Agenda – July 31, 2017
Group 9 Health and Safety Committee (College of Engineering)

1. *Attending*

Fiona Spencer or Eliot George, AA
Colleen Irvin, BioE
Sean Yeung, CEE
Michael Pomfret, CEI
Kameron Harmon, ChemE
Sonia Honeydew, CoE DO
Sophie Ostlund for Tracy Erbeck, CSE
Karen Liebert, EE
Angie Haggard, EH&S
Stacia Green, HCDE
Jenny Dutton or Sheila Prusa, ISE
Bill Kuykendall, ME
Chris Adams, MolES/NanoES
Tatyana Galenko, MSE

2. *Previous Meeting Minutes*

- June 2017 – approve? Corrections?

3. *Department Incident Reports*

- EE – cut hand on sharp metal, got stitches at ER (Apr)
- CEE – fiberglass pierced hand through glove (May)
- ChemE – high voltage power amplifier caught fire, extinguished (May)
- DO – Hit head from fall, after chair leg went through hole in floor (May)
- ME – battery shorted across carbon enclosure, smoked, extinguished (Jun)
- AA – near miss during test flight of capstone model airplane (Jun)
- BioE – mercury thermometer broken, spilled cleaned (Jun)
- AA – heat exhaustion in desert for rocket launch (Jun)
- ME – chemical spill and exposure (Jun)

4. *Group Business*

- CoE annual evac drills scheduled by EH&S – share any lessons learned.
- Fire safety surveys prioritized, progressing (Scott Nelson & Adrian Santos).
- EEOP/FSEP: review evac plans and send latest versions to Diana Zumba.
- U-wide charter: customize for Group 9.
- Review EH&S resources (checklists, protocols, training templates).

5. *UW-Wide Meeting*

- June minutes attached.
- July agenda attached. Highlight: reviewed election procedures for this Autumn. Templates, election guide, timeline on OneDrive. In July choose election coordinator, and determine how reach all employees. In August call for nominees, in September create ballot and hold elections, in October tally votes and contact nominees. Report results to EH&S before Thanksgiving. In January: training, elect chairs and U-wide reps.

6. *Department Updates*

Next Meeting August 28th at 3pm, in CSE 128

DRAFT Meeting Minutes
Health and Safety Committee for Group 9 (College of Engineering)

Meeting Date: June 26, 2017

Attended

Eliot George for Fiona Spencer, AA
Colleen Irvin, BioE
J. Sean Yeung, CEE
Kameron Harmon, ChemE
Sophie Ostlund for Tracy Erbeck, CSE
Sonia Honeydew, DO
Karen Liebert, EE
Angie Haggard, EH&S
Stacia Green, HCDE
Sheila Prusa, ISE
Bill Kuykendall, ME
Chris Adams, MolES/NanoES
Tatyana Galenko, MSE

Absent

Michael Pomfret, CEI
Michael Glidden, DO

Previous Meeting Minutes

- May 2017 – draft minutes approved

Incident Reports

- ChemE – cut through glove while washing broken glassware (Mar). We seem to see a lot of damage to hands so ChemE will encourage labs to be more careful with hands and fingers and will share any discovered resources with Group 9. PPE should be last line of defense; we should be engineering solutions.
- ME – white mark on hand eventually washed off, maybe polishing agent (Apr). Recommend use squirt bottles rather than squeeze bottles in labs. If it's an old and/or unidentified chemical, have it collected.
- ChemE – phenol splashed on wrist while working in fume hood (Apr). Student-provided coats maybe not best fit and TA not comfortable disallowing student participation. Suggestion: lab provide cheap Tyvek chemical-resistant over-sleeves (share product info).
- CEE – evening mugging in Baltimore, reported to local police (Apr). No buddy system? Money for taxis on grant? Bad neighborhood?
- EE – cut hand on sharp metal, got stitches at ER (Apr). Karen will ask Johnny for more info on the where/when/how… also why incident in January reported in April. Revisit next time.

DRAFT Meeting Minutes
Health and Safety Committee for Group 9 (College of Engineering)

