Agenda – August 29, 2016 Group 9 Health and Safety Committee (College of Engineering)

1. Attending

Fiona Spencer, AA
Colleen Irvin, BioE
Sean Yeung, CEE
Kameron Harmon, ChemE
Alex Lefort for Tracy Erbeck, CSE
Sonia Honeydew, DO
Karen Liebert, EE

Angie Haggard, EH&S Emma Alder, EH&S Morgan Tubby, HCDE Sheila Prusa, ISE Bill Kuykendall, ME Chris Adams, MoIES Tatyana Galenko, MSE

2. Absent

Michael Glidden, DO

3. New member

• Introductions for ChemE's new rep (and new UW employee) Kameron Harmon. Who else manages shared labs? Who else is a BC? How can we best share resources and best practices?

4. Previous Meeting Minutes

• July 2016 - approve?

5. Group Business

- Great Shakeout earthquake drill on 10/20 at 10:20am
- Hate speech graffiti and Dean's 7/26 email
- University of Hawaii lab accident review

6. Department Incident Reports

- ChemE punctured finger while uncapping needle (Apr)
- BioE mouse bite during training (May)
- ChemE sodium hydroxide splash to face (Jun)
- ME wire hanging in hood poked eye (Jul)
- CEE jammed finger when wrench slipped (Jul)
- MSE former lab member working alone at night, explosion in hood, small burn (Jul)
- CEE unsecure clamp to forklift, plate slipped and hit face + knees (Jul)

7. UW-Wide Meeting

- Jul minutes attached.
- Aug agenda attached. Highlights: we answered the H&S Governance task force survey questions about what UW could do better; and Angie will email draft templates for charter, minutes, and attendance taking for H&S groups.

8. Department Updates

9. Next Meeting

• September 26th at 2pm, in CSE 128

Meeting Date: July 25, 2016

Attended

Fiona Spencer, AA
Tracy Erbeck, CSE
Sonia Honeydew, DO
Karen Liebert, EE
Angie Haggard, EH&S

Morgan Tubby, HCDE Bill Kuykendall, ME Chris Adams, MolES Tatyana Galenko, MSE

Absent

Colleen Irvin, BioE

J. Sean Yeung, CEE

Debbie Carnes, ChemE

Michael Glidden, DO Emma Alder, EH&S Sheila Prusa, ISE

Guest Speaker

- Stacie Smith, Seismic Resilience Program Manager, Emergency Management earthquake preparedness
 - Stacie has a Masters in Infrastructure Planning and Management. This
 addresses how we work on our own and how we are interdependent,
 identifying critical infrastructure systems such as agriculture, water supply,
 public health, etc.
 - Stacie offers free earthquake mitigation walk-throughs
 (https://www.washington.edu/uwem/mitigation-walkthrough/) upon request; email smiths42@uw.edu.
 - o The New Yorker article which brought so much attention to the earthquake threat in the PNW was describing the Cascadia subduction zone (expect tsunami, plus infrastructure problems west of I-5). We have three types of quake threats here:
 - 1. Deep (e.g. Nisqually quake; most common; no tsunami)

- 2. Subduction (Cascadia or San Andreas faults; biggest tsunami threat; New Yorker article describes most extreme version, if the whole thing ripped all at once)
- 3. Coastal/Surface (e.g. "Seattle Fault" under I-90; these faults run by all three UW campuses; least likely but most disastrous)
- o Secondary threats after an earthquake include fire, tsunami, landslides, and liquefaction where once riverbeds and swamps (e.g. U-Village).
- o Personal preparedness should be addressed as All Hazards Preparedness; regardless of the disaster, you'll need to sustain yourself when displaced for a minimum of 3 days (better to plan for 7). Have these emergency supplies in your home, car, and at work. You can make yourself a wishlist on Amazon and accumulate items gradually, maybe start with a gallon of water and pair of old running shoes under your desk at work, and know where to turn off water and gas at home, and have a contact person in another state. Stacie has a list of vendors who will work with departments or individual employees. (Chris recommends Prepare Smart vendor.)
 - 1. Water
 - 2. Food
 - 3. Light
 - 4. Communication
 - 5. Medical supplies
 - 6. Warmth/shelter
 - 7. Sanitation
 - 8. Tools/equipment
 - 9. Entertainment
 - 10. Personal items
- Community Preparedness includes CERT (Community Emergency Response Team – UW training now available at Bothell), first aid training, the Seattle HUB program, SNAP (Seattle Neighborhoods Actively Prepare) and Map Your Neighborhood.
- UW Emergency Management mitigates against, prepares for, brings in subject matter experts to respond to, and helps us recover from incidents.
- o The UW Emergency Operations Center (which is not the UWEM office) is a coordination center for situational awareness and decision making.

- Scott Preston of UWEM is in charge of BARC (Business, Academic, and Research Continuity) planning – help is available when you want to work on your department's BARC plan. See APS 13.2 for compliance information:
 - http://www.washington.edu/admin/rules/policies/APS/13.02.html . Note that the university won't pay you for time not worked, so it's in your best interest to have plans in place to get back to work after a disaster.
- Crisis Communications flyer (reminder):
 http://www.washington.edu/safety/files/2015/08/emergency-toolkit-2015.pdf.
- Annual (worldwide?) earthquake drill, the Great Shakeout, is on 10/20 this year: https://www.washington.edu/uwem/2016/08/24/great-uw-shakeout/. Any building or department can choose to participate. Please contact Stacie. (Tracy suggests using phone intercom system to announce drill check with UW IT?)

Previous Meeting Minutes

• June 2016 - approved

Group Business

- EH&S Lab Safety Initiative Task Force: summary of 6/28/16 mtg
 - o 90 Pls have been invited to pilot, Deans and Chairs advised. This includes 35 out of 77 depts. About to schedule initial surveys. Each dept will have one consistent EH&S contact. Hopefully this pilot will show how best to help rest of 900 labs on campus.
 - o Criteria for invitation was 28 questions from last 1.5 years of lab safety surveys (1,000 surveys), *and* significant hazards in chemical inventory.
 - Task force reviewed questionnaire results about selection of 28 questions.
 These questions will be used in the online dashboard that shows score and compare to rest of dept, college, UW goal of 85%.
 - o EH&S studying pilot PI demographics; perhaps can group labs with similar scenarios such as lots of undergrads or no lab manager.
 - o EH&S looking for ideas for incentives/motivation.
 - o Initiative outreach will include LSI Update (newsletter), LSI webpage, LSI project branding.

