## Chemistry Local Safety Team Meeting Minutes Approved

Name of Team:	Chemistry Local Safety Team	Chair(s):	Derek Gates & Monica Clarkson		
Date:	April 25, 2024	-	Time:11:02 amLocation:Online Zoom Meeting		
<ol> <li>Additional A</li> <li>Review Cen of Accident         <ul> <li>Monthl</li> </ul> </li> <li>Review Wo (including a</li> </ol>	Previous LST Meeting Minutes Agenda Items & Approval of Agenda tral Accident/Incident Reporting System (CAIRS) report s/Incidents y Incident List & Statistical Summary Report rkplace Safety Inspections ny changes to equipment, machinery or work processes fect the health or safety of workers)	<ol> <li>7. Onge Minu</li> <li>8. New</li> <li>9. Next</li> </ol>	ew Education and Training bing Business – Status of Action Items, Review of Previous utes and Other Business Meeting ting Adjournment		

## 1. ROLL CALL

Worker Representatives	Work Location	Present	Regrets	Absent
Guillaume Bussiere	Chemistry - Teaching Faculty			
Karen Button	Chemistry – M&P, Stores Manager			
Ken MacFarlane	Chemistry - M&P, Director, Finance and Operations	$\square$		
Mohamad Rezaei	Chemistry - M&P, Director, Technical Services	$\mathbf{\nabla}$		
Tori Christianson	Chemistry – CUPE 2950, Outreach and Communications	$\mathbf{\nabla}$		
Patrick Dever	Chemistry – Shops and Services Tech	$\mathbf{\nabla}$		
Ben Herring	Chemistry – Research Tech	$\checkmark$		
Jacqueline Higgins	Chemistry – Graduate Student	$\mathbf{\nabla}$		
Cameron Zheng	Chemistry – Graduate Student			

Employer Representatives	Work Location	Present	Regrets	Absent
Derek Gates	Chemistry – Faculty, Co-Chair	M		
Monica Clarkson	Chemistry - M&P, Co-Chair & Safety Program Officer	M		



Resources/Guests	Work Location	Present	Regrets	Absent
Richard Wambolt	UBC Safety & Risk Services	M		
Glenn Sammis	FOS JOHSC & University Chemical Safety Committee		Ø	

2. APPROVAL OF PREVIOUS LST MEETING MINUTES					
(Statement to indicate minutes of previous meeting have been read & acknowledged and to record any corrections to it)					
Are the minutes approved?	Yes ☑	No			

3. ADDITIONAL AGENDA ITEMS & APPROVAL OF AGENDA		
Is the agenda adopted?	Yes 🗹	No D

### 4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:

See attached incident report:

• Monthly Incident List & Statistical Summary Report (make note of trends etc. For any general CAIRS information that requires discussion or action, please record under "New Business". Any incident specific items and follow up requests are to be listed below)

(\* See Legend at End for Priority and Status Codes)

<b>Item #</b> (Use CAIRS Incident ID #)	Priority	Date	Action Plan (Actions Taken/Need to be taken)	Assigned To	Follow up: Date Pending	Status
129681/129682	С	Jul 22, 2022	CHEM Glass Waste Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemIst within the January 18, 2024 CHEM LST minutes. UBC Waste Management Services is in agreement with the department to allow for the metal glass waste pails to be labelled with spray paint. Labelling the pails will help UBC Waste Management workers to identify and deliver the marked "UBC CHEM" metal pails to CHEM. Several of the	DG/MC	In Progress	IP