- BioE @ MolES – lab trash included improperly disposed item creating fumes (Apr). Warned CS not to pick up trash if looks/smells funny, and to ask someone before touch trash. Going forward lab will dispose of items from hood themselves – double-bag and take to loading dock (or mark their trash).
- ME – finger pinched by car spoke & brake (May). New SOP includes chocking wheels before work on car, and getting the "all clear" before move car.
- AA – hot lamp melted tunnel acrylic wall (May). Undergrads in 3x3 wind tunnel; halogen work lamp on top of tunnel didn't char but bubbled outside only of 1 ¼" thick tunnel wall. When smelled, unplugged lamp. No injuries. Removed halogen lamps from there and replaced with LEDs. Changed policy: won't work unsupervised, and will get supervisor (TA) approval before make changes.
- ChemE – cut hand when glass funnel stem broke (May). Changed procedure: twist rather than push, because uses less force. Got tool – stopper expander.
- CEE – fiberglass pierced hand through glove (May). This happened with steel fiber last year. Two groups using same eqpt, and someone doesn't clean up after themselves. Will talk to tech… maybe use disposable trays? Continue this next time.
- CSE – cut arm on jagged stall door (May). Didn't realize hook had broken off. CS submitted FS WO for repair.
- ChemE – high voltage power amplifier caught fire, extinguished (May). Haven't heard back from vendor yet re: defective eqpt. Could it have been the infrastructure? Continue discussion; CEI rep from Bowman bldg should have more info next time.
- CEE – Inhaled vapors from acid bath (May). Very concentrated acid bath; should have done in fume hood but mixed in large vented room. Got big whiffs of it and went to urgent care, told to rest and breathe… symptoms eventually subsided. Moved work to hood and wrote new SOP to perform high concentration version in hood. Does UW have protocol for using hood? EH&S emphasizes review of incidents that involve chemical exposure. Tracy Harvey is Chemical Hygiene Officer. Note that if concerned about exposure you can always *call* Hall Health first before taking the time to *walk* to Hall Health or UWMC ER. Hall Health building contains both Primary Care Clinic (appropriate for undergrads) and Employee Health (for staff). If paid by UW, call Employee Health at 5-1026 for consult even if non-chem exposure. They handle bumps, bruises, stitches, small sutures. Alternatively call an ambulance to ER, which costs more but you get to the front of the line if urgent. Hall Health is focused on prevention. If you are *sure* you were exposed to chemicals go to the ER, but if *not sure* you may call Hall Health (above numbers) for a consult.
- DO – Hit head from fall, after chair leg went through hole in floor (May). Did F.S. find any more holes? Is HVAC OK for occupancy? Continue discussion next time.
- ChemE – finger cut as pinched by flam cab doors (May). This spring-loaded cabinet snaps shut fast. Added warning sign.

DRAFT Meeting Minutes
Health and Safety Committee for Group 9 (College of Engineering)

Group Business

- CoE annual evac drills are being scheduled by Scott Nelson & Adrian Santos (EH&S).
- Building fire safety surveys prioritized, done soon by Scott and Adrian of EH&S.
- EEOP/FSEPs – Sonia share edits to template in Loew Hall FSEP, and what give Evac Wardens on clipboard. Every building please send current FSEP to Diana Zumba for EH&S library. Note regarding Classroom Technology & Events (previously Classroom Services): use main number 1-5000 as contact number in FSEP.
- U-wide charter: customize for Group 9 at July meeting.
- Review EH&S resources: save for future meeting.
- Reminder: this fall's graduate student Lab Safety Seminar is 9/26/17 (one day).

UW-Wide Meeting

- May minutes in packet.
- June agenda in packet. Highlight was speaker from Emergency Communications Team. The ECT determines the timing and content of UW Alerts. Other tools at their disposal: UW Indoor Alert, UW Outdoor Alert, Emergency Blog, Web Banner, Safety Portal, American Red Cross Safe and Well Site. They welcome suggestions/concerns.

Department Updates

- BioE, ChemE, MolES, CSE – One dept having difficulties with FS Customer Care preemptively closing or eliminating work requests. Another dept having better luck with FS Customer Care now than previous system, especially with HVAC response. Another dept has had good experience with FS Customer Care for maintenance issues but found little ability to deal with alterations. Another dept was told by FS Customer Care that it would take weeks to come replace a ceiling tile but it was a fire code issue so dept bypassed CC and called shop directly to get work done.
- MolES – Issues with drain smells from other side of building. Example of ways to shop for ethanol. Suspicious person in conference room early morning, saying scary things, moved to other buildings as well.
- NanoES – has certificate of occupancy so can tour and move in.
- MSE – Had an issue where green fluorescent water came from sinks, because power plant glycol from chiller system got into lab water system at Roberts… fixed now.

Next Meeting

- July 31st at 3pm, CSE 128

University of Washington
Accident / Incident Report

Report Number:**2017-04-067** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**ELECTRICAL ENGINEERING**
Date Reported(yyyy/mm/dd):**2017/04/17**	Time of Reporting:**09:27 AM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**ELECTRICAL ENGINEERING**

Incident Details

Date of Incident(yyyy/mm/dd):**2017/01/23**	Time of Incident:**1:00 PM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:**Electrical Eng Bldg**	
Room:**EEB-307Q**	Other:	

Incident Details:

Cut hand on a sharp piece of metal. Got stitches at UW ER, am now fine.

Attachment:**No**

Supervisor

Last Name:**POOVENDRAN**	First Name:**RAADHAKRISHNAN**
Phone:**+1 206 221-6512**	Email:**rp3@uw.edu**
Occupation/Position:**PROFESSOR AND CHAIR**	Department:**ELECTRICAL ENGINEERING**

Classification

Level 1:
Injury requiring medical treatment (go to level 3 if in-patient hospitalization or amputation occurred),

Type of Incident

Injury Description: **Cut, Laceration, Puncture, Scratch, Abrasion (Open Wound),**

Body Parts Affected: **Hands, Wrists,**

Cause of Injury or Damage: **Struck or Pinched by Moving Object,**

Possible Causes

Equipment:

Environment: **Sharp Objects,**

Policies / Procedures: **Inadequate Planning, Preparation,**

Human Factors: **Inattention,**

Suggested corrective action by the affected party

Unique situation - be more careful in future.

Supervisor's Comments

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

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.)
This instrument well designed with user in mind. So this led to the problems for the [redacted] who was opening it.

Recommendations/Preventive Measures:
Be cautious with new tools that are not user friendly.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/04/26	**2017/04/26**

Other Comments:
I have met with the [redacted] and gone over the details of the injury. It seems that the root cause is the faculty design that was not user friendly.

