Chemistry Local Safety Team Meeting Minutes APPROVED

Name of Team:	Chemistry Local Safety Team	**Chair(s):**	Derek Gates & Monica Clarkson
Date:	March 21, 2024	**Time:**	11:00 am
		Location:	Online Zoom Meeting

AGENDA:

1. Roll Call
2. Approval of Previous LST Meeting Minutes
3. Additional Agenda Items & Approval of Agenda
4. Review Central Accident/Incident Reporting System (CAIRS) report of Accidents/Incidents
   - Monthly Incident List & Statistical Summary Report
5. Review Workplace Safety Inspections (including any changes to equipment, machinery or work processes that may affect the health or safety of workers)
6. Review Education and Training
7. Ongoing Business – Status of Action Items, Review of Previous Minutes
8. New and Other Business
9. Next Meeting
10. Meeting 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	☑	☐	☐
Mohamad Rezaei	Chemistry - M&P, Director, Technical Services	☑	☐	☐
Tori Christianson	Chemistry – CUPE 2950, Outreach and Communications	☑	☐	☐
Patrick Dever	Chemistry – Shops and Services Tech	☑	☐	☐
Ben Herring	Chemistry – Research Tech	☐	☑	☐
Jacqueline Higgins	Chemistry – Graduate Student	☑	☐	☐
Cameron Zheng	Chemistry – Graduate Student	☑	☐	☐

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

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

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)

	Yes	No
Are the minutes approved?	☑	☐

3. ADDITIONAL AGENDA ITEMS & APPROVAL OF AGENDA

	Yes	No
Is the agenda adopted?	☑	☐

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)*

Item # (Use CAIRS Incident ID #)	Priority	Date	Action Plan (Actions Taken/Need to be taken)	Assigned To	Follow up: Date Pending	Status
129681/129682	C	Jul 22, 2022	**CHEM Glass Waste** Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemlst 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 CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			metal pails have already been labelled and is still in progress. **LST Comments:** Mar 2024 - It was noted that the CHEM LST has had lack of support from UBC Waste Management Services. This item has been flagged to be discussed at the FOS JOHSC			
132233	C	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 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). • It has been suggested to the instructor to update the 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. **LST Comments:** Corrective actions items 1 through 6 have been completed. Item 7 is in progress. The CHEM LST will be working with lab directors to recommend greasing the ground glass joints.			
133762/133761	C	Jan 29, 2024	**Ethyl Acetate Spill** The ethyl acetate pump (manual) had been identified as needing servicing. The pump had been removed from a barrel three days prior and pumped to remove any residual solvent. It was left in the dispensing room to evaporate from Friday afternoon to Monday afternoon. The worker	MC/KB/PD	Closed	C

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			collected the pump, again pumped it to ensure it was empty, and assumed it was empty. The worker was carrying the pump to the mechanical shop for servicing when solvent did come out of the pump head and spilled on the workers pants around the knees. They informed the safety officer who advised them to use the emergency shower. They used the shower in D-wing 1st floor which is the nearest shower to the incident location. The worker refused medical treatment and UBC First Aid several times, as they were feeling fine. The pump was left to air out further. **Actions and Resolutions:** (1) Solvent Filling SWP to be updated with new procedure on how to dry out a pump before maintenance. Including what PPE to wear when transporting the pump between locations. (2) Emergency response procedures to be circulated to Stores staff. (3) Get pump repaired if possible or replaced if deemed necessary. (4) Remind worker to wear PPE when transporting the pump between locations. **LST Comments:** Procedures have been updated. All corrective actions have been completed.			
133807/133799	C	Feb 2, 2024	**Skin Irritation** The person involved noticed a rash on their wrist after handling solid chemicals. All proper PPE was worn during the chemical handling and the specific chemical source is unknown. The affected area was washed with soap and campus first aid was called for assessment.	MC/MS	Closed	C