- EH&S posted FSEP template (https://www.ehs.washington.edu/fsobuilding/index.shtm) and 12 Building Emergency Procedures (https://www.ehs.washington.edu/fsobuilding/bldgemer.shtm).
- Hawaii lab accident report on hold until August meeting.

Incident Reports

- ChemE punctured finger while uncapping needle (Apr). ChemE rep absent.
 Discuss this at August Group 9 mtg.
- BioE mouse bite during training (May). BioE rep absent. Discuss this at August mtg.
- ChemE sodium hydroxide splash to face (Jun). Rep absent. Discuss in August.
- EE elbow/forearm ergonomic injury (Jun). This is duplicate of May report already discussed, per Angie. Accommodations made, occupational therapy underway.
- CSE broke foot at conference in Israel (Jun). Fell less than 6" or on stairs. Off site; no corrective action needed.
- MSE octylamine leaked through gloves (Jun). Cleaning glassware, eventually feel burn and see blister, wash with soap. In future double glove or change gloves more frequently. Note that nitrile gloves should have functioned in this scenario per rating.
- MSE flask seal leaked solvent, led to fire in hood (Jun). Lab members were suspicious of setup before started, so were using caution, monitoring, and ready for small fire with fire extinguisher. Will replace insulation more often.

<u>UW-Wide Meeting</u>

- June meeting minutes attached
- July agenda attached
- July meeting highlights:
 - Stacie Smith reported on functional exercise in April called "Current Affair". This practiced and tested university-wide coordination in an imagined long term power outage, with the complicating factor of a smoke cloud drifting towards dorms and stopping traffic on two bridges.
 - Group 10, College of Environment: Dean's Office decided all departments will work together on a Husky Ready (BARC) plan. There is some redundant information between H&S Plan and Husky Ready Plan; Emma reminds us she is working on a new H&S Plan template for offices.
 - Susan Freccia of Compliance and Risk Services presented on the Health and Safety Governance Task Force, which is currently seeking survey responses about what UW could do better with H&S.

- Friday July 8th there was a serious accident that led to hospitalization and partial amputation of finger. Improperly packaged (sealed!) dry ice exploded from package. No exposure to infectious material. Reminder of Shipping Hazardous Materials training: http://www.ehs.washington.edu/psotrain/corsdesc.shtm#shmc.
- EH&S staffing: EH&S is currently short on industrial hygienists so contact
 Emma or Jude if you're having a hard time getting one. EH&S just hired
 Karen Crow as Outreach & Health Education Analyst, to start 8/1.

Department Updates

- MolES OARS report next month: someone not associated with lab for 6 months came in at 10:30pm, working alone without discussing with PI or anyone. Corrective action: PI's let building management know when someone leaves so key/card access is ended.
- EH&S EH&S staff shortage of industrial hygienists. EH&S new hire Karen Crow for educational outreach, website updates, and Lab Safety Initiative outreach awareness. Please do H&S Governance survey (Sonia forward).

Next Meeting

August 29th at 2pm, CSE 128



Report Number: 2016-04-054	Contact EH&S at 206-543-7262
Person Reporting Incident	
Last Name:KIM	First Name: ANTHONY
Phone:+1 206 543-8786	Email:andykim@uw.edu
Occupation/Position: LECTURER	Department: CHEMICAL ENGINEERING
Date Reported(yyyy/mm/dd):2016/04/19	Time of Reporting:05:45 PM
Person Involved or Affected	
Last Name:	First Name:
Phone:	Email:
Occupation/Position:Undergraduate Student	Department:
Person was in Paid Position:No	
Incident Details	
Date of Incident(yyyy/mm/dd):2016/04/18	Time of Incident:4:00 PM When Shift Begins: N/A
Campus:Seattle	Incident Location/Parking Lot:BENSON HALL
Room: 121	Other:
Incident Details:	
and put on a band-aid. Discussion of the incider piercing most likely occurred while uncapping a r	needle and applying a counterforce to the cap while newhat confined space) would be a contributing factor to
Supervisor	
Last Name:KIM	First Name: ANTHONY
Phone:+1 206 543-8786	Email:andykim@uw.edu
Occupation/Position: LECTURER	Department: CHEMICAL ENGINEERING
Classification	
Level 1: Injury requiring first aid,	
injury requiring rise ard,	
Type of Incident	
Type of Incident Injury Description: Cut. Laceration. Puncture. So	eratch, Abrasion (Open Wound),
Injury Description: Cut, Laceration, Puncture, Sc	cratch, Abrasion (Open Wound),
Injury Description: Cut, Laceration, Puncture, So Body Parts Affected: Fingers,	
Injury Description: Cut, Laceration, Puncture, So Body Parts Affected: Fingers,	eratch, Abrasion (Open Wound), ps, Scalpels, etc. (Clinical, Research, Teaching),
Injury Description: Cut, Laceration, Puncture, So Body Parts Affected: Fingers, Cause of Injury or Damage: Needles, Medical Sharp	
Injury Description: Cut, Laceration, Puncture, Son Body Parts Affected: Fingers, Cause of Injury or Damage: Needles, Medical Sharp Possible Causes	
Injury Description: Cut, Laceration, Puncture, Son Body Parts Affected: Fingers, Cause of Injury or Damage: Needles, Medical Sharp Possible Causes Equipment:	

Human Factors: Inadequate Training,

Suggested corrective action by the affected party

Proper procedures for uncapping and using hypodermic needles were demonstrated to all students during Week 1 of the quarter, however the detail to un-cap by using a continuous motion away from the needle (and avoid the tendency to apply a counter-force during uncapping) may not have been stressed. An additional precaution for un-capping needles while working in a fume hood is needed: uncapping should be done outside the fume hood, where there is ample unobstructed space to remove the cap with a continuous motion away from the needle. A written procedure and hands-on demonstrations incorporating above will be provided to all students by April 25.

