps Replace aged/cracked rubber tubing
132	Building Manager	Electrical	Replace cover on junction box on EDM pump Repair cord and replace plug on heat gun Recommend replace mercury thermometer with one that does not contain Hg	
		Electrical	Remove or mount electrical strip. Replace frayed insulation on plug	
		Electrical		

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Lyman	132	Building Manager	Fire Safety / Facilities	Replace cove junction box Contact Mike Kauffman (EH&S) to evaluate confined space (cryo pit)
		Lab User	Compressed Gas/Cryogenes	Fire stop openings in wall Do not use old, cracked tubing Recommend do not store cylinders on cylinder cart. Note cylinder cart did not have pin to prevent collapsing
			Electrical Fire Safety / Facilities	Raise outlet strip off floor - shock hazard Provide 3' clearance around circuit breaker panel (move parts box)

EH&S Lab Inspections

PI Stanley

DEAS

Date *06/26/06*

Written Dept. Safety Policies and/or SOPs? *Yes*

Health & Safety Information about Chemicals? *Yes* *MSDS on web*

Lab Cleanout? Frequency? *N/A*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
60 Oxford St.	323	Building Manager	Fire Safety / Facilities	Sprinklers blocked by utilities in ceiling
	324		General Safety	Replace ceiling tile
	326	Fixed	Haz Waste	Mixed stock containers of corrosives and flammable liquids in same secondary containment

EH&S Lab Inspections

PI Stewart-Mukhopadhyay

EPS

Date 07/12/06

Written Dept. Safety Policies and/or SOPs?

Yes Shock compression equipment and cold room

Health & Safety Information about Chemicals?

Yes on-line

Lab Cleanout? Frequency?

No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	B017	Lab User	General Safety	Use HEPA vacuum when cleaning impact chamber Have EH&S confined space inspectors evaluate impact chamber for confined space issues.

EH&S Lab Inspections

PI Stone

DEAS

Date 06/22/06

Written Dept. Safety Policies and/or SOPs?

Health & Safety Information about Chemicals? Yes

Lab Cleanout? Frequency? N/A *Moving to McKay 5th floor soon*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Pierce	G6	Lab User	Haz Waste	Chemicals stored in room without Satellite Accumulation area. Remove chemicals or set up SAA
	G7A	Fixed Lab User	Chemical Use	Open container in SAA Separate acid from flammables in solvent storage cabinet

EH&S Lab Inspections

PI Stubbs

Physics

Date *08/09/06*

Written Dept. Safety Policies and/or SOPs? *Yes Procedures on web*

Health & Safety Information about Chemicals? *Yes MSDSs kept in cabinet*

Lab Cleanout? Frequency? *Yes 1/year*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
HEPL	109	Lab User	Electrical	Recommend raise outlet strip off floor

EH&S Lab Inspections

PI Thaddeus

DEAS

Date 09/25/06

Written Dept. Safety Policies and/or SOPs? *No Recommend develop procedures for operating silane system, filling cylinders and other potentially hazardous operations*

Health & Safety Information about Chemicals? *Yes MSDS comes with chemicals, also on web*

Lab Cleanout? Frequency? *No*

Bldg	Room	Responsibility	Area	Issue
Pierce	B4	Building Manager	Fire Safety / Facilities	Fire extinguisher dated 1996 replace and hang on wall
			Ventilation	Recommend positive ventilation in cylinder store room
		Fixed	Compressed Gas/Cryogenics	Replaced cylinder protective cap on stored PH3 cylinder
		Lab User		Recommend do not use cylinder cart to support compressed gas cylinder
				Recommend do not store cylinders with regulators attached - replace cylinder protective cap when storing
	B6	Building Manager	Electrical	Numerous unchained cylinders
			General Safety	Power strips on floor - shock hazard
		Lab User		Support compressed gas tubing to remove from walkways
			Fire Safety / Facilities	Closer needed if door between B4 and B6 is fire door
			Compressed Gas/Cryogenics	Consider a lab process safety review and written procedure for silane use (possible hazards: SiH4 & O2 mixture in delivery system, backflow, poly tubing rupture, flammable solvents stored with silane increase fuel load, pressure/vacuum cylinder purging)
Outdoor	Building Manager		Do not store cylinders with regulators - replace protective caps	
		Electrical	Electrical outlet on floor - shock hazard	
	Lab User		Consider High Voltage sign on Gas discharge tube end caps	
		Compressed Gas/Cryogenics	Determine oxygen deficiency hazard when venting liquid nitrogen in pit.	