EHS Review

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

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

University of Washington
Accident / Incident Report

Report Number:**2017-05-058** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:**injury@u.washington.edu**
Occupation/Position:**STUDENT ASST**	Department:**CIVIL & ENVIR ENGR**
Date Reported(yyyy/mm/dd):**2017/05/11**	Time of Reporting:**02:58 PM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:**injury@u.washington.edu**
Occupation/Position:**STUDENT ASST**	Department:**CIVIL & ENVIR ENGR**

Incident Details

Date of Incident(yyyy/mm/dd):**2017/05/11**	Time of Incident:**9:00 AM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:**MORE HALL**	
Room:**34**	Other:	

Incident Details:

I was mixing permeable concrete by hand in a black 'hotel tray' as instructed. There was some leftover fiberglass concrete mixture from a previous project stuck in the bottom of the tray which pierced through my glove and skin.

Attachment:**No**

Supervisor

Last Name:**YAMAURA**	First Name:**JULIAN**
Phone:	Email:**injury@u.washington.edu**
Occupation/Position:**PREDOC INSTRUCTOR**	Department:**CIVIL & ENVIR ENGR**

Classification

Level 1:
Injury requiring first aid,
Injury requiring medical treatment (go to level 3 if in-patient hospitalization or amputation occurred),

Type of Incident

Injury Description: **Cut, Laceration, Puncture, Scratch, Abrasion (Open Wound),**

Body Parts Affected: **Hands, Wrists,**

Cause of Injury or Damage: **Broken Glass, Splinter, Sharp Furniture Edge, etc.,**

Possible Causes

Equipment: **Inadequate Maintenance,**

Environment:

Policies / Procedures:

Human Factors:

Suggested corrective action by the affected party

The 'hotel trays' need to be throughout cleaned after use with fiberglass.

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.)			
Recommendations/Preventive Measures:			
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:			

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

University of Washington
Accident / Incident Report

Report Number:**2017-05-083** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**CHEMICAL ENGINEERING**
Date Reported(yyyy/mm/dd):**2017/05/17**	Time of Reporting:**02:57 PM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**CHEMICAL ENGINEERING**

Incident Details

Date of Incident(yyyy/mm/dd):**2017/05/17**	Time of Incident:**9:30 AM**	When Shift Begins:**9:00 AM**
Campus:**Seattle**	Incident Location/Parking Lot:**BOWMAN BUILDING**	
Room:**107**	Other:	

Incident Details:

A high-voltage power amplifier was powered on for the first time on the morning of May 17th. The unit is supplied with 480 V, 3-phase, 125 A power (per specs). After turning the power on, the display screen went through an apparent booting procedure. Near, or just after, the end of the boot process, popping noises were heard. Fearing this was arcing, I cut power and flipped the unit s switch to the off position. At that point, I noticed a small flame on the inside of the unit. It appeared to be growing despite the power being cut, so a powder (ABC) fire extinguisher was used to put out the fire. The power supply to the unit has been cut and the unit has not been powered on since this incident. Manufacturer (Ametek) has been notified. Ametek speculates that user error was not the cause and they are investigating the incident.

Attachment:**Yes**

Supervisor

Last Name:**MACKENZIE**	First Name:**JOHN**
Phone:	Email:**jdmacken@uw.edu**
Occupation/Position:**PROFESSOR**	Department:**MATERIALS SCI & ENGRG**

Classification

Level 2:
Fire or Explosion,

Type of Incident

Injury Description: **Property Damage Only,**

Body Parts Affected: **None,**

Cause of Injury or Damage: **None,**

Possible Causes

Equipment: **Defective Tools, Equipment,**

Environment: **Other,**

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

Policies / Procedures: **Other,**

Human Factors: **Other,**

Suggested corrective action by the affected party

Discussions with the manufacturer (Ametek) led to the early hypothesis of a fault within the instrument. Supplied power and start-up procedures were determined to be correct by Ametek's technical representative. Power and user access to the machine has been suspended indefinitely, pending the results of Ametek's investigation.

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.)
Equipment defect resulted in this fire on its first attempted activation. This defect was present in the equipment before it was received from the vendor.

Recommendations/Preventive Measures:
Vendor to replace equipment.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/08/22	**2017/05/22**

Other Comments:
This was a minor incident which was well handled by the staff involved which prevented in from growing in severity. The fire resulted form a defect in the equipment and there was no fault on the part of anyone at UW.

Second Higher Authority Review

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

EHS Review

Last Name:**HAGGARD**	First Name:**ANGELINA M**	Phone Number:**+1 206 616-3442**	Email:**ahaggard@uw.edu**
Occupation/Position:		Department:	
Comments:**5/18/17 forwarded to Mark Murray, Scott Nelson, Diana Zumba - Angie Haggard**			

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

University of Washington
Accident / Incident Report

Report Number:**2017-05-111** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**DEAN ENGINEERING**
Date Reported(yyyy/mm/dd):**2017/05/26**	Time of Reporting:**10:48 AM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:**+1** [redacted]	Email:[redacted]
Occupation/Position:[redacted]	Department:**DEAN ENGINEERING**

Incident Details

Date of Incident(yyyy/mm/dd):**2017/05/22**	Time of Incident:**3:45 PM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:**WILCOX HALL**	
Room:**70**	Other:	

Incident Details:

Wilcox 70 conference area has a previously unknown hole in the floor. The floors are raised as the entire area was once devoted to computer servers.
The chairs in that room have individual legs. While in a meeting, I backed my chair up and one leg (back corner) plunged entirely into the hole in the floor. I hit my head against the wall under the TV and ended up on the floor.

