University of St. Andrews
School of Chemistry

Minutes of the School Safety Committee
25th November 2021

Kevin Jones	[KJ]	H&S Manager (Chair)
Bela Bode	[BEB]	Assistant Safety Coordinator
Petr Kilian	[PK]	Assistant Safety Coordinator
Andreas Stasch	[AS]	Assistant Safety Coordinator
Iona Hutchison	[ILH]	Disability Officer
Paul Connor	[PAC]	Physical
Magnus Alphey	[MSA]	BSRC, X-Ray
Bob Steele	[RS]	Earth Sciences Representative
Terry Smith	[TS]	BSRC
Iain Smellie	[IAS]	Chemistry
David Brown	[DB]	Drochaid

1. Apologies

Apologies received from Juan Penedo-Esteiro, Scott Filipovic, Brian Walker and Nick Taylor.

2. Cyanide

KJ explained that he received several enquiries about conducting cyanide reactions in individual laboratories. KJ explained that current policy dictates cyanide reactions must be performed in laboratory 367, which must be booked in advance as it is used by Sharon Ashbrook, Euan Kay and Doug Philp. KJ expressed his concern over asking people to work in unfamiliar surroundings and transport cyanide sources through the department. KJ has developed a draft procedure that outlines the steps to be taken if a cyanide reaction is to be performed in a research lab other than 367.

IAS queried why cyanide is specifically highlighted as other chemicals are used in the department that are equally dangerous (azides given as an example) and do not require use of a specific laboratory.

BEB queried the reasoning behind the dedicated lab and mentioned that if this is historical then he supports changes to the procedure with backing from KJ and HoS. AS suggested that the dedicated labs may be historical when cyanide reactions were carried out on much larger scales.

MA queried whether a section should be added to the operating procedure regarding roof access when cyanide is being used. Bob Steele also mentioned that Earth Sciences evaporate hydrofluoric acid and were told they would be informed if contracts are working on the roof close to their laboratory, however, he is unsure if this guidance is being followed.

PK suggested adding a sentence stating that cyanide reactions must be conducted in an efficient fume cupboard and to include a discussion of emergency procedures (e.g. what happens if the fume cupboard shuts down or the fire alarm is triggered). BEB mentioned that it is not clear from the current draft whether this is a “one time” approval for conducting cyanide reactions or if permission should be sought for each reaction. KJ clarified that this will need to be completed each time an experiment

is to be conducted. IAS mentioned that transportation of cyanide is another aspect of the procedure that can be extended as considering a spillage of cyanide in a communal space (e.g. corridor / lift) is important. AS queried whether there was anything special about lab 367 for cyanide use. KJ mentioned that the medical-oxygen kit is stored outside lab 367, but there is nothing special about the fume cupboard.

KJ summarised that the committee supports cyanide reactions being carried out in individual laboratories, but that the procedure needs to be made more explicit.

Actions	Date Completed
KJ to update procedure with comments from H&S committee	
KJ to raise cyanide procedure at Staff Council for further discussion and potential adoption	

3. Base Baths

KJ explained that during a meeting with Brian Kennedy (Deputy Director of Planning - Insurance), the issue of maintaining base baths was raised. KJ queried whether a procedure was in place to test the self-closing mechanism for the base bath and if there are areas for improvement based on experience. AS recommended highlighting to the insurers that the default position is closed and that an electrical supply is needed to keep the lid open. AS raised the point that you would not wish to test the mechanism with the solvent still present and similarly would not want to remove the solvent from the metal container for an extended period. MA queried if the thermocouple could be detached for testing and AS confirmed that the thermocouple is contained within the lid and cannot be easily removed. PK queried whether the thermocouple / thermal switch used to trigger the mechanism has a shelf life and would need to be replaced periodically. PK also mentioned that he is wary about the build-up of solvent vapours in the box due to proximity to electrical components and suggested this could be solved by the correct choice of inner container. PC mentioned that a switch could be added to test the closing mechanism and the thermocouple could be tested annually. MA queried whether an emergency switch positioned at a distance could added so the box could be closed at a distance in an emergency.

Following the meeting, AS suggested developing a technical manual for the base baths, outlining the design and safe operating procedures.