EH&S Lab Inspections

PI Vlassak

DEAS

Date 07/05/06

Written Dept. Safety Policies and/or SOPs? Yes *Posted on door*

Health & Safety Information about Chemicals? Yes *SOPs*

Lab Cleanout? Frequency? *N/A*

Bldg	Room	Responsibility	Area	Issue
ESL	114	Building Manager	Fire Safety / Facilities Ventilation	Replace missing ceiling tile Route vacuum pump exhaust to exhaust line - not out window
		Lab User	Compressed Gas/Cryogenics	Collapsed Tygon tubing for vacuum leading to dessicators reduces vacuum pumping efficiency. Replace with thick walled or stiff wall tubing
			Electrical	Electronics for laser system has exposed electrical connectors. Insulate or shield all electrical connections > 48VAC or 60VDC Cardboard box is not an acceptable support for electronics supporting laser system Protect wires on floor or route overhead on wire tray Replace covers on sputtering system
			Emergency Preparedness	Update emergency response contacts door sign
			Fire Safety / Facilities	Tygon tubing vacuum line routed above ceiling is not rated for plenum use
			General Safety	Fix or secure chilled water system so it does not leak. (Do not rely on sign advising against bumping into system.)
	117	Building Manager	Emergency Preparedness	Eyewash and safety shower needed for chemical use of KOH and HF
		Lab User	Chemical Use	Acetone bottle precariously balanced on edge of secondary containment. Place in containment. Calcium gluconate tube expired 05/05 - replace Unlabeled beakers containing liquid chemicals in hood
			Compressed Gas/Cryogenics	Request installation of house vacuum or move dessicators to 114. Do not run polymeric lines through plenum.
			Emergency Preparedness	Update emergency response contacts door sign
			Haz Waste	Insufficient volume in secondary containment for hazardous waste container Gallon water bottle with snap cap is not acceptable closure for hazardous waste container
		Question		Determine if ferric chloride and acetone can react inside hazardous waste container
	118	Lab User	Chemical Use	Provide appropriate storage of peroxide bottles (12) and stock mixtures of chemicals - not on floor.

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	118	Lab User	Compressed Gas/Cryogenics Fire Safety / Facilities	Two cylinders double-chained to single cylinder bracket Compressed air line routed above ceiling is not rated for plenum use.

EH&S Lab Inspections

PI Weitz

DEAS

Date 08/23/06

Written Dept. Safety Policies and/or SOPs? Yes *Located On Website*

Health & Safety Information about Chemicals? Yes *Website*

Lab Cleanout? Frequency? Yes *One hour per week*

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
ESL	205	Building Manager	Fire Safety / Facilities	Do not block door open
	214	Lab User	Electrical	Replace cover to junction box Raise power strips off the ground Chair is not an appropriate support for monitor Replace covers on chiller
			Emergency Preparedness	Blocked eyewash
			Lasers / Non-ionizing Rad	Update Emergency Response sign on door All occupants of the room should be aware of laser safety precautions Exposed beam from laser, determine if hazard
	215	Building Manager	Emergency Preparedness	Emergency Shower - Hallway - Possible leak around shower, visible mold, replace tile and fix leak
	216A	Fixed Building Manager	Ventilation	Eyewash filter loose - tighten filter
		EH&S Technicians		Eyewash- Rec. replace w/ binocular eyewash
		Lab User	Emergency Preparedness	Register fume hood
			Haz Waste	Do not block eyewash
				Secondary Containment needed for hazardous waste Containers

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	511	Lab User	Emergency Preparedness	Cold Room, update Emergency Response door sign
	513	Building Manager		Low Pressure Eyewash
		Lab User	Chemical Use	Do not stack chemical containers on chemical containers
			Emergency Preparedness	Blocked Eyewash
			General Safety	Full plastics container-empty Leaking RO System Outlet Valve
	519	Building Manager	Haz Waste	Stock chemicals and Haz Waste stored together
			Emergency Preparedness	Low pressure eyewash
		Lab User	Chemical Use	Unlabeled squeeze bottle
			Compressed Gas/Cryogenics	When not in use, install valve protective cap
			Electrical	Raise power strip off ground

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
McKay	519	Lab User	Emergency Preparedness General Safety Lasers / Non-ionizing Rad	Blocked Eyewash Sharps (razor) left on bench Cardboard sheild, prefer non-flammable shield
	520	Building Manager	Electrical Emergency Preparedness	Replace junction box cover Adjust Safety Shower handle so it does not interfere with workstation Low pressure eyewash Safety Shower - no test tag Made shower handle accesible
		Fixed		
		Lab User	Chemical Use Electrical Emergency Preparedness	Unlabeled Squeeze Bottle 3 foot clearance needed in front of fire panel update Emergency Response door sign
	523	Building Manager	Chemical Use Fire Safety / Facilities	Hall Closet (423) has dessicators w/ unknown materials Relocate -80 degree freezer and replace closet door (431) Door proped open in Hall Closet (431), remove cabinet
	531		Chemical Use Emergency Preparedness	Rec. exhaust for flammable storage cabinets Low pressure eyewash
		Lab User	Chemical Use Emergency Preparedness Haz Waste	Relocate DI waterline-blocking eyewash Replace mercury thermometer Chemical storage - do not allow containers over hang shelf Eyewash blocked by chemical bottles Secondary containment in hood needed for hazardous waste

EH&S Lab Inspections

PI Wofsy

DEAS

Date 07/06/06

Written Dept. Safety Policies and/or SOPs? N/A

Health & Safety Information about Chemicals? N/A

Lab Cleanout? Frequency? No

<i>Bldg</i>	<i>Room</i>	<i>Responsibility</i>	<i>Area</i>	<i>Issue</i>
Hoffman	230	Building Manager EH&S Technicians	Electrical Ionizing Rad	Open hole in switchplate Radiation sign on door, Equipment case with "Caution Radioactive Material" sticker but no Harvard Source #
	G28	Lab User Fixed Lab User	General Safety Compressed Gas/Cryogenes Chemical Use Compressed Gas/Cryogenes General Safety	Cluttered lab with difficult accessibility 5 cylinders not strapped to support Cleanout old chemicals and water from refrigerator Numerous instances of multiple cylinders strapped to single cylinder support Recommend inventory and removal of unneeded cylinders Cluttered lab with difficult accessibility