Attachment:**Yes**

Supervisor

Last Name:**FRAY**	First Name:**DAVID**
Phone:**+1 206 685-1724**	Email:**dfray@uw.edu**
Occupation/Position:**DIRECTOR DEPARTMENTAL COMPUTING**	Department:**DEAN ENGINEERING**

Classification

Level 1:
Injury or Exposure, no first aid required,

Type of Incident

Injury Description: **Concussion, Headache, Pain, Irritation, Inflammation, Swelling,**

Body Parts Affected: **Head, Neck,**

Cause of Injury or Damage: **Contact with Object: Bumped into Something,**

Possible Causes

Equipment:

Environment: **Other,**

Policies / Procedures:

Human Factors:

Suggested corrective action by the affected party

The area was repurposed recently into a conference room after serving for decades as equipment storage

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

for computers. I recommend examining the raised floor in room 70 for other hazards and patching/replacing the floor tiles.

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.)
Room is all raised floor, previously a computer server room. Floor is covered wall to wall with 2' X 2' carpeting squares, hiding any possible holes in the raised floor. Hole was at the intersection of four squares, but hidden from view. Room had been used previously for storage or used as an office, with a desk covering access to the hole. Room was recently converted into a conference room, exposing the entire floor area. No one had inspected what was under the carpeting for possible hazards.

Recommendations/Preventive Measures:
Hole is now covered by a piece of sheet metal, between the floor tiles, and the carpeting squares. We are inspecting other areas within the conference room, and adjoining areas which are also raised floor, and covered with carpeting. Sheet metal plates are being placed over any other holes we find.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/05/25	**2017/05/25**

Other Comments:
[redacted] **must have hit his head pretty hard against the wall. Attached photo shows the plaster board was pushed in and existing nails or screws were pushed out thru the plaster.**

EHS Review

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

Comments:**5/26/17 forwarded to Denise Bender and Brandon Kemperman - Angie Haggard**

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

University of Washington
Accident / Incident Report

Report Number:**2017-06-027** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:**Hickner**	First Name:**Michelle**
Phone:	Email:**mhickner@uw.edu**
Occupation/Position:**PROGRAM OPERATIONS SPECIALIST (E S 8)**	Department:**ENG: Mechanical Engineering-Staff**
Date Reported(yyyy/mm/dd):**2017/06/13**	Time of Reporting:**09:24 AM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:
Occupation/Position:**Undergraduate Student**	Department:
Person was in Paid Position:**No**	

Incident Details

Date of Incident(yyyy/mm/dd):**2017/06/12**	Time of Incident:**7:30 PM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:**ENGINEERING ANNEX**	
Room:**101A**	Other:	

Incident Details:

The carbon enclosure that houses our battery cells has two cutouts for power and ground lug terminals, one for a positive (12v) terminal and one for a ground terminal. As one of our members torqued these lugs, a portion of conductive material made contact with the carbon enclosure causing the battery to short across the enclosure. This produced a fair bit of smoke as the resin in the carbon enclosure burned. Members respond quickly by spraying the battery with a fire extinguisher and removing it from the car. The battery was then deposited outside and all doors were opened and fans were used to circulate fresh air into the building. These events happened in a ~5min period.

Attachment:**No**

Supervisor

Last Name:**Hickner**	First Name:**Michelle**
Phone:	Email:**mhickner@uw.edu**
Occupation/Position:**PROGRAM OPERATIONS SPECIALIST (E S 8)**	Department:**ENG: Mechanical Engineering-Staff**

Classification

Level 1:
Property damage only,

Type of Incident

Injury Description: **Property Damage Only,**

Body Parts Affected: **None,**

Cause of Injury or Damage: **Electricity, Temperature Extreme (Hot or Cold),**

Possible Causes

Equipment: **Defective Tools, Equipment,**

Environment:

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

Policies / Procedures:

Human Factors:

Suggested corrective action by the affected party

Redesign the carbon enclosure so that this physically cannot happen

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 clearance between conductive material and uncovered carbon on the battery enclosure was too small and a conductive washer was forced into contact with the carbon, causing electrical current to flow between the battery terminals through the carbon enclosure. The relatively high resistance of carbon caused it to heat up to the point of burning the resin of the carbon enclosure.

Recommendations/Preventive Measures:
Redesign of the battery enclosure with more insulating material between conductive surfaces. Making the battery enclosure out of an insulating material such as plastic instead of polymer reinforced carbon fiber would also suffice.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/06/16	**2017/06/16**

Other Comments:

EHS Review

Last Name:	First Name:	Phone Number:	Email:
Occupation/Position:		Department:	

Comments:

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

University of Washington
Accident / Incident Report

Report Number:**2017-06-043** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:**Ross**	First Name:**John**
Phone:**+1 206 543-0439**	Email:**jwross@uw.edu**
Occupation/Position:**DIRECTOR OF UWAL AND UWAL BUSINESS MANAGER**	Department:**ENG: William E. Boeing Department of Aeronautics and Astronautics-ALUW**
Date Reported(yyyy/mm/dd):**2017/06/18**	Time of Reporting:**02:29 PM**

Person Involved or Affected

Last Name:**Undergrads from [redacted] class; volunteers**	First Name:
Phone:	Email:
Occupation/Position:**Undergraduate Student**	Department:
Person was in Paid Position:**No**	

Incident Details

Date of Incident(yyyy/mm/dd):**2017/05/28**	Time of Incident:**Can Not Be Determined**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:	
Room:	Other:**Near Coupeville, Whidbey Island**	

Incident Details:

Near miss. Aborted flight of R/C aircraft that turned out to be hazardous. No injuries.