Actions	Date Completed
KJ to speak with Scott Filipovic and Jack Bremner about the base-bath design, potential to trigger the mechanism with a heat gun and possibility of adding a test switch to new models.	
KJ to discuss potential improvements with AS and PK before feeding back to H&S committee	
KJ to work with SF to develop technical manual	

4. Lab Inspections

KJ explained that during a conversation with Brian Kennedy, laboratory self-inspections were discussed. KJ asked the committee how self-inspections might be improved.

BEB suggested that KJ could visit labs and cross check against self-assessments to ensure against discrepancies. AS stated it is beneficial to have external inspections as lab owners become "blind" to issues. MA offered to help KJ conduct lab inspections and act as a fresh pair of eyes. MA also mentioned that if a PI raises an issue during the inspection, they are responsible for addressing these issues (or contact someone to help address the problem). BEB suggested that a statement could be added to the form stating it is the responsibility of the PI to follow up on actions. BEB mentioned that the BSRC and Chemistry forms are different and those used in Chemistry would benefit from being updated. AS explained that the form was based on a paper version provided by Alan Aitken, but some questions may not be required.

KJ suggested he sits down with AS to revise the self-inspection form and mentioned he had requested access to "iauditor" so he can conduct lab inspections more frequently.

KJ queried whether adding a section to the lab inspections in which students / staff are questioned about H&S protocol would be useful. TS commented that he thought this would be a good addition as this is what the HSE will do if they visit (e.g. ask "what would you do in situation X?"). MA added that asking the students to describe the experiment they are conducting and asking to see risk assessments could also be included. BEB mentioned that querying the risks of their specific experiment would be worthwhile and may highlight if researchers fully appreciate the hazards of a given experiment.

Actions	**Date Completed**
KJ and AS to redesign self-inspection forms	
KJ to add "safety protocol" questions to external lab inspections	
KJ to follow up on "iauditor" subscription for introduction next year	

5. First Aid

KJ explained he has completed the level 3 Education and Training Award and is qualified to deliver First-Aid training within the department. KJ stated he would be back in touch in January 2022 to ask members of the H&S committee who are willing to act as first-aiders to attend a one-day course. KJ queried if there are any concerns about introducing a first-aid component to the PhD induction within the School of Chemistry. MA commented that it is good for students to be aware of these issues and this would be beneficial.

Actions	**Date Completed**
KJ to contact staff in January next year to arrange training	
KJ to develop First-Aid course for new PhD and Post-Doc Staff	

6. Fire Drills

KJ explained that two fire drills were conducted (July and October) and were generally very positive. Key learning points highlighted were (i) groups congregating at wrong assembly point, (ii) when gas shut-off system is disabled during a fire drill, automatic swipe-card release is also disabled. KJ suggested this is tested at the next fire drill to fully understand the connectivity of the system. KJ queried if the fire wardens on the committee wish to raise any have any concerns or issues they wish to raise.

PK asked whether a policy had been developed to stop people wearing headphones / hearing difficulties entering the building. PC suggested that signs could be placed at exits to prevent accidental entry. TS mentioned that the BSRC has flashing beacons and whether this could be installed in Purdie. KJ mentioned he look into potential solutions and feedback to the H&S committee.

KJ mentioned that he will contact fire stewards before the next fire drill to block exits and prop doors open as an additional test during the evacuation.

Actions	Date Completed
KJ to consider solution to re-entry problems	
KJ to contact selected fire wardens for help during next fire drill	

7. Fire Extinguisher Training

KJ explained that he had contacted Robert Jackson and Gary Wood (University Fire Officers) who have offered to train a handful of safety coordinators to deliver practical fire extinguisher training. KJ extended an invitation to any H&S committee members who wanted to be included in this training can contact KJ directly.

Actions	Date Completed
KJ to arrange fire extinguisher training in early 2022	
H&S committee members to contact KJ if interested in being trained	

8. Standard Induction

KJ explained that he would circulate a draft “induction checklist” that has been developed by the laboratory safety working group for consideration by the H&S committee. KJ welcomes any comments regarding the document and any points that can be added.

Actions	Date Completed
KJ to circulate document for consideration	

9. H&S Website

KJ shared a link for a newly developed H&S website. KJ welcomed any suggestions for how the site could be improved and any content that should be added.

Actions	Date Completed
H&S committee to feedback on potential additions to H&S website	