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			Notes from investigation: -All appropriate PPE was being worn, including safety glasses, lab coat, nitrile gloves, long pants and closed-toed shoes. -The individual had not noticed a chemical spill or chemical contact on their gloves and lab coat during the cleanup. -The rash was noticed after the task was being completed, in which time UBC First Aid was called. - UBC First Aid attended and noted that the affected area looked like an allergic reaction and had no additional instructions for the individual. - Out of precaution the individual did seek medical attention. - The individual is uncertain what the rash was caused by. **Actions and Resolutions:** (1) Check allergies related to glove material. (2) Check lab coat Velcro for abrasion to skin and lab coat fit. (3) Chemical sensitizers may have caused the rash. Ask individual to monitor and be aware of working with sensitizers. **LST Comments:** It was discussed that this could have been caused by a chemical sensitizer. The group has been asked to take extra precaution when working with sensitizers. All corrective action items have been completed.			

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
134000/133998	c	Jan 30, 2024	**Flash Chromatography – Near Miss** Graduate student was performing flash chromatography. 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. **Actions and Resolutions:** (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. (2) Recommend for group to purchase extra adapters so they are available to students and workers. (3) Notify group to be aware that column support material can get caught within the glass joints and cause the joint to get stuck. (4) MC to provide contact and notify the group that the Sammis group has additional procedures, which could be useful. **LST Comments:** Correct action item 2 has been completed. An addition corrective action was added to notify group to be aware that column support material can get caught within the glass joints, which can potentially cause the adapter and column to get stuck. Also, it was noted that the Sammis Group has additional procedures that could be useful to the group. MC to notify the group.	MC/CZ	In Progress	IP

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
134036	c	Mar 8, 2024	**Unwell Student** Student started to feel dizzy and faint while performing a lab. Student was taken out of the lab and sat in the hallway where it is cooler and less busy. Student was given water and asked if she needed anything to eat. The student denied but them later ate a granola bar. The student said they could not get back to their residence on their own as they felt they may faint. Chemistry safety officer and campus first aid were called for help. Campus first aid offered to take the student to the hospital but they refused. Campus first aid transported the student back to their residence. **LST Comments:** This incident was a personal medical issue. UBC First aid was called and emergency response was followed.	MC	Complete	C
134053/134061	c	Mar 13, 2024	**Contact with Electric Current** 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 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.	MC/FM/ MR/HK	In Progress	IP

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			Actions and Resolutions: (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. • 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. (2) Obtain and use a non-contact voltage tester as a tool to determine if equipment has been de-energized. (3) Complete the following electrical upgrades listed below. • Install battery clamps/posts. The battery's mounting to its structure is currently insecure and needs to be more firmly attached. • Replace grounding clamps with bolts. The grounding connections could benefit from the use of higher-quality connectors to ensure better safety. • Install power switch for battery. The battery's manual connection could be enhanced by installing a switch at the connection point. • Install electrical hazard signage in immediate working area and include the voltage level. • Use a physical barrier to shield personnel from live metal parts. (4) There were additional improvements recommended during the investigation, which are			

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			listed below. These should have been addressed in the annual and monthly safety inspections. • 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. • Properly secure air lines. Compressed air lines should be securely fastened to prevent them from hanging loosely in the area, which poses a risk. • Address all tripping hazards. Several tripping hazards were identified within the area that need to be addressed. • Provide appropriate "Exit" signage. The room lacks proper exit signage, which is crucial for safety and compliance with regulations. • Address issues with spatial limitations. The hallway is relatively narrow, flanked on both sides by electronic racks and equipment anchored firmly in place, increasing the risk of tripping or falling. Additionally, there is a risk of head injuries from the steel structures overhead, which house cables and other components, especially when standing on a step ladder. (5) Provide group with UBC CHEM's Emergency Response procedures and provide information on how to report immediately reportable incidents to Campus Security at 604-822-2222. (6) Check to see if annual and monthly inspections are being done.			

4. REVIEW CAIRS REPORT OF ACCIDENTS/INCIDENTS:						
			LST Comments: All corrective action items are in progress, except for item 5 and 6, which have been completed. 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.			