The UW undergrads were students in [redacted] class. The radio controlled aircraft was the Spring [redacted] 2015-Aircraft (not the current [redacted] class' 2017-Aircraft).

As part of the winter/spring 2017 [redacted] course, taught by [redacted], undergrads were directed to finish the 2015-Aircraft that previous [redacted] students had started building two years ago. Current students, busy with the 2017-Aircraft, did not look into the design of the 2015-aircraft very much and put trust in [redacted] that he was vouching for the 2015-Aircraft's design, and that he was setting them up for success.

The flight began straight, but after the first command to turn, the situation became a case of a 36 pound aircraft flying around at 100 mph with a flight controlability only slightly better than a bottle rocket.

The volunteer R/C pilot is a professional and after first couple of barely controllable turns chose to land at the earliest opportunity. Much risk is mitigated by having this highly experienced pilot. He had directed pre-flight safety steps. All safety considerations worked, but it is not okay to surprise him with something that flies this badly. Put at unnecessary and excessive risk were UW reputation, good will of volunteers, environment (brush fire), nearby cars, UW persons, and non-UW bystanders.

[redacted] gave an impression that the 2015-Aircraft could be flight tested with about the same level of modest risk as was the case in similar situations years ago. It is now apparent that [redacted] did not adequately verify the design. The R/C pilot said (among other things) he could not reasonably control the yaw angle. [redacted] did not attend the flight test.

The account of the flight indicates that the 2015-Aircraft had severe unsteady Roll-Yaw coupling (i.e. ailerons create intended roll but also create excessive, jerky, undesirable yaw). The wind tunnel testing that the 2015 class performed show this effect. Part of dealing with it is rudder design. But the 2015 students' rudder design estimates were not finished in time for any rudders or rudder angles to be tested in the wind tunnel. The 2015-Aircraft has a rudder but it's design history is unclear.

Part of completing the 2015-Aircraft was defining the weight distribution so the center of gravity (CG) would be at the location specified during wind tunnel testing (April 2015). Control forces of an aircraft pivot about its CG so keeping the CG at or very near its design location is arguably the most

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

important thing.

Comparing pictures from the wind tunnel test to a mark on the 2015-Aircraft suggest that the 2017 students received incorrect information about the CG location and balanced the weight a few inches too far aft.

There may be other basic design flaws.

Attachment:**No**

Supervisor

Last Name:**Waas**	First Name:**Moderage**
Phone:**+1 206 221-2569**	Email:**awaas@aa.washington.edu**
Occupation/Position:**PROFESSOR**	Department:**PROV: College of Engineering**

Classification

Level 1:
Near miss (No incident occurred but it could have),

Type of Incident

Injury Description: **None,**

Body Parts Affected: **None,**

Cause of Injury or Damage: **None,**

Possible Causes

Equipment:

Environment:

Policies / Procedures:

Human Factors: **Failure to Follow Established Protocol/Procedures, Inattention,**

Suggested corrective action by the affected party

[redacted] is excessively boastful about his [redacted] capstone airplane design courses, when in reality the coursework is never complete. Closer attention to both the details of course design work and the Big Picture of overall progress are called for.

Years ago, the class built exotic model aircraft that the R/C pilot flew easily. This 2015-Airplane incident should not be dismissed on the basis that all flight tests come with risks.

In this case, the 2016-17 students had their own design to work on. A couple of current [redacted] students grumbled about [redacted] wanting them to complete unfinished R/C Airplanes. In addition to the 2015-airplane, the professor advocated that the 2016-airplane be finished too, saying it is "just a couple weeks away from being done" when it is actually in pieces. Another 2017 [redacted] student said that [redacted] ostensibly assigned completion of the 2015-Airplane as a form of practice. But with all the high school and college focus on hands-on teams and projects they already had practice sanding, trimming, and painting. For other details they were reportedly given little information. Busy work on the 2015-Airplane interfered with the 2017 design work.

The "established protocol" is the tradition of an instructor having in mind what the student output should be. The simplest form is an instructor having an answer key to a quiz. For a design course, the instructor could be minding the students' design work as they go, including doing independent calculations. But that is not the case for [redacted], and it gets greater potential for missing safety-related design flaws as [redacted] pays less and less attention to the reasonableness of the course content and timeframe.

But successful corrective action is an even more extensive process that touches on course planning, academics, and so on. I highly recommend a re-commitment to processes proven to be successful in the past.

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.)
Updates: Phrase "near hit" removed. The EH/S instructions to flag incident as a "near miss" prompted a

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

recurring point around here that a near miss means you got hit, so adding "near hit" was done out of habit.

To reiterate: the safety measures worked and all procedures of the host site were followed. The incident should increase host confidence in UW.