Supervisor's Comments				
Root Causes: (Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)				
Recommendations/Preventive	Measures:			
Corrective Actions Target	Corrective Actions Target Date (yyyy/mm/dd): Corrective Actions Complete Date (yyyy/mm/dd):			
Other Comments:				
EHS Review				
Last Name:	First Name:	Phone Number:	Email:	
Occupation/Position: Department:				
Comments:				



Report Number: 2016-05-089 Contact EH&S at 206-543-7388

Report Number: 2016-05-089	Contact EH&S at 206-543-7388
Person Reporting Incident	
Last Name:	First Name:
Phone:+	Email:
Occupation/Position: SENIOR FELLOW	Department: BIOENGINEERING
Date Reported(yyyy/mm/dd):2016/05/23	Time of Reporting:01:58 PM
Person Involved or Affected	
Last Name:	First Name:
Phone: +	Email:
Occupation/Position: SENIOR FELLOW	Department: BIOENGINEERING
Incident Details	
Date of Incident(yyyy/mm/dd):2016/05/23	Time of Incident:1:00 PM When Shift Begins:1:00 PM
Campus:Seattle	Incident Location/Parking Lot: MAG HEALTH SCIENCES
Room: G109	Other:
Incident Details:	
When I attended the 'Mouse Hands-on Laboratory wound thoroughly 15 minutes using warm water.	' training, I was bit by the mouse. I already scrubbed my

Attachment: No

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Last Name: WANG	First Name:RUIKANG			
Phone:+1 206 616-5025	Email:wangrk@uw.edu			
Occupation/Position: PROFESSOR	Department:BIOENGINEERING			

Classification

Level 1:

Injury or Exposure, no first aid required,

Type of Incident

Injury Description: Broken or Lost Tooth, Cut, Laceration, Puncture, Scratch, Abrasion (Open Wound),

Body Parts Affected: Hands, Wrists,

Cause of Injury or Damage: Animal (Other than Primates),

Possible Causes

Equipment: Other,

Environment: Animal Action,

Policies / Procedures: Other,

Human Factors: Other,

Suggested corrective action by the affected party

Supervisor's Comments

Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

When dealing with animals, this incident may occasionally happens. This is the responsibility of trainee and

course instructor to prevent this from happening.

Recommendations/Preventive Measures:

handle with caution, following instructions given by the instructors.

Corrective Actions Target Date (yyyy/mm/dd):
2016/05/23 Corrective Actions Complete Date (yyyy/mm/dd):
2016/05/23

Other Comments:

I am the adviser for the person involved in the incident, not the supervisor for the training course (use of animals) where the incident happened. However, in future, I will emphasize the safety cautious to my personnel before training.

EHS Review				
Last Name: HAGGARD	First Name:ANGELINA M	Phone Number:+1 206 616-3442	Email:ahaggard@uw.edu	
Occupation/Position: Department:				
Comments: on 5/23/16 forwarded to OHN & Emp Health				



Report Number: 2016-06-005 Contact EH&S at 206-543-7388

Person Reporting Incident			
Last Name:LIU	First Name: ERIK		
Phone:+1 206 616-5991	Email:ejliu@u.washington.edu		
Occupation/Position: PREDOC RES ASSOC 1	Department: CHEMICAL ENGINEERING		
Date Reported(yyyy/mm/dd):2016/06/03	Time of Reporting:06:16 PM		
Person Involved or Affected			
Last Name:	First Name:		
Phone:	Email:injury@u.washington.edu		
Occupation/Position:	Department: CHEMICAL ENGINEERING		
Incident Details			
Date of Incident(yyyy/mm/dd):2016/06/03	Time of Incident:4:30 PM When Shift Begins: N/A		
Campus:Seattle	Incident Location/Parking Lot:BEN HALL INT. RSCH		
Room: 443	Other:		

Incident Details:

Subject involved received small splash of sodium hydroxide solution to face, and was subsequently sent to the eye wash station to flush exposure area. There was a tiny bit of redness on exposure area, but subject reported no symptoms after use of the eye wash station. After monitoring subject for about an hour after the incident with no change to the exposed area, the subject went home with instructions to seek medical care if there are changes to the exposed area.

Attachment: No

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Last Name: JIANG	First Name:SHAOYI		
Phone:+1 206 616-6509	Email:sjiang@u.washington.edu		
Occupation/Position: PROFESSOR	Department: CHEMICAL ENGINEERING		

Classification

Level 1:

Injury or Exposure, no first aid required,

Type of Incident

Injury Description: Pain, Irritation, Inflammation, Swelling, Other,

Body Parts Affected: Face,

Cause of Injury or Damage: Chemicals,

Possible Causes

Equipment: Other,

Environment: Chemicals,

Policies / Procedures: Other,

Human Factors: Other,

Suggested corrective action by the affected party

will require further discussion with subject with regards to events leading up to the use and splashing ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

of sodium hydroxide to assess factors and corrective actions once the subject has a clear mind and is no longer stressed over the incident

Supervisor's Comments

Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

There are no particular root causes except that the person needs to be more careful with her experiments.

Recommendations/Preventive Measures:

The person involved has significant lab experience. There are no particular root causes except that the person needs to be more careful with her experiments. I talked to this person involved and another person who assisted her immediately after the accident occured and reported this accident. I called for a group meeting on June 24, 2016 to (a) walk through several key lab safety issues again, (b) reemphasize the importance to follow UW safey rules/policies strictly and (c) make sure that all group members have received up-to-date safety training and information. Our group meetings periodically discussed lab safety issues over years and will continue to do so.

Corrective Actions Target Date (yyyy/mm/dd): 2016/06/24	Corrective Actions Complete Date (yyyy/mm/dd): 2016/06/24
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Other Comments:

(a) I have talked to the person involved and another person who assisted and reported; (b) the person involved and all others in the group have been reminded about lab safety again; (c) I have checked and made sure that all have up-to-date lab safety training and information.