4. REVIEW CAI	<b>RS REPO</b>	RT OF ACCIDEN	ITS/INCIDENTS:			
			metal pails have already been labelled and is still in progress. Mar 2024 - It was noted that the CHEM LST has had a lack of support from UBC Waste Management Services. This item has been flagged to be discussed at the FOS JOHSC. LST Comments: No updates at this time.			
132233	с	Oct 20, 2023	Cut with Broken Mercury Thermometer A student was removing a thermometer from a still-head adaptor. The student said it was tight, pulled hard, and broke the thermometer, cutting the student's index finger in the process. The affected area was washed immediately and UBC First Aid was called. It is unknown whether the mercury had contact with the skin or area that was cut. Campus security responded to the first aid call around 10:50am, and escorted the student to the hospital to get tested for heavy metal poisoning, and to see if the wound needs further attention (it has stopped bleeding by the time campus security arrived). There was a drop of mercury, which spilled out of the broken thermometer. The spill was cleaned up immediately. During the investigation it was noted that the thermometer should be removed from the distillation apparatus once it has cooled. When removing the thermometer from the apparatus while it is warm, the thermometers have a tendency of getting stuck at the position of the ground glass joint. Actions and Resolutions: (1) Lab instructor to check if lab manual has instructions to indicate if the distillation apparatus and thermometer should be cooled before dismantling it. (2) Lab instructor to remind students not to use excessive force when handling glassware	MC/CZ/DG	In Progress	IP





4. REVIEW CAIRS REPORT OF ACCIDE	4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:			
	(3) Staff to check if alcohol thermometers can effectively			
	replace the mercury thermometers being used in the lab.			
	(4) Provide mercury spill cleanup procedures to lab			
	instructor and lab technician.			
	(5) Print and place mercury spill cleanup procedures into			
	the existing mercury spill kits. Label the spill kit with			
	appropriate signage			
	(6) Properly dispose of brush that may have been			
	contaminated with mercury.			
	(7) Identify the joint of the distillation apparatus and check			
	to see if any further recommendations are required (ie. Use			
	of grease).			
	<ul> <li>It has been suggested to the instructor to update the</li> </ul>			
	lab manual with a note to not use excessive force and			
	to wait for the apparatus to cool down before			
	dismantling the distillation apparatus.			
	It was discussed that if the joints of the still head and			
	the thermometer are ground glass, it is recommended			
	to use grease or a Teflon sleeve. Generally, if ground			
	glass joints are heated without grease or a Teflon			
	sleeve, they may fuse together. MC and DG to further investigate.			
	<ul> <li>Corrective actions items 1 through 6 have been</li> </ul>			
	completed. Item 7 is in progress. The CHEM LST will be			
	working with lab directors to recommend greasing the			
	ground glass joints.			
	LST Comments:			
	No updates at this time.			
	No apaates at this time.			

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4. REVIEW CAI	RS REPOR	RT OF ACCIDEN	ITS/INCIDENTS:			
134000/133998	c	Jan 30, 2024	<ul> <li>Flash Chromatography – Near Miss</li> <li>Graduate student was performing flash chromatography.</li> <li>While drying the column using an adapter, without a pressure release valve, the adapter was stuck in the column and the adapter burst in the fume hood with the sash down. There may have been a sudden surge in building air pressure, which was reported to facilities. Safety glasses, lab coat, gloves, long pants and closed-toed shoes were being worn.</li> <li>Actions and Resolutions: <ul> <li>(1) Update procedures to include the use of an appropriate adapter equipped with pressure release valve, to include emergency response, and to check for cracks in the glassware before work begins. Once procedures have been updated, re-train everyone.</li> <li>(2) Recommend for group to purchase extra adapters so they are available to students and workers.</li> <li>(3) Notify group to be aware that column support material can get caught within the glass joints and cause the joint to get stuck.</li> </ul> </li> <li>LST Comments: <ul> <li>All corrective actions have been completed.</li> </ul> </li> </ul>	MC/CZ	Complete	С
134053/134061	С	Mar 13, 2024	<b>Contact with Electric Current</b> In preparation for an upcoming scientific experiment at TRIUMF, our team was engaged in setting up the necessary equipment. This involved a visit to the site by our software developer. The software developer encountered a non- responsive device, while configuring equipment. The developer, unaware the device was connected to a live 400 V DC supply, attempted a battery replacement to a current meter and received a minor shock. The incident was immediately reported to our on-site electrical engineer and	MC/FM/ MR/HK	Complete	C