Original concerns included summaries of comments of those involved, including the R/C pilot who had said something to the effect that a reason to end the flight prematurely was the aircraft had inadequate yaw control and velocity was about 100mph. Student complaints about [redacted] are recurring, but this year included observations of the 2015-airplane's mismatch between design information and first flight performance. The student report says or said there was a lack of turn authority from the stabilator and canards. Additionally, students in the past few years in and out of [redacted] have escalated expressions of concern about not being listened to which factored in to the choice to submit an OARS report. Names of former students who reviewed an early draft of text for the OARS report are being kept confidential at their request.

Yesterday and today I got some further information.
The control concerns of the R/C pilot are limited, not general. His more complete opinion is that the 2015 aircraft had a "normal" level of first flight uncertainty.
The prompt to prematurely end the flight came from an affiliate professor present - not the R/C pilot. Whether the R/C pilot would have otherwise kept flying can be checked with him.

Recommendations/Preventive Measures:
The addition of reading material and documentation may or may not be effective. The R/C flight process already has a lot.
Certain "culture of safety" enhancements that are ongoing topics of the A&A Safety Committee should be figured out first.

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

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:**6/19/17 forwarded to Emma Corell, Denise Bender - 6/19/17**

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

University of Washington
Accident / Incident Report

Report Number:**2017-06-046** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:**injury@u.washington.edu**
Occupation/Position:**RESEARCH SCIENTIST/ENGINEER 1**	Department:**BIOENGINEERING**
Date Reported(yyyy/mm/dd):**2017/06/20**	Time of Reporting:**09:38 AM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:**injury@u.washington.edu**
Occupation/Position:**RESEARCH SCIENTIST/ENGINEER 1**	Department:**BIOENGINEERING**

Incident Details

Date of Incident(yyyy/mm/dd):**2017/06/19**	Time of Incident:**8:30 PM**	When Shift Begins: **N/A**
Campus:**UWMC**	Incident Location/Parking Lot:	
Room:**354**	Other:**South Lake Union, Brotman Building**	

Incident Details:

Small mercury thermometer broken on linoleum floor. Spill cleaned using plastic scraper and glass vial for larger droplets and scotch tape for smaller droplets. All objects in contact with mercury were ziplock bagged and bucketed. Spill area cordoned with masking tape.

Attachment:**No**

Supervisor

Last Name:**KIM**	First Name:**DEOK-HO**
Phone:**+1 206 616-1133**	Email:**deokho@uw.edu**
Occupation/Position:**ASSISTANT PROFESSOR**	Department:**BIOENGINEERING**

Classification

Level 1:
Near miss (No incident occurred but it could have),
Property damage only,

Type of Incident

Injury Description: **Property Damage Only, None,**

Body Parts Affected: **None,**

Cause of Injury or Damage: **Chemicals, None,**

Possible Causes

Equipment: **Improper Equipment,**

Environment:

Policies / Procedures: **Inadequate Planning, Preparation,**

Human Factors: **Inattention,**

Suggested corrective action by the affected party

Replace all mercury-containing devices in lab with non mercury containing ones.

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.)
Mercury containing equipment still remained in use by lab personnel. Incident would have been avoided entirely had the thermometer involved not contained mercury. Lack of awareness of mercury containing equipment could have contributed to dropping of the thermometer.

Recommendations/Preventive Measures:
ID and remove all mercury containing in the lab. Train members on identification of mercury containing devices.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/06/30	

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:**6/20/17 forwarded to Katia Harb, Denise Bender - Angie Haggard**

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

University of Washington
Accident / Incident Report

Report Number:**2017-06-070** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:**Knowlen**	First Name:**Carl**
Phone:**+1 206 543-7159**	Email:**knowlen@uw.edu**
Occupation/Position:**RESEARCH ASSOCIATE PROFESSOR**	Department:**ENG: William E. Boeing Department of Aeronautics and Astronautics**
Date Reported(yyyy/mm/dd):**2017/06/27**	Time of Reporting:**09:14 AM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:
Occupation/Position:**Undergraduate Student**	Department:
Person was in Paid Position:**No**	

Incident Details

Date of Incident(yyyy/mm/dd):**2017/06/23**	Time of Incident:**3:00 PM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:	
Room:	Other:**Spaceport, New Mexico**	

Incident Details:

Student experienced a brief period of heat exhaustion. After a long day preparing a rocket for launch in the desert, he threw up and almost fainted. An EMT vehicle was present on site and applied first aid, primarily cooling him off for ~20 min. [redacted] recovered fine, but we kept him out of the sun for rest of day.

Attachment:**No**

Supervisor

Last Name:**Knowlen**	First Name:**Carl**
Phone:**+1 206 543-7159**	Email:**knowlen@uw.edu**
Occupation/Position:**RESEARCH ASSOCIATE PROFESSOR**	Department:**ENG: William E. Boeing Department of Aeronautics and Astronautics**

Classification

Level 1:
Injury requiring first aid,

Type of Incident

Injury Description: **Heat Stress, Heat-related Illness,**

Body Parts Affected: **Body Systems: Internal Organs, Nervous System, Respiratory, etc.,**

Cause of Injury or Damage: **Temperature Extreme (Hot or Cold),**

Possible Causes

Equipment: **Other,**

Environment: **Inclement Weather,**

Policies / Procedures: **Failure to Follow Procedures,**

Human Factors: **Inattention,**

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

Suggested corrective action by the affected party

Orientation for students for self-protection in desert environments is recommended. In particular, noting early signs of heat exhaustion and heat stroke.