EHS Review				
Last Name:	First Name:	Phone Number:	Email:	
Occupation/Position: Department:				
Comments:				

Accident Summary Report

HSC 9 7/1/2016 to 7/31/2016

Case#	Org Name	Employee Activity	Root Cause	Supervisor Corrective Action
2016-07-001	MECHANICAL ENGINEERING	I was working on my apparatus in the combustion lab, where I walked into a loose wire hanging from the hood. The wire entered my eye and caused some irritation.	Several students, working under the supervision of various faculty, share the lab space (MEB Rm B-003). One of these students used a thin view to secure items. The wire was located at eye level.	Measures: Personnel using lab have been requested not to use thin wires to secure items. Personnel using the lab have been requested to wear eye protection at all times. Signs have been posted in lab requiring the wearing of protective eye wear,
2016-07-008	CIVIL & ENVIR ENGINEER	injured his right middle finger as he slipped while pushing a metal rod. the finger is not fractured but is swollen and painful.	loose balance	Evenly applying force on long lever arm.
2016-07-012	MATL SCI & ENGINEERING	Former lab member (left group in January 2016) came to clean up a dirty round bottom flask containing empol (http://www.dispersions-pigments.basf.us/p02/USWeb-Internet/en_GB/function/conversions:/publish/content/micr osites/pigmentsdispersions/Brochures/Dimer_Brochure-EL.pdf). He had difficulty cleaning the glassware and so added chloroform to the flask and started to heat it up to 160 C. The flask was not sealed. At this stage, an explosion occurred. Fumehood sash was down and he was wearing a labcoat, safety glasses, and gloves. However, his hands were in the fumehood and the oil from the oil bath that was being used to heat the flask, splashed on the labcoat, which seeped through to the skin. He removed the labcoat immediately to rinse his arm under cold water. At this stage, an ambulance was called. He was treated for a thermal burn (1 inch in length).	see incident details	The students in the group have been reminded of the following: 1. Never work in the lab on their own. Students have asked to sign a contract to this effect. 2. Never let anyone who is not a group member (even former members) work in the lab without my permission. 3. Don't heat solvents way beyond their boiling point. One can go 10-20 degrees above their boiling point but no more. If one needs to go beyond this, additional precautions must to be taken. 4. Wash glassware with acetone and water/soap not hot chloroform. 5. Be aware of flash points of solvents. 6. Do not heat flasks with cracks even if they seem minor. 7. Ask for help if in doubt. As a group, we have also gone through our "good lab practices" document again. We have also introduced an "overnight reaction" form so that if an incident happens at night, anyone will know what is stirring in the reaction flask.

Thursday, August 18, 2016

Page 1 of 2

Case#	Org Name	Employee Activity	Root Cause	Supervisor Corrective Action
2016-07-016	CIVIL & ENVIR ENGINEER	Turning a large screw out of the strong floor, which was stuck. The lever and crossbar slipped out of the screw. Forward momentum of pushing caused student to hit the wall, jamming finger.	The student was using a large wrench. He was exerting full force and the wrench slipped. The bolt he was removing from the strong floor was stuck, it is possible that some additional training on safe use of large wrenches and more frequent removal and lubrication of the strong floor bolts could have prevented the accident.	Provide additional instruction on body and hand position when using large wrenches and exerting full effort.
2016-07-035	CIVIL & ENVIR ENGR	A plate slipped when the clamp came off. The clamp was not fastened on properly. It hit me in the face and my knees. I had a bloody nose, a bruise under my right eye, bruises on both legs, and a large open area on my left knee.	A plate was being moved by a forklift and was secured with C-clamps to the forks. The plate got loose and slide on the forks and hit the student who was observing. There were two root causes: (1) larger clamps should have been used to secure the plates, and (2) the student was standing too close to the forks while the plate was being moved.	Reemphasize appropriate distance from forklift activities and re-teach proper securing of forklift loads. The operator of the forklift had been trained by a certified forklift instructor.

Thursday, August 18, 2016



Report Number: 2016-07-001 Contact EH&S at 206-543-7388

Person Reporting Incident					
Last Name:	First Name:				
Phone:	Email:injury@u.washington.edu				
Occupation/Position: RESEARCH ASSISTANT	Department: MECHANICAL ENGINEERING				
Date Reported(yyyy/mm/dd):2016/07/01	Time of Reporting:11:48 AM				
Person Involved or Affected					
Last Name:	First Name:				
Phone:	Email:injury@u.washington.edu				
Occupation/Position: RESEARCH ASSISTANT	Department: MECHANICAL ENGINEERING				
Incident Details					
Date of Incident(yyyy/mm/dd):2016/02/04	Time of Incident:10:00 AM When Shift Begins: N/A				
Campus:Seattle	Incident Location/Parking Lot:				
Room: B003	Other:Mechanical Engineering Building				
Incident Details:	•				

I was working on my apparatus in the combustion lab, where I walked into a loose wire hanging from the hood. The wire entered my eye and caused some irritation.

Attachment: No

Supervisor

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Last Name:MALTE	First Name:PHILIP	
Phone:+1 206 685-2171	Email:malte@u.washington.edu	
Occupation/Position: PROFESSOR	Department:MECHANICAL ENGINEERING	

Classification

Level 1:

Injury or Exposure, no first aid required, Injury requiring medical treatment (go to level 3 if in-patient hospitalization or amputation occurred),

Type of Incident

Injury Description: Eye or Vision Issues,

Body Parts Affected: Eyes,

Cause of Injury or Damage: Tools, Instruments,

Possible Causes

Equipment: Improper Equipment,

Environment:

Policies / Procedures:

Human Factors:

Suggested corrective action by the affected party

Professor Malte, in charge of lab, took immediate actions to fix this issue and notified everyone in the lab about taking good care about preventing such incidents to happen.

ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

Supervisor's Comments Root Causes: (Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.) Several students, working under the supervision of various faculty, share the lab space (MEB Rm B-003). One of these students used a thin view to secure items. The wire was located at eye level. Recommendations/Preventive Measures: Measures: Personnel using lab have been requested not to use thin wires to secure items. Personnel using the lab have been requested to wear eye protection at all times. Signs have been posted in lab requiring the wearing of protective eye wear, Corrective Actions Target Date (yyyy/mm/dd): Corrective Actions Complete Date (yyyy/mm/dd): 2016/02/15 2016/02/15 Other Comments: normally wears protective eye wear when working in the lab. The accident occurred in the morning, at the start of the workday. was moving some lab items, and had not yet put on the eye wear. The wire was difficult to see, and should not have been used by the other student, **EHS Review** Email: Last Name: First Name: Phone Number: Occupation/Position: Department:

Comments:



Report Number:2016-07-008	Contact EH&S at 206-543-7388		
Person Reporting Incident			
Last Name: CHAIJAROEN	First Name: VONGSANT		
Phone:+1 206 543-7433	Email:vchaijar@u.washington.edu		
Occupation/Position:RESEARCH SCIENTIST ENGINEER II/ STRUCTURES LAB MGR	Department:CIVIL & ENVIR ENGR		
Date Reported(yyyy/mm/dd):2016/07/05	Time of Reporting:02:25 PM		
Person Involved or Affected			
Last Name:	First Name:		
Phone:	Email:		
Occupation/Position:Undergraduate Student	Department:		
Person was in Paid Position:Yes			
Incident Details			
Date of Incident(yyyy/mm/dd):2016/07/05	Time of Incident:11:30 AM When Shift Begins: N/A		
Campus: Seattle	Incident Location/Parking Lot:MORE HALL		
Room: 038	Other:		
Incident Details:			
injured his right middle finger as he sfractured but is swollen and painful.	slipped while pushing a metal rod. the finger is not		
Attachment: Yes			
Supervisor			
Last Name: CHAIJAROEN	First Name: VONGSANT		
Phone:+1 206 543-7433	Email:vchaijar@u.washington.edu		
Occupation/Position:RESEARCH SCIENTIST ENGINEER II/ STRUCTURES LAB MGR	Department:CIVIL & ENVIR ENGR		
Classification			
Level 1: Injury requiring first aid,			
Type of Incident			
Injury Description: Pain, Irritation, Inflammation,	Swelling,		
Body Parts Affected: Fingers,			
Cause of Injury or Damage: Slip or Trip (No Fall),			
Possible Causes			
Equipment:			
Environment:			
Policies / Procedures:			
Human Factors: Loss of Balance,			

Suggested corrective action by the affected party

Evenly applying for over an extension lever. **Supervisor's Comments** Root Causes: (Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.) loose balance Recommendations/Preventive Measures: Evenly applying force on long lever arm. Corrective Actions Complete Date (yyyy/mm/dd): Corrective Actions Target Date (yyyy/mm/dd): 2016/07/06 2016/07/06 Other Comments: Student rest and will return to work a couple day once the injury heal. **EHS Review** Last Name: First Name: Phone Number: Email: Occupation/Position: Department:

Comments:



Report Number: 2016-07-012 Contact EH&S at 206-543-7388

Person Reporting Incident					
Last Name:LUSCOMBE	First Name:CHRISTINE				
Phone:+1 206 616-1220	Email:luscombe@u.washington.edu				
Occupation/Position: ASSOCIATE PROFESSOR Department: MATERIALS SCI & ENGRG					
Date Reported(yyyy/mm/dd):2016/07/07	Time of Reporting:10:12 AM				
Person Involved or Affected					
Last Name:	First Name:				
Phone:	Email:injury@u.washington.edu				
Occupation/Position: STUDENT ASST	Department: MCCARTY FOOD SERVICE				
Person was in Paid Position:No					
Incident Details					
Date of Incident(yyyy/mm/dd):2016/07/06	Time of Incident:10:00 PM When Shift Begins: N/A				
Campus:Not assigned to Campus	Incident Location/Parking Lot:MOLES - HOFFMAN TRLR				
Room: 140	Other:				
Incident Details:					

Former lab member (left group in January 2016) came to clean up a dirty round bottom flask containing empol (http://www.dispersions-pigments.basf.us/p02/USWeb-

Internet/en_GB/function/conversions:/publish/content/microsites/pigmentsdispersions/Brochures/Dimer_Brochure-EL.pdf). He had difficulty cleaning the glassware and so added chloroform to the flask and started to heat it up to 160 C. The flask was not sealed. At this stage, an explosion occurred. Fumehood sash was down and he was wearing a labcoat, safety glasses, and gloves. However, his hands were in the fumehood and the oil from the oil bath that was being used to heat the flask, splashed on the labcoat, which seeped through to the skin. He removed the labcoat immediately to rinse his arm under cold water. At this stage, an ambulance was called. He was treated for a thermal burn (1 inch in length).

Attachment: No

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Last Name:LUSCOMBE	First Name: CHRISTINE	
Phone:+1 206 616-1220	Email:luscombe@u.washington.edu	
Occupation/Position: ASSOCIATE PROFESSOR	Department:MATERIALS SCI & ENGRG	

Classification

Level 2:

Fire or Explosion,

Type of Incident

Injury Description: Burn (Thermal, Chemical, Electrical),

Body Parts Affected: Arms,

Cause of Injury or Damage: Chemicals, Fire, Explosion, Temperature Extreme (Hot or Cold),

Possible Causes

Equipment: Other,

Environment: Fire, Explosion, Heat Stress,

Policies / Procedures: Inadequate Support, Assistance,

Human Factors: Inadequate Training,

Suggested corrective action by the affected party

Will work in labs only when appropriately trained and supervised.

Supervisor's Comments

Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

see incident details

Recommendations/Preventive Measures:

The students in the group have been reminded of the following:

- 1. Never work in the lab on their own. Students have asked to sign a contract to this effect.
- 2. Never let anyone who is not a group member (even former members) work in the lab without my permission.
- 3. Don't heat solvents way beyond their boiling point. One can go 10-20 degrees above their boiling point but no more. If one needs to go beyond this, additional precautions must to be taken.
- 4. Wash glassware with acetone and water/soap not hot chloroform.
- 5. Be aware of flash points of solvents.
- 6. Do not heat flasks with cracks even if they seem minor.
- 7. Ask for help if in doubt.

As a group, we have also gone through our "good lab practices" document again. We have also introduced an "overnight reaction" form so that if an incident happens at night, anyone will know what is stirring in the reaction flask.

2016/07/07 2016/08/04

Other Comments:

See recommendations and preventative measures.

