

## Dalton Cumbrian Facility (DCF) Safety Monthly Meeting

17 September 2013 13:30-14:30

DCF Meeting Room 1

### Minutes of Meeting

#### Present:

Simon Pimblott (SMP) (Chair)  
Amanda Kenway-Jackson (AKJ)  
Ruth Edge (RE)  
Rebecca Shepherd (RS)  
Mark White (MW)  
Vicky Irving (VI)  
Kan-Cheung Cheung (KCC)

#### Apologies:

Dave Allyson (DA)  
Rob Derbyshire (RD)  
Kevin Warren (KW)  
Andy Smith (ADS)  
Adrian Parker (AP)  
Sven Koehler (SK)

## 1 Welcome & Apologies

SMP welcomed everyone to the meeting. Apologies were received from DA, RD, KW, ADS, AP & SK.

## 2 Minutes & Matters Arising

A review of previous minutes and outstanding actions took place. It was agreed that these were a true representation.

<b>2803-009</b>	KW to check with STDU for PTW training courses. 17-09-2013 Action transferred to MW.	<b>ONGOING</b> – MW looking at adapting the UoM PTW system for DCF. Once this is complete, bespoke training will be carried out by MW.
<b>2506-001</b>	RE to compare Berthold & Babcock prices for calibrating of radiation devices.	<b>CLOSED</b> – RE had received a quote for neutron monitors, Babcock were the preferred supplier.
<b>2506-002</b>	KW to send DCF Local Emergency Plan to David Barker (copied to AP) to finalise.	<b>CLOSED</b>
<b>2506-006</b>	RE to update lab/chemical waste list and seek advice from UoM chemical waste coordinator.	<b>CLOSED</b> – Neales waste would visit DCF on 24 <sup>th</sup> September.
<b>2506-013</b>	AKJ to have walkdown of fire assembly point to ensure it is at least 200m away from gas bottle store, as recommended by gas safety trainer.	<b>CLOSED</b> – MW confirmed gas store is 35m from fire assembly point but only just in line of sight. Await Fire Risk Assessment from FARMSS.
<b>2013-0808-S-01</b>	RS to send a reminder following recent lab champions meeting that suggestions for emergency packs should be made asap to MW.	<b>CLOSED</b> – email sent, no suggestions received. <b>New Action 2013-1709-S-01 MW to draw up a list of things to purchase for an emergency pack – should be 'tailor made' for DCF.</b>
<b>2013-0808-S-02</b>	MW to prepare training for PUWER & Pressure Systems.	<b>CLOSED</b> – MW has prepared PUWER & Pressure training, suggested that DCF staff have a run through before MW delivers training.
<b>2013-0808-S-03</b>	Nalin Thakkur & David Barker to visit DCF, VI to draft a letter of invitation including a draft agenda. AP to coordinate a suitable date.	<b>CLOSED</b> – Nalin had agreed to visit. SMP & David Barker were to meet separately & would discuss a visit to DCF.
<b>2013-0808-S-04</b>	RE to send the email trail regarding the Radiation Safety Unit being unable to visit DCF to AP.	<b>ONGOING</b>
<b>2013-0808-S-05</b>	RE to send Radiation Safety Unit policy document to AP & SMP.	<b>CLOSED</b>
<b>2013-0808-S-06</b>	SMP to request decay store specification from Renae Sonnenburg. No store available at DCF, need to	<b>CLOSED</b> – Chris Rhodes NNL was sending spec to SMP. RE had received a