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.)
Over-exertion in extreme heat is to be avoided. Not recognizing the first signs of heat exhaustion was likely root cause, student should of informed others that he was not feeling well before getting close to collapse. Buddy system worked (everybody is always paired w/ someone when on these excursions in the desert) and first aid was immediate.

Recommendations/Preventive Measures:
More in-depth orientation for students for self-protection in desert environments is recommended. In particular, identifying early signs of heat exhaustion and heat stroke.

Corrective Actions Target Date (yyyy/mm/dd):	Corrective Actions Complete Date (yyyy/mm/dd):
2017/06/27	**2017/06/27**

Other Comments:
New policy for enhanced safety briefings on heat concerns for SARP activities will be implemented immediately.

EHS Review

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

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

University of Washington
Accident / Incident Report

Report Number:**2017-06-094** **Contact EH&S at 206-543-7388**

Person Reporting Incident

Last Name:**Boechler**	First Name:**Nicholas**
Phone:**+1 206 221-6515**	Email:**boechler@uw.edu**
Occupation/Position:**ASSISTANT PROFESSOR**	Department:**ENG: Mechanical Engineering**
Date Reported(yyyy/mm/dd):**2017/06/30**	Time of Reporting:**06:02 PM**

Person Involved or Affected

Last Name:[redacted]	First Name:[redacted]
Phone:	Email:
Occupation/Position:**Undergraduate Student**	Department:
Person was in Paid Position:**Yes**	

Incident Details

Date of Incident(yyyy/mm/dd):**2017/06/30**	Time of Incident:**4:30 PM**	When Shift Begins: **N/A**
Campus:**Seattle**	Incident Location/Parking Lot:**AERO & ENG RESCH**	
Room:**323**	Other:	

Incident Details:

- Already described. Update: student checked by doctor and released from UW ER -- no injury.

- Spill was cleaned up with alconox, water, and paper towels, then the floor area was blocked off with signs while it dried.

- Waste pickup will be scheduled.

Attachment:**No**

Supervisor

Last Name:**Boechler**	First Name:**Nicholas**
Phone:**+1 206 221-6515**	Email:**boechler@uw.edu**
Occupation/Position:**ASSISTANT PROFESSOR**	Department:**ENG: Mechanical Engineering**

Classification

Level 1:
Injury or Exposure, no first aid required,

Type of Incident

Injury Description: **None,**

Body Parts Affected: **Arms,**

Cause of Injury or Damage: **Chemicals,**

Possible Causes

Equipment:

Environment:

Policies / Procedures:

Human Factors: **PPE Not Used, Failure to Follow Established Protocol/Procedures,**

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

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.)
The need for complete PPE needed to be re-emphasized.

Recommendations/Preventive Measures:
Held a full lab meeting and discussion this morning (July 5) to re-emphasize the importance of following safety procedures and lab SOPs, including the use of full proper PPE. Reminded all students in the lab that they should renew their safety training if it has expired or will expire soon.

Corrective Actions Target Date (yyyy/mm/dd): **2017/07/05**	Corrective Actions Complete Date (yyyy/mm/dd): **2017/07/05**

Other Comments:

EHS Review

Last Name:**Bender**	First Name:**Denise E**	Phone Number:**+1 206 221-0368**	Email:**db58@uw.edu**
Occupation/Position:		Department:	

Comments:

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

ENVIRONMENTAL HEALTH & SAFETY
UNIVERSITY of WASHINGTON

University-Wide (U-Wide) Health and Safety Committee
June 14, 2017 Meeting Minutes
1:00-2:30 pm Foege N130A

	Elected Members (Group)		Appointed Members (Group)		EH&S Staff
X	**Leslie Anderson (1) Chair**	x	Chad Cook (2)	X	Jude Van Buren
x	Ryan Hawkinson (1)	x	Paul Zuchowski (3)	X	Denise Bender
	Sterling Luke (2)	x	Beth Hammermeister (4)		Emma Corell
x	Justin Berry (3)	x	Liz Kindred (5)	x	Angelina Haggard
	Carol Harvey (4)	x	Sonia Honeydew (9)	x	Robyn Kunsman
	Stephen Lundgren (5)		David Zuckerman (10)		Katia Harb
x	Maggie Luning (6)				Eleanor Wade
x	Tamara Leonard (6)				Doug Gallucci
x	Robyn Smidley (7)			x	Karen Crow
x	Kelly Carter-Lynn (7)				
	Alex Volkman (8)				
x	Hannah Wilson (8)				**Guests**
	Colleen Irvin (9)			X	Victor Balta
x	David Warren (10)				
x	Rick Gleason (Faculty Senate)				
	Labor Union Representation		**Ex-Officio Members**		**Ex-Officio Members**
x	Paula Lukaszek, WFSE Local 1488	x	Michelle Doiron, Attorney General's Office		Chief John Vinson, UWPD
	Vacant, SEIU Local 1199		Tracey Mosier, Facilities Services		Jay Sedivy, Transportation Services
x	Hannah Barnett, SEIU Local 925		Chris Pennington, Facilities Services	x	Letty Rogers, Risk Management
	Taylor Stepien, Graduate & Professional Student Senate (GPSS), UAW 4121		Steve Charvat, Emergency Management	x	Ron Fouty, Capital Planning & Development
			Eli King, Emergency Management		
			Stacie Smith, Emergency Management		

*x= Present at meeting

Agenda

1. Call to Order
2. Approval of Meeting Minutes
3. Guest Speaker: Victor Balta, Advancement DOF
4. Organizational Group Reports
5. Union Reports
6. Ex-Officio Reports
7. Environmental Health &Safety (EH&S) Updates
8. Good of the Order
9. Adjournment

Recorded by Robyn Kunsman

1. **Call to Order:** The meeting was called to order at 1:04 PM by Leslie Anderson.