Second Higher Authority Review

Last Name:ALDER	First Name:EMMA	Phone Number:+1 206 221- 2852	Email:ealder@uw.edu	
Occupation/Position: ACCII	DENT PREVENTION MANAGER	Department: ENV HEALTH & SAFETY		

Comments:

EHS Review

Last Name: HAGGARD	First Name: ANGELINA M	Phone Number:+1 206 616-3442	Email:ahaggard@uw.edu		
Occupation/Position:		Department:			



Interdepartmental Correspondence

July 20, 2016

TO: Christine Luscombe, Ph.D., Associate Professor

Department of Materials Science & Engineering

FROM: Tracy Harvey, Ph.D., Laboratory Safety Program Manager

Environmental Health and Safety (EH&S) Department

SUBJECT: Laboratory Thermal Burn Injury Follow-up: Molecular Engineering & Sciences

Building (MoIES)

Purpose:

The purpose of this report is to identify the causes and contributing factors in the incident to help prevent similar incidents and support preventive actions in the laboratory.

Incident Description

An incident report was submitted to EH&S via the Online Accident Reporting System (OARS) on July 7, 2016 regarding an incident that occurred in the Luscombe lab the previous evening. The laboratory is located in the Molecular Engineering and Sciences Building Room 140. A former student had come into the laboratory to clean glassware he left behind in January 2016. He used chloroform as a cleaning solvent for a dirty flask, and then put the flask containing solvent into an oil bath inside the chemical fume hood set to 160 degrees F. The open flask exploded in the bath. The sash was down on the fume hood, and the student was wearing a laboratory coat but the hot oil from the bath splashed the student's lab coat and soaked through to the skin on his arm. The student removed the lab coat and rinsed the splashed arm in cold water. He called 911 and was transported for burn treatment by ambulance, then released without hospitalization.

Investigation

Tracy Harvey, EH&S Laboratory Safety Program Manager, met with Christine Luscombe, Principal Investigator, on July 11, 2016 following the incident.

Dr. Luscombe explained that the (Masters) student was asked to come in and clean his glassware. He had been working with nonhazardous materials while a lab member. He came in after hours, and was working alone in the lab. When he had trouble getting the flask clean, he chose a number of solvents to rinse with, the last one being chloroform, to attempt to remove residue on the glass. Dr. Luscombe confirmed that chloroform was a poor choice for cleaning glassware, and not standard laboratory practice.

The Luscombe lab has a "Good Practices" document that is provided to all students working in the lab; a copy of this document has been provided to EH&S. This document outlines lab safety training requirements; the student was confirmed to have completed all of the required safety trainings. It was also confirmed that the student received an introductory in-person lab safety tour, per the "Good Practices" document.

Conclusion

Chloroform should not have been used for cleaning glassware. In addition, placing the glassware containing chloroform in oil to heat it resulted in a pressurized reaction that resulted in an explosion. According to a safety data sheet for chloroform, in a fire or if heated, a pressure increase will occur and the container may burst.

Recommendations and Follow-Up

The below recommendations are the help prevent a similar incident from happening in the future and to help provide general laboratory safety. The current practice of using the "Good Practices" document is an acceptable way to communicate safety requirements, and participation is documented. The document is clear and fairly comprehensive. The following additions to the document are recommended, based on the incident:

- Develop clear guidelines with specific restrictions for allowing personnel to work alone in your lab and also for working outside of standard business hours. EH&S recommends a procedure for obtaining approval from the PI ahead of time for approving the schedule and for approving the scope of work. Consider limiting working alone in the lab alone or outside business hours to situations where it is absolutely necessary.
- 2. In the "Good Laboratory Practices" document, expand on the term "appropriate solvents" for cleaning (in the section on the Base Bath), as not all students are familiar with all the solvents available.
- 3. Add information to the document on safe practices for working with the oil bath.

Please contact me at tdy@uw.edu or 206-616-3778 if I can be of further assistance.

CC: Mark Murray, EH&S Assistant Director for Building and Fire Safety Emma Alder, EH&S Accident Prevention Manager Angie Haggard, EH&S OARS Program Administrator



Report Number: 2016-07-016 Contact EH&S at 206-543-7388

Report Number 2010-07-010	Contact Ends at 200-343-7300			
Person Reporting Incident				
Last Name: YEUNG	First Name: JEREMY			
Phone:+1 206 543-2547	Email: jsean@u.washington.edu			
Occupation/Position: LABORATORY MANAGER	Department:CIVIL & ENVIR ENGR			
Date Reported(yyyy/mm/dd):2016/07/07	Time of Reporting:02:37 PM			
Person Involved or Affected				
Last Name:	First Name			
Phone:	Email:			
Occupation/Position:Undergraduate Student	Department:			
Person was in Paid Position:Yes				
Incident Details				
Date of Incident(yyyy/mm/dd):2016/07/05	Time of Incident:11:30 AM When Shift Begins: N/A			
Campus: Seattle	Incident Location/Parking Lot:MORE HALL			
Room: 037	Other:			
Incident Details:				

Attachment:No

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Sı	ın	e	rv	ıs	C	r

Last Name: BERMAN	First Name: JEFFREY		
Phone:+1 206 616-3530	Email: jwberman@u.washington.edu		
Occupation/Position: ASSOCIATE PROFESSOR	Department:CIVIL & ENVIR ENGR		

Turning a large screw out of the strong floor, which was stuck. The lever and crossbar slipped out of

the screw. Forward momentum of pushing caused student to hit the wall, jamming finger.