	purchase one. (UoM policy is for Schools to have only overnight decay stores, so can we store for longer - RE having conversation with Francis Livens & Nick Bryan).	spec from INL. <b>New Action 2013-1709-S-02 RE, KCC, ADS &amp; MW to purchase set of lead bricks.</b> <b>New Action 2013-1709-S-03 SMP to request spec of decay store in graphite lab from Abbie Jones.</b>
<b>2013-0808-S-07</b>	KCC to complete accelerator project registration documentation and send to Radiation Safety Unit.	<b>ONGOING</b>
<b>2013-0808-S-08</b>	VI to ensure Rachel Valentine is happy with levels of safety training MW has received in previous roles – specifically manual handling.	<b>CLOSED</b> – Rachel Valentine had no issues with MW's training. VI to obtain in writing.
<b>2013-0808-S-09</b>	RE to find out exposure limits of TLD badges.	<b>CLOSED</b> – Confirmed at 10 sieverts maximum.
<b>2013-0808-S-10</b>	RE to draft an email to go out under SMP signature to remind occupants that all equipment and experiments require a protocol to be submitted.	<b>CLOSED</b> – email sent.
<b>2013-0808-S-11</b>	RE to complete a walk down form to capture soldering iron in analytical lab.	<b>CLOSED</b> – walk down form was completed, soldering iron been PAT tested.
<b>2013-0808-S-12</b>	VI to obtain fitness certificates for Charles Taylor & MW.	<b>CLOSED</b> – <b>New Action 2013-1709-S-04 DCF requires a list of everyone that has completed a certificate, VI liaising with Occ Health for a list – get clarification over short term students</b>
<b>2013-0808-S-13</b>	VI to coordinate diaries and schedule a meeting between SMP, AP & David Barker.	<b>CLOSED</b> – scheduled for 30 <sup>th</sup> Sept
<b>2013-0808-S-14</b>	KCC & ADS to draft a near miss report for chiller condensation, AKJ & SMP to review.	<b>ONGOING</b> – A second event now occurred with condensation forming, first event needs to be logged before second event. AKJ to facilitate internal reporting.
<b>2013-0808-S-15</b>	VI & MW to have conversation with Janet Makin re: MW providing annual first aid refresher training.	<b>ONGOING</b> – MW meeting with Janet Makin on 18 <sup>th</sup> Sept to discuss, will report back to next meeting.
<b>2013-0808-S-16</b>	AP to investigate why DCF did not receive communications from Heads of Dept. regarding annual returns.	<b>ONGOING</b> – ensure arrangements have been made for core staff to be included on the primary mailing list.
<b>2013-0808-S-17</b>	RE to look into whether oxygen monitors are required in labs.	<b>CLOSED</b> – monitor required in analytical lab – to be added to list of requirements for Acc Hall.
<b>2013-0808-S-18</b>	ADS, KCC & MW to carry out an assessment of need/cost for emergency breathing apparatus.	<b>ONGOING</b> – AKJ to look at brochures, MW to purchase if appropriate.
<b>2013-0808-S-19</b>	VI to purchase a metal fire extinguisher (same as in Accelerator Hall) – liaise with University Fire Officer if required.	<b>CLOSED</b> – extinguisher purchased and installed.

### 3 Radiation Protection

A radiation safety course had been arranged for 24<sup>th</sup> September.

DCF was now set up for portable neutron monitoring.

Tenders for the RPA contract were being assessed on 23<sup>rd</sup> September, DA's contract had been extended until April 2014.

### 4 Laboratory Safety

The IC had ran out of water whilst the two responsible students were away.

**Action 2013-1709-S-05 SMP to discuss student responsibility for equipment at weekly research meetings.**

**Action 2013-1709-S-06 SMP to have a meeting (after 10 October) with MW, RE & EJM to discuss the following:-**

- **Understanding operating conditions, procedures and safety requirements of all equipment in G007 Materialography Lab**
- **Discuss water outlets in G007 and what should be filtered to the settlement tank**
- **Location of ball mill**

## **5 General Safety**

The process for Risk Assessment was discussed.

MW would like to implement a traffic light system for DCF (as recommended by IOSH).

SMP would like written approval of this system from Rob Derbyshire.

MW to send a written description of what he intends to implement to Rob for approval.

**\*Post-meeting note – see section 13 of attached RA policy sent by Rob Derbyshire.**

Discuss new RA process at next lab champions meeting to ensure all lab champs and PI's are on board.