4. REVIEW CAIRS REPORT OF ACCIDEN	ITS/INCIDENTS:	
4. REVIEW CAIRS REPORT OF ACCIDEN	<ul> <li>then to me by our business development developer. We paused all TRIUMF operations pending an investigation. The developer, seemingly unharmed but seeking reassurance, went to the hospital escorted by our business development manager, was examined, found unharmed and swiftly released from the hospital.</li> <li>Actions and Resolutions: <ul> <li>(1) Document site-specific working procedures, train all workers on the procedures and make a copy available on-site. The procedures should also include emergency response and working alone procedures.</li> <li>A comprehensive emergency procedure was not observed on-site. It's important to have clear instructions available detailing the steps to take in various emergency scenarios.</li> <li>(2) Obtain and use a non-contact voltage tester as a tool to determine if equipment has been de-</li> </ul> </li> </ul>	
	<ul> <li>(2) Obtain and use a non-contact voltage tester as a tool to determine if equipment has been deenergized.</li> <li>(3) Complete the following electrical upgrades listed below.</li> <li>Install battery clamps/posts. The battery's mounting to its structure is currently insecure and needs to be more firmly attached.</li> <li>Replace grounding clamps with bolts. The grounding connections could benefit from the use of higher-quality connectors to ensure better safety.</li> </ul>	
	<ul> <li>Install power switch for battery. The battery's manual connection could be enhanced by installing a switch at the connection point.</li> </ul>	



4. REVIEW CAIRS REPORT OF ACCIDEN	S/INCIDENTS:	
4. REVIEW CAIRS REPORT OF ACCIDENT	<ul> <li>S/INCIDENTS:</li> <li>Install electrical hazard signage in immediate working area and include the voltage level.</li> <li>Use a physical barrier to shield personnel from live metal parts.</li> <li>(4) There were additional improvements recommended during the investigation, which are listed below. These should have been addressed in the annual and monthly safety inspections.</li> <li>Provide an emergency phone for workers. No telephone available in the vicinity. It is essential to have a phone readily available, complete with appropriate labeling for emergency use.</li> <li>Properly secure air lines. Compressed air lines should be securely fastened to prevent them from hanging loosely in the area, which poses a risk.</li> <li>Address all tripping hazards. Several tripping hazards were identified within the area that need</li> </ul>	
	Address all tripping hazards. Several tripping	



4. REVIEW CAIRS	REPORT OF ACCIDENTS/INCIDENTS:	
	(5) Provide group with UBC CHEM's Emergency	
	Response procedures and provide information on h	now
	to report immediately reportable incidents to Cam	pus
	Security at 604-822-2222.	
	(6) Check to see if annual and monthly inspections	are
	being done.	
	TRIUMF safety staff have confirmed that annual and	
	monthly inspections are being done. The incident	
	investigation was completed with the TRIUMF Safety	
	Officer (Terry Sanghera) and Engineering Physics Group	
	Leader (Marco Marchetto). UBC CHEM is collectively	
	working with TRIUMF to get these corrective actions	
	completed.	
	LST Comments:	
	All corrective action items have been completed.	



### Chemistry

Faculty of Science

5.	REVIEW OF WORKPLACE SAFETY INSPECTIONS (including any changes to equipment, machinery or work processes that may affect the health
	or safety of workers)

Attach inspection checklist(s) and report(s) to these meeting minutes and use this table to record discussion and new recommendation(s)

<b>Item #</b> (Use Inspection #)	Priority	Discussion/Comments/Recommendations	Assigned To	Follow up: Date Pending	Status
Sep 2018	с	<ul> <li>Demo Lab Areas</li> <li>BH will oversee day-to-day processes</li> <li>KM/HW cleaned-up benchtop areas on Mar 10; sorted out chemicals for disposal on Mar 16 and plan to attend for further clean-up/disposal processing on Mar 25 in the Demo Room</li> <li>Jose has a TA organizing the Demo Kits <ul> <li>Lab Tech &amp; TA working on Demo Kits</li> <li>Inspection of the demo areas have been completed. All items listed above are on hold or in progress as follow up items.</li> </ul> </li> <li>LST Comments: In progress.</li> </ul>	BH/KM KM	On hold In Progress	IP
Feb 2024		<ul> <li>CHEM Shops &amp; Services</li> <li>The remaining shops (CHEM D116/118) and services (CHEM D315) areas were recently inspected in February. Only one deficiency was noted.</li> <li>Mar 2024: No updates</li> <li>LST Comments:</li> <li>No updates at this time.</li> </ul>	MR/TC	In Progress	IP
Feb 2024		CHEM D & E Research Labs and Office Areas The first round of inspections for research spaces have started. Research labs and office areas were inspected this February. Overall, there has been a significant improvement since last year's inspections. Low risk items were predominantly reported. LST Comments: 88% of the deficiencies have been completed.	MC	In Progress	IP