Classification

Level 1:

Injury requiring first aid,

Type of Incident

Injury Description: Bruise, Contusion, Pain, Irritation, Inflammation, Swelling,

Body Parts Affected: Fingers,

Cause of Injury or Damage: Contact with Object: Bumped into Something, Slip or Trip (No Fall), Struck or Pinched by Moving Object,

Possible Causes

Equipment: Using Equipment Improperly,

Environment:

Policies / Procedures: Failure to Follow Procedures, Inadequate Instructions, Procedures,

Human Factors: Inadequate Training,

Suggested corrective action by the affected party

Remove strong floor bolts more frequently (and clean), so that they're not so stuck. Provide proper

ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

training prior to using unfamiliar tools. **Supervisor's Comments** Root Causes: (Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.) The student was using a large wrench. He was exerting full force and the wrench slipped. The bolt he was removing from the strong floor was stuck, it is possible that some additional training on safe use of large wrenches and more frequent removal and lubrication of the strong floor bolts could have prevented the accident. Recommendations/Preventive Measures: Provide additional instruction on body and hand position when using large wrenches and exerting full effort. Corrective Actions Target Date (yyyy/mm/dd): Corrective Actions Complete Date (yyyy/mm/dd): 2016/07/15 2016/07/11 Other Comments: We have discussed proper techniques when using large wrenches with all student workers in the lab. **EHS Review** Last Name: First Name: Phone Number: Email:

Department:

Occupation/Position:

Comments:



Report Number: 2016-07-035 Contact EH&S at 206-543-7388

Person Reporting Incident				
Last Name:PUNT	First Name:RICHARD			
Phone: 2067293568	Email:repunt@u.washington.edu			
Occupation/Position:STUDENT RESEARCHER	Department:CIVIL & ENVIR ENGR			
Date Reported(yyyy/mm/dd):2016/07/13	Time of Reporting:08:42 AM			
Person Involved or Affected				
Last Name:	First Name:			
Phone:	Email:			
Occupation/Position: STUDENT RESEARCHER	Department:CIVIL & ENVIR ENGR			
Incident Details				
Date of Incident(yyyy/mm/dd):2016/07/13	Time of Incident:10:00 AM When Shift Begins:9:00 AM			
Campus:Seattle	Incident Location/Parking Lot:			
Room: MORE 073	Other:Structures Lab			

Incident Details:

A plate slipped when the clamp came off. The clamp was not fastened on properly. It hit me in the face and my knees. I had a bloody nose, a bruise under my right eye, bruises on both legs, and a large open area on my left knee.

Attachment: No

Supervisor

Last Name:BERMAN	First Name: JEFFREY	
Phone:+1 206 616-3530	Email: jwberman@u.washington.edu	
Occupation/Position: ASSOCIATE PROFESSOR	Department:CIVIL & ENVIR ENGR	

Classification

Level 1:

Injury requiring first aid,

Type of Incident

Injury Description: Bruise, Contusion, Cut, Laceration, Puncture, Scratch, Abrasion (Open Wound), Pain, Irritation, Inflammation, Swelling, Other,

Body Parts Affected: Face, Nose, Legs, Knees,

Cause of Injury or Damage: Structures, Surfaces,

Possible Causes

Equipment: No Guards/Barriers, Improper Equipment,

Environment: Sharp Objects,

Policies / Procedures: Inadequate Planning, Preparation,

Human Factors:

Suggested corrective action by the affected party

I believe that heavy duty clamps were necessary for the lifting of this plate with the fork lift. My suggestion went unheeded and because of that I was injured.

ON FILE: Affected/Injured Employee's date of birth, gender, date of hire, and hours of employment.

Supervisor's Comments

Root Causes:

(Please look at all the factors that may have contributed to the accident. Such factors may include equipment, environment, policies, procedures, and personnel.)

A plate was being moved by a forklift and was secured with C-clamps to the forks. The plate got loose and slide on the forks and hit the student who was observing. There were two root causes: (1) larger clamps should have been used to secure the plates, and (2) the student was standing too close to the forks while the plate was being moved.

Recommendations/Preventive Measures:

Reemphasize appropriate distance from forklift activities and re-teach proper securing of forklift loads. The operator of the forklift had been trained by a certified forklift instructor.

Other Comments:

EHS Review				
Last Name: HAGGARD	First Name:ANGELINA M	Phone Number:+1 206 616-3442	Email:ahaggard@uw.edu	
Occupation/Position:		Department:		

Comments:

University-Wide Health and Safety Committee Meeting Agenda

August 10, 2016 1:00 – 2:30 PM

Foege N130A

Regular Attendees:

- 2016-2017 University-Wide Health and Safety Committee Members (http://www.ehs.washington.edu/ohssafcom/groups.shtm)
- Jude Van Buren, Katia Harb, Emma Alder, EH&S

Agenda Items	Persons Responsible	Process	Time
Call to Order	Leslie Anderson	Robert's Rules of Order	
Approval of Meeting Minutes	Leslie Anderson	Robert's Rules of Order	5 min
Safety Governance Task Force	Leslie Anderson	Discussion	20 min
Organizational Group Reports	Committee Members	Discussion	15 min
Union Reports	Union Representatives	Discussion	10 min
Ex-Officio Reports	Ex-Officio Members	Discussion	10 min
EH&S Reports	Angie Haggard, Templates for charter and minutes	Discussion	10 min
Good of the order	Committee Members	Discussion	20 min
Adjourn	Leslie Anderson	Robert's Rules of Order	



University-Wide Health and Safety Committee Meeting Minutes

July 13, 2016 1:00-2:30 pm Foege N130A

	Elected Membership		Appointed Membership		Guests
X	Leslie Anderson (1) Chair	X	Chad Cook (2)	X	Stacie Smith
	Ryan Hawkinson (1)	X	Paul Zuchowski (3)	X	Susan Freccia
	Sterling Luke (2)	X	Melissa Banks (7)		
	Carol Harvey (4)		Nadia Khan (4)		
	Stephen Lundgren (5)	X	Liz Kindred (5) Co-Chair		
X	Ron Maxell (6)	X	Sonia Honeydew (9)		
	Paul Miller (6)	X	David Zuckerman (10)		
X	Kelly Carter-Lynn (7)				
X	Betsy Brown (7)				
	Alex Volkman (8)				
	Meghan Fuhlman (8)				
Х	Hannah Wilson (8)				
Х	David Warren (10)				
	Rick Gleason (Faculty	A			
	Senate)				
	Labor Union Representation		Ex Officio Membership		Support
x	Paula Lukaszek WFSE Local 1488		Michelle Doiron Attorneys General Office	X	Jude Van Buren, Senior Director, EH&S
	Vacant		Tracey Mosier,		Katia Harb,
	SEIU Local 1199	X	Facilities Services		Asst. Director, EH&S
	Vacant SEIU 925		Vacant, Risk Services	x	Emma Alder, Accident Prevention Mgr., EH&S
	Vacant UAW 4121	X	Ron Fouty, Capital Development Projects	x	Angie Haggard, EH&S
				x	Doug Gallucci, EH&S
*X	*X= Present at meeting				