**Action 2013-1709-S-07 MW to prepare some slides for lab champions meeting to explain new Risk Assessment process. Send to Rob Derbyshire for approval.**

### **5.1 Accidents, Incidents and Near-Misses**

Post grad student had burned his arm on his motorbike in DCF car park. Treatment was given by RS. A first aid report form had been completed and sent to Janet Makin; Janet confirmed that as this happened outside of the premises and was not related to a work activity there was no need for an accident form.

## **6 Health & Safety Training**

Breathe will conduct bespoke confined space training at DCF. AKJ, SMP & MW to discuss.

VI & MW were working on a training matrix which would identify who has received what training and when, this should be ready to bring to the Safety meeting in November.

A defibrillator had been purchased, awaiting delivery. No training is required to operate a defib however it can be linked to annual first aid refresher training if needed.

## **7 Communications with Regulators**

KW had been working on information for the EA in case of a visit.

## **8 AOB & Date of Next Meeting**

SF6 cylinders still needed to be put into the gas store. Floor of gas store should be level.

<b>Summary of Actions Agreed 17 September 2013:</b>	
2013-1709-S-01	<b>MW to draw up a list of things to purchase for an emergency pack – should be 'tailor made' for DCF.</b>
2013-1709-S-02	<b>RE, KCC, ADS &amp; MW to purchase set of lead bricks.</b>
2013-1709-S-03	<b>SMP to request spec of decay store in graphite lab from Abbie Jones.</b>
2013-1709-S-03	<b>DCF requires a list of everyone that has completed a certificate, VI liaising with Occ Health for a list – get clarification over short term students.</b>

2013-1709-S-04	<b>SMP to discuss student responsibility for equipment at weekly research meetings.</b>
2013-1709-S-05	<b>SMP to have a meeting (after 10 October) with MW, RE &amp; EJM to discuss the following:-</b> <ul style="list-style-type: none"> <li>▪ <b>Understanding operating conditions, procedures and safety requirements of all equipment in G007 Materialography Lab</b></li> <li>▪ <b>Discuss water outlets in G007 and what should be filtered to the settlement tank</b></li> <li>▪ <b>Location of ball mill</b></li> </ul>
2013-1709-S-06	<b>MW to prepare some slides for lab champions meeting to explain new Risk Assessment process. Send to Rob Derbyshire for approval.</b>

**The next DCF Safety meeting will be held on 10<sup>th</sup> October at 10:00.**

**Minutes Distributed To:**

**DCF Staff**

Simon Pimblott (SMP)  
Kevin Warren (KW)  
Adrian Parker (AP)  
Amanda Kenway-Jackson (AKJ)  
Ruth Edge (RE)  
Kan-Cheung Cheung (KCC)  
Andy Smith (ADS)  
Vicky Irving (VI)  
Rebecca Shepherd (RS)  
Mark White (MW)  
Dave Allyson (DA)  
Abbie Jones (AJ)  
Barry Lennox (BL)  
Enrique Jimenez-Melero (EJM)  
Clint Sharrad (CS)  
Sven Koehler (SK)  
Alexandru Stancu (AS)  
Colette Quinn (CQ)

**School Safety Advisors**

Elaine Armstrong (EA) [Chemistry]  
Gary Burns (GB) [CEAS]  
Richard Cutting (RC) [EAES]  
Ivan Easdon (IE) [Materials]  
Jim Fearick (JF) [CEAS]  
Simon Heslin (SH) [MACE]

**Heads of Schools**

Michael Sutcliffe (MS) [CEAS]  
Christopher Whitehead (CW) [Chemistry]  
Hugh Coe (HC) [EAES]  
Tony Brown (TB) [EEE]  
Andrew Gibson (AG) [MACE]  
Paul O'Brien (PO'B) [Materials]

**EPS Safety Coordinator**

Rob Derbyshire



## University Health & Safety Arrangements : Chapter 9



### Health & Safety Risk Management & Risk Assessments – key principles

Key word(s) :	(Health & safety) risk management; risk assessment; sensible risk management Management of Health & Safety at