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)

Item # (Use Inspection #)	**Priority**	**Discussion/Comments/Recommendations**	**Assigned To**	**Follow up: Date Pending**	**Status**
Sep 2018	C	**Demo Lab Areas** • BH will oversee day-to-day processes • 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 • Jose has a TA organizing the Demo Kits • Lab Tech & TA working on Demo Kits • Inspection of the demo areas have been completed. All items listed above are on hold or in progress as follow up items. **LST Comments:** In progress.	BH/KM KM	On hold In Progress	IP IP

5. REVIEW OF WORKPLACE SAFETY INSPECTIONS (including any changes to equipment, machinery or work processes that may affect the health or safety of workers)					
Nov 2023	C	**Chem A Research Labs** All research spaces within Chem A were inspected in November. This will be the second round of inspections for these spaces. The second round of inspections were successful. A lot of labs were found to have no deficiencies with respect to the inspection checklist. Feb 2024 Update - 90 % of the deficiencies have been completed. **LST Comments:** All corrective actions have been completed.	MC	Complete	C
Feb 2024		**CHEM Shops & Services** The remaining shops (CHEM D116/118) and services (CHEM D315) areas were recently inspected in February. Only one deficiency was noted. **LST Comments:** No updates at this time.	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:** In progress.	MC	In Progress	IP

* *GI- General Inspection*
LI - Lab Inspection
S&SI Shops & Services Inspections

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

7. ONGOING BUSINESS – Status of Action Items (includes review of previous meeting minutes)					
Original Item #	**Priority**	**Action Plan (Actions Taken/Need to be taken)**	**Assigned To**	**Follow up: Date Pending**	**Status**
E	E	**CHEM LST Safety Minutes** Prepare meeting minutes, post approved minutes to the Chemistry website, and upload a copy to the FOS JOHSC SharePoint site.	MC	Ongoing	N/A
2020	C	**Development of Departmental SWPs** Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemlst within the January 18, 2024 CHEM LST minutes. **LST Comments:** No updates at this time.	DG	Ongoing	N/A
Dec 2021	C	**Earthquake Securing Straps for Large Dewars and Compressed Gas Cylinders** Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemlst within the January 18, 2024 CHEM LST minutes. • 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. • Feb 2024 Update - Proposal was drafted for CHEM C, and was sent to Building Operations as a service request for carpenters. **LST Comments:** In progress.	MR	In Progress	IP

7. ONGOING BUSINESS – Status of Action Items (includes review of previous meeting minutes)					
Feb 2021	C	**Dispensing LN2 Safely - Training** It would be useful to have an informational course and quiz available to the department as a training tool for dispensing liquid nitrogen. **LST Comments:** This item has been referred forward.	MR	Referred Forward	RF
July 2023	C	**PPE Requirements in Chem Stores** It was confirmed through UBC SRS that there are no regulatory requirements for wearing PPE in Chem Stores for shopping. Depending on the task being done, staff are required to wear basic PPE and any additional PPE as required. Due to past incidents where hazardous materials were spilled in the area, it was recommended that at minimum everyone should wear safety glasses (new suggestion), lab coat (new suggestion), long pants and closed-toed shoes. Previous discussions and notes can be found at https://chem.ubc.ca/safety/chemlst within the January 18, 2024 CHEM LST minutes. **LST Comments:** Starting April 2, all individuals entering Chem Stores will be required to wear safety glasses, lab coat (new suggestion), long pants, and closed-toed shoes. Spare safety glasses and lab coats will be available. Signage will be updated. This will be discussed at the faculty meeting. Faculty will be asked to discuss this with their entire group. In addition, a notice of the new requirements will be sent out to the department.	N/A	N/A	IP

7. ONGOING BUSINESS – Status of Action Items (includes review of previous meeting minutes)					
July 2023		**Earbuds and headphone Use** 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. DG to discuss this at the next faculty meeting. 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. A subcommittee was established and are in the process of collecting information related to wearing personal (non-PPE) earbuds in the workplace. **LST Comments:** The use of earbuds, earphones and/or headphones will be prohibited in lab and shop areas. The existing one ear bud policy will be terminated and a new policy will be implemented. A first draft has been made and is in progress.	BH/ MC/ DG/CZ/ ZH	In Progress	IP
Oct 2023	C	**Diethyl Ether Use** 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. **LST Comments:** No updates at this time.	MC/DG	In Progress	IP