\* GI- General Inspection

LI - Lab Inspection

S&SI Shops & Services Inspections



6. EDUCATION AN	5. EDUCATION AND TRAINING					
(General discussion)	, RMS Cour	ses, external training opportunities etc. For all actionable items please list below)				
ltem #	Priority	Discussion/Comments/Recommendations	Assigned To	Follow up: Date Pending	Status	
N/A	E	UBC CHEM Fire Extinguisher Training Please contact <u>safety@chem.ubc.ca</u> to sign up.	MC	N/A	N/A	

Original Item #	Priority	Action Plan (Actions Taken/Need to be taken)	Assigned To	Follow up: Date Pending	Statu s
E	E	<b>CHEM LST Safety Minutes</b> Prepare meeting minutes, post approved minutes to the Chemistry website, and upload a copy to the FOS JOHSC SharePoint site.	МС	Ongoing	N/A
2020	с	Development of Departmental SWPs Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemIst within the January 18, 2024 CHEM LST minutes. LST Comments: Referred Forward.	DG	Referred Forward	N/A
Dec 2021	С	<ul> <li>Earthquake Securing Straps for Large Dewars and Compressed Gas Cylinders Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemIst within the January 18, 2024 CHEM LST minutes. </li> <li>Nov 2023 Update - The scope of the project has been re-defined and is in progress. The Mech Shop will continue to work with Building Operations to complete this project. </li> <li>Feb 2024 Update - Proposal was drafted for CHEM C, and was sent to Building Operations as a service request for carpenters.</li> <li>March 2024 Update – In progress.</li> <li>LST Comments: Upgrades in CHEM C have been completed.</li></ul>	MR	In Progress	IP



## Chemistry Local Safety Team Meeting

7. ONGOING	BUSINESS – S	Status of Action Items (includes review of previous meeting minutes)			
Feb 2021	с	<b>Dispensing LN2 Safely - Training</b> It would be useful to have an informational course and quiz available to the department as a training tool for dispensing liquid nitrogen. <b>LST Comments:</b> This item has been referred forward.	MR	Referred Forward	RF
July 2023		<ul> <li>Earbuds and headphone Use</li> <li>There was an incident on campus where an individual was calling for help for over 8 minutes. Unfortunately, the other individuals in the lab could not hear the call for help because they were wearing headphones/earbuds that restricted them for hearing anything else. The individual was very distressed at the time. At UBC Chem, depending on the supervisor, there are both the "no earbud/headphones policy" or the "only one earbud policy". Wearing headphones or both earbuds at a time are not allowed. The Chem LST will review this policy.</li> <li>DG to discuss this at the next faculty meeting.</li> <li>Oct 2023 Update: This item was discussed at the faculty meeting on Sept 28, 2023. A subcommittee will be formed and discussions will be continued offline. It was suggested that we involve the CGSS for their perspective.</li> <li>A subcommittee was established and are in the process of collecting information related to wearing personal (non-PPE) earbuds in the workplace.</li> <li>LST Comments:</li> <li>The use of earbuds, earphones and/or headphones will be terminated and a new policy will be implemented. A first draft has been made. Picture of hearing devices will be added to the policy.</li> </ul>	BH/ MC/ DG/CZ/ ZH	In Progress	IP
Oct 2023	с	<ul> <li>Diethyl Ether Use</li> <li>Chem LST to assess if there are any exposure concerns for using diethyl ether in closed vessels on the bench top of the teaching labs.</li> <li>LST Comments:</li> <li>No updates at this time.</li> </ul>	MC/DG	In Progress	IP



8. NEW & O	THER BUSINE	SS			
General di	scussion iten	ns (list actionable items below)			
Item #	Priority	Discussion and/or Action Items	Assigned To	Date to be Completed	Status
N/A	E	CHEM LST Member Updates and Concerns Are there any safety concerns or updates that were not discussed? LST Comments: Derek – Monica – The annual fume hood air flow tests have begun and should be completed by the second week of May. We will be working closely with building operations to get the repairs and issues completed sooner than later. Ken – Mohamad – Karen – Guillaume – Ben – Tori – Patrick – Cameron – Jacqueline – Rich/SRS/Guests –	N/A	N/A	N/A
N/A	E	SRS Updates         Recommended items to discuss at JOHSC/LST Meeting         First Aid Regulation Changes         On November 1, 2024, amendments to the Occupational Health and Safety         (OHS) Regulation relating to occupational first aid will come into effect. The         changes mean employers across the province will need to review their current         first aid plans and make necessary adjustments.         Employers are required to complete a first aid assessment in consultation with         workers to establish first aid needs that considers factors like workplace location         and hazard ratings. The OHS Regulation will also be aligning with the Canadian	SRS Updates	N/A	N/A



8. NFW & OTHER BUSINE	ss		
8. NEW & OTHER BUSINE	SS Standards Association standards, which will result in changes to the names and duration of the training. As a result, equipment requirements will also be aligned with the CSA standards. What does this mean to your JOHSC/LST? While these changes to the first aid program at the UBC Point Grey campus will be managed by Campus Security, off campus locations will be required to implement these changes as well. Your JOHSC/LST can continue to remind faculty and staff of how they can access first aid at our workplaces (e.g. UBC-V		
	Campus 604-822-4444). For any specific questions around regulatory changes or the process of completing first aid assessments for offsite UBC-V locations including field work, please contact <u>dustin.szeto@ubc.ca</u> . For a comprehensive overview of all updates to the first aid regulations, visit the <u>WorkSafeBC website</u> . <b>Building Emergency Response Plan (BERP) Submissions</b> As a reminder, please review and update the Building Emergency Response Plan (BERP) for your area annually and ensure all building occupants receive the final version. This year, please note the important addition requiring the submission		
	of the completed BERP with any individual evacuation plans to <u>safety.risk@ubc.ca.</u> Informational Items Day of Mourning Across Canada, April 28 has been designated as the <u>Day of Mourning</u> . It is a day to remember those who have lost their lives to work related incidents or occupational disease and to renew our commitment to creating healthy and safe		
	workplaces. <b>LST Training</b> You can register LST training <u>here</u> .		





WorkSafeBC Inspection Reports (IR)		
There were five WorkSafeBC Inspection Reports received since the last co-chair		
email.		
1) MARCH 1, 2024 – IR #202417748025A		
Description:		
This Inspection Report documents the reporting by the employer of a workplace		
incident that occurred on February 28 at the Jack Bell Research Centre where a		
<ul> <li>worker was exposed to Isoflurane.</li> <li>There were zero (0) orders issued to the University.</li> </ul>		
o mere were zero (o) orders issued to the oniversity.		
JOHSC/LST General Learnings/Discussion Points:		
• When an incident occurs, the employer must investigate and report into		
CAIRS within 48 hours of the occurrence so that a preliminary investigation		
can be completed within 48 hours as required by section 71 of the Workers		
Compensation Act		
Reminder that incident investigations must be completed within 30 days, with description, unsefe conditions, contributors, connective estimated		
with description, unsafe conditions, contributors, causes, corrective actions, and worker rep participation.		
2) MARCH 4, 2024 – IR # 202419279016A		
Description:		
On March 1, a worker dropped an ethylene oxide ampoule, causing it to crack.		
They immediately exited the room, informed their supervisor, and contacted 911.		
The fire department responded, and the worker was released from the hospital		
after a medical examination.		
• There were zero (0) orders issued to the University.		
JOHSC/LST General Learnings/Discussion Points:		
• As a reminder, any workplace incident that has caused a serious or life-		
threatening injury, had the potential for serious injury, plus all other		



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8. NEW & OTHER BUSINI	ESS	
	This Inspection Report documents the receipt and acceptance of the employer's	
	preliminary Incident Investigation Report, relating to an incident which occurred	
	on March 1, when a worker dropped an ethylene oxide ampoule, causing it to	
	crack.	
	• There were zero (0) orders issued to the University.	
	JOHSC/LST General Learnings/Discussion Points:	
	• Encourage everyone to report incidents and near misses into CAIRS within 48	
	hours of the occurrence so that a preliminary investigation can be completed	
	within 48 hours as required by section 71 of the Workers Compensation Act	
	Reminder that incident investigations require a site visit that must be	
	completed within 30 days, and include a detailed description of incident,	
	unsafe conditions, contributors, causes, corrective actions, and the name of	
	the participating worker representative.	
	5) MARCH 27, 2024 – IR #202416973032A	
	Description:	
	On March 25, 2024, a WorkSafeBC officer followed up on a report of an unsafe	
	condition at the AMS Student Nest. The officer met with employer	
	representatives to review matters of compliance with the Workers Compensation	
	Act (WCA) and the Occupational Health and Safety Regulation (the Regulation).	
	The reported unsafe condition is currently being investigated and will remain	
	inactive until the concerns are addressed.	
	<ul> <li>There was one (1) order issued to the University.</li> </ul>	
	o Unsafe Condition - Order #1: An order was issued under section 3.10 of the	
	OHSR that states, "Whenever a person observes what appears to be an unsafe or	
	harmful condition or act the person must report it as soon as possible to a	
	supervisor or to the employer, and the person receiving the report must	
	investigate the reported unsafe condition or act and must ensure that any	
	necessary corrective action is taken without delay." The employer must submit an	
	investigation report and corrective actions by April 19, 2024, ensuring the unsafe	
	condition is addressed.	



8. NEW & OTHER BUSINE	ESS	
	<ul> <li>JOHSC/LST General Learnings/Discussion Points:</li> <li>Workers have the right to refuse work they reasonably believe to be unsafe. They should immediately inform their supervisor, who is then required to investigate the concern promptly and remedy it if feasible. For more information on responsibilities for supervisors visit the Investigations for Supervisors.</li> <li>A supervisor or employer representative must document any refusal of unsafe work, referring to the <u>Refusal of Unsafe Work Investigation Report</u> for guidance. Additionally, should an employer be in the midst of resolving a work refusal, a written notice must be issued to any worker assigned to or permitted to perform the work in question using the aforementioned investigation report.</li> <li>For comprehensive details on the process of refusing unsafe work, including steps to take and documentation requirements, please visit the UBC Safety &amp;Risk Services website at <u>Refusal of Unsafe Work</u>.</li> </ul>	

### THE UNIVERSITY OF BRITISH COLUMBIA

# UBC

**Chemistry** Faculty of Science

9. NEXT MEETING				
Date:	May 16, 2024			
Time:	11:00 am			
Location:	Online Zoom Meeting			

10. MEETING ADJOURNED				
Time:	11:37 am			

### LEGEND

PRIORITY:		STATUS:	
А	<b>High Risk, Immediate Response within 1-2 days:</b> Potential for causing loss of life, body part and/or extensive loss of structure, equipment or material.	N	New
В	<b>Moderate Risk, response as soon as possible within 1 week:</b> Potential for causing a serious injury, illness or property damage.	R	Repeat
С	Low Risk, response as soon as possible; Next regular inspection or further investigation required: Probable potential for causing a non-disabling injury or non-disruptive property damage.	С	Complete
D	Reminders	IP	In Progress
E	Information	RF	Referred forward

Send a copy of the meeting minutes to the JOHSC. Highlight important items that must be reviewed/discussed at next JOHSC meeting.

Monthly Distribution and Posting of Approved Meeting Minutes (Required):

- All LST members
- Appropriate JOHSC