Agenda

- 1. Call to Order
- 2. Approval of Minutes
- 3. Vice-Chair Election
- 4. After Action Report: Current Affair
- 5. Organizational Group Reports
- 6. Union Reports
- 7. Ex-Officio Reports
- 8. Health & Safety Governance Task Force
- 9. EH&S Reports
- 10. Open Discussion
- 11. Adjourn

Recorded: by Angie Haggard

- 1. Call to Order: Meeting was called to order at 1:05 PM by Leslie Anderson.
- 2. Approval of Minutes: No changes to the June minutes were suggested and were approved as written. As there was no quorum to ratify the June meeting minutes they will be <u>ratified</u> at the August meeting if a quorum is present.
- 3. Vice-Chair Election: The committee held an election for Vice-Chair due to the vacancy left by Sara Jones who has left the University. The floor was opened for nominations. Liz Kindred was the sole nominee. Her nomination was accepted and seconded. The committee voted by a show of hands in favor and Liz Kindred was elected Vice-Chair.
- 4. After Action Report: Current Affair Stacie Smith from UW Emergency Management Seismic Resilience Program Office presented an After Action Report for the one day functional exercise Current Affair that occurred on April 28, 2016. This year's exercise scenario was a long term power outage. The objectives for Current Affair included utilizing roles and responsibilities, situation awareness and to practice coordination. The primary challenge was University wide communication. The exercise allowed participants to practice effective strategic decision making and how to manage public information. Shortly after the exercise is completed, participants met for a "hot wash". Participants provided initial feedback for what went well and areas for improvement. The next steps are implementing the corrective action plan. Slides will be posted online here: http://www.ehs.washington.edu/ohssafcom/mtgminutes16.shtm

Current Affair was a separate exercise from the regional exercise Cascadia Rising held from June 7 – June 9 with participants from British Columbia to northern California.

5. Organizational Group Reports:

- a. **Group 1:** Leslie Anderson reported Group 1 met earlier in the day. The group reviewed the Online Accident Reporting System (OARS) reports. Emma Alder presented the 2015 Accident Statistics. There was an update from the Health & Safety Governance Task Force. Group 1 will discuss possible Safety projects at the Provost's behest.
- b. Group 2: Chad Cook reported Group 2 met on June 9. They discussed OARS reports. There was a discussion about Active Shooter notifications. Creative Communications (C2) created a Safety Lean Board.
- c. **Group 3:** Paul Zuchowski reported Group 3 met on June 22nd. They reviewed OARS reports. The have a resiliency working group. Sara Jones announced her departure from the University.
- d. Group 4: No report.
- e. **Group 5:** Liz Kindred reported Group 5 they were able to get caught up on their report reviews since they did not meet in May. The group focused on reducing safe patient handling for the medical center's which included identifying the available resources, training and equipment.
- f. **Group 6:** Ron Maxell reported Group 6 had a short meeting. Election activities for more committee members will take place in September.
- g. Group 7: Mel Banks reported Group 7 has met twice the last U-Wide meeting. They reviewed OARS reports. They discussed field trip protocols with Risk Management. They expressed concern for Pokémon Go safety. The group reviewed the 2015 Accident Statistics with Ana Karaman, Vice Chancellor for Administration and Planning. Ana is Group 7's Executive Sponsor.
- h. **Group 8:** No report.
- i. Group 9: Sonia Honeydew reported Group 9 met on June 27th. They reviewed OARS reports. The group reviewed Lab Safety and their Husky Ready Plan. Emma Alder presented on Root Cause Analysis. Stacie Smith from UW Emergency Management will be the guest speaker at the July meeting.
- j. **Group 10:** David Warren reported Group 10 met on June 20th and reviewed OARS reports. Angie Haggard provided the U-Wide meeting update. Group 10 expressed concern for the location of Tent City 3. The location selected for Tent City 3 is Group 10's designated evacuation area. The Dean's Office is requiring Husky Ready training for the entire college. There is a picnic planned in conjunction with the July meeting. Group 10 also expressed concerned regarding the possible overlaps and duplicative efforts for various plans, i.e. Fire Safety Evacuation Plans (FSEOP) formerly the EEOP, Husky Ready and the Health & Safety Plans/Accident Prevention Plans (APP).

- k. Faculty Senate: No report.
- 6. Union Reports: Paula Lukaszek reported that WFSE Local 1488 filed a grievance for the Clark Hall windstorm scaffolding incident. The forensic report is complete. Paula also stated the scaffolding should have been built to specifications the pins were a problem. She further reported that two masons used yellow cards to bring attention to their concerns about the scaffolding at Clark Hall. She also commented that there is a lack of knowledge on campus regarding these kinds of situations. Tracey Mosier stated she could not comment because there was an open grievance. Tracey reminded the committee that there are many different ways facilities employees can bring forward safety issues and concerns. And due to the concerns brought forward regarding the Clark Hall scaffolding, Labor and Industries was contacted to review the scaffolding concerns.
- **7. Ex-Officio:** No reports.
- **8. Health & Safety Governance Task Force** Susan Freccia, Director of Strategic Initiatives, Compliance and Risk Services provided an update from the Task Force on Health and Safety Governance. Susan will send a summary email to the U-Wide committee after the meeting.
- 9. EH&S Reports:
 - a. EH&S staffing Update:
 - i. The Building Fire & Safety group has vacancies due to Christa Gorski, Joe Grogean, and Gary Bangs leaving the University. During the interim period, Argus is conducting the technical trainings for Facilities Services. There will be a temporary/contract Industrial Hygiene employee during the interim period. This interim period also provides an opportunity to review policies and procedures and organizational structure.
 - ii. Karen Crow begins her new position August 1st with responsibilities for Outreach and Health Education. She is currently the SHIP project manager. Her responsibilities will include updating the EH&S website and assisting with the Lab Safety outreach initiative.
 - b. **L&I Update**: On July 8th an Allergy & Infectious Disease employee was hospitalized. No L&I inspection has occurred. The initial injury investigation report contains information about improperly packaged sterile samples with dry ice.
- 10. Open Discussion: none.
- **11. Meeting Adjournment:** Leslie adjourned the meeting at 2:29 PM.