8. NEW & OTHER BUSINESS					
• General discussion items (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:** **Monica –** It has been noticed that Building Operations staff when entering chemistry labs do not wear all the required PPE. This issue has been brought up at the Faculty of Science Joint Occupational Health and Safety Committee to help with awareness.	N/A	N/A	N/A
N/A	E	**SRS Updates** **Recommended items to discuss at JOHSC/LST Meeting** **Electrical Safety Website** Safety & Risk Services now has information focused on electrical safety. This resource is designed to equip you with the knowledge and tools necessary to minimize risks of fire, shock, or injury associated with electrical systems. Please visit the Safety & Risk Services website to learn more about safe work practices on electrical safety. **SRS General Inspection Updates** *Emergency Exit Signs* UBC Facilities has been receiving calls to install new emergency signs as an action item resulting from local area inspections. As a result, we have revised **Item # B-4** under section **B. Interior – Common Areas, Hallways, and Stairs** in the General Inspection Template. This revision specifies that the inspection of illuminated emergency exit signs is applicable only to "existing or installed" exit signs. The focus should be on ensuring that all current or newly installed signs are visible and functional. *Electrical Panel Clearance*	SRS Updates	N/A	N/A

8. NEW & OTHER BUSINESS					
		Building Operations' teams, have observed that the required 1-meter clearance in front of electrical panels are not being maintained throughout campus. When conducting your inspections, be diligent in ensuring this clearance is maintained. Please contact your facilities manager if you have any questions. Relevant inspection templates have been updated to reflect this communication. **Informational Items** **Daylight Savings Time starts Sunday March 10 at 2:00am** On March 10, set your clocks forward one hour. In anticipation of losing one hour of sleep, here are some tips to ease the effects of the switch: • Rest up: Go to bed earlier to get your usual amount of sleep so you can be well rested and alert • Plan ahead: Give yourself extra time to drive to and from work especially during the Monday commute • Step up the safety: Take extra safety precautions on days following the switch to help avoid workplace incidents ○ Consider scheduling particularly hazardous work later in the week (where possible) after employees have had more time to adjust their sleep schedules **WorkSafeBC Inspection Reports (IR)** There were two WorkSafeBC Inspection Reports received since the last co-chair email. 1) FEBRUARY 6, 2024 – IR #202416973017A Description: On February 2, 2024, a worker slipped at Perugia Café, causing them to fall and strike their head. The worker received first aid on scene, and was then transported to a hospital for medical treatment. • There were zero (0) orders issued to the University. JOHSC/LST General Learnings/Discussion Points:			

8. NEW & OTHER BUSINESS					
		• As a reminder, any workplace incident that has caused a serious or life-threatening injury, plus all other immediately reportable incidents, must be reported to Campus Security at 604-822-2222 (after calling 911 emergency services) as part of the incident response. • More information regarding what to do in the event of a serious incidents, possible serious incident, or other immediately reportable incidents can be found on the SRS Website. • 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. 2) FEBRUARY 12, 2024 – IR #202416973021A •Description: • This Inspection Report documents the receipt and acceptance of the employer's full Incident Investigation Report (EIIR), relating to an incident which occurred February 2, when a worker slipped at Perugia Café, causing them to fall and strike their head. • There were zero (0) orders issued to the University. JOHSC/LST General Learnings/Discussion Points: • Reminder that incident investigations must be completed within 30 days, with description, unsafe conditions, contributors, causes, corrective actions, and worker rep participation.			

9. NEXT MEETING	
Date:	April 18, 2024
Time:	11:00 am
Location:	Online Zoom Meeting

10. MEETING ADJOURNED	
Time:	11:51 am

LEGEND

PRIORITY:		STATUS:	
A	**High Risk, Immediate Response within 1-2 days:** Potential for causing loss of life, body part and/or extensive loss of structure, equipment or material.	**N**	New
B	**Moderate Risk, response as soon as possible within 1 week:** Potential for causing a serious injury, illness or property damage.	**R**	Repeat
C	**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.	**C**	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