2. **Approval of Meeting Minutes:** The May meeting minutes were approved.

3. **Guest Speaker: Victor Balta, Advancement DOF:** Victor Balta presented on emergency and crisis communications history, processes, tools, and resources. He addressed questions from committee members involving Red Square, Evergreen, mass evacuation, other UW campuses, etc. Leslie Anderson asked for a member of the communications team to join U-Wide as an Ex-Officio. Victor asked that U-Wide members continue to provide feedback and ideas to his department.

4. **Organizational Group Reports**

    a. **Group 1:** Leslie Anderson and Ryan Hawkinson reported that Group 1 met today. Eli King presented on large event planning. OARS reports were reviewed. A question was raised involving what information is to be given to other parties when involved in a traffic incident.

    b. **Group 2:** Chad Cook stated that Group 2 met and reviewed OARS reports.

    c. **Group 3:** Paul Zuchowski reported that Group 3 reviewed OARS reports.

    d. **Group 4:** Beth Hammermeister reported that Group 4 reviewed OARS. Judy Cashman presented on fainting after a recent increase of reports involving fainting.

    e. **Group 5:** Liz Kindred reported that Group 5 did not meet.

    f. **Group 6:** Maggie Luning reported that Group 6 met to discuss OARS. The group reviewed the Accident Prevention Plan (APP) draft and the new employee orientation draft. Fire extinguisher training was discussed.

g. **Group 7:** Kelly Carter-Lynn reported that Group 7 reviewed OARS reports. First Aid and CPR training is open on June 20 and 22 at the Bothell campus. Group members were assigned to perform follow-up on open OARS reports. The Emergency Maintenance Coordinator will be providing lists to replenish safety supplies. A safety fair is in the works. The group will request that the Executive Sponsor take over health and safety communications to Bothell campus. AEDs will be available in all buildings. Nicole Sanderson was elected as a new Co-Chair. A rotating member will be attending U-Wide. Active shooter training took place yesterday. The group submitted recommendations to include an addendum for Bothell in the APP.

h. **Group 8:** Hannah Wilson reported that Group 8 reviewed OARS reports. Their summer focus will be on evacuation warden training. The APP and new employee checklist were discussed.

i. **Group 9:** Sonia Honeydew reported that Group 9 met. The APP was reviewed. The Clean Energy Institute is now represented on the committee. Scott Nelson of EH&S presented on FSEP and other fire and life safety items. Evacuation maps should be reviewed for updated information.

j. **Group 10:** David Warren reported that Group 10 reviewed OARS reports. The group discussed the APP and discussed presenters that they would like to bring in to their meetings (Capital Projects, concussions, etc.).

5. **Union Reports:** Hannah Barnett encouraged union membership from classified staff members of SIEU and WFSE.

6. **Ex-Officio Reports:** Eli King presented the first draft of large/short notice planned events on campus to HSC 1. She is looking for feedback to move this forward.

7. **Environmental Health & Safety Updates**: Jude Van Buren recognized Rick Gleason for his teaching excellence. She gave updates on yearly statistics packet presentations.

   Denise Bender reported that the LNI response letter regarding custodians was accepted, and further exposure monitoring will be available after June 19. EH&S will be monitoring the scaffolding issue. Exposure monitoring is being performed on November 2. The arc flash case was resolved by purchasing a robot to operate in the medical center high voltage area.

8. **Good of the Order:** None.

9. **Adjournment:** Leslie Anderson adjourned the meeting at 2:19 PM.

University-Wide (U-Wide) Health and Safety Committee Meeting Agenda

July 12, 2017

1:00 – 2:30 PM

Regular Attendees:

- Current University-Wide Health and Safety Committee Members
  http://www.ehs.washington.edu/ohssafcom/index.shtm

- Environmental Health & Safety (EH&S) Staff:
  Jude Van Buren, Denise Bender, Emma Corell, Angie Haggard, Robyn Kunsman

Agenda Item	Lead	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
Elections for 2018-19 Health & Safety Committee Term	Emma Corell	Presentation	30 min
Organizational Group Reports*	Committee Members	Discussion	15 min
Union Reports	Union Representatives	Discussion	5 min
Ex-Officio Reports	Ex-Officio Members	Discussion	10 min
EH&S Updates	L&I Update – Emma Corell APP Update – Emma Corell	Discussion	10 min
Good of the Order	Committee Members	Discussion	10 min
Adjourn	Leslie Anderson	Robert's Rules of Order	

*Organizational Group Reports include topics covered at their most recent meeting

Please send ideas for agenda items to Leslie Anderson at least 2 weeks prior to our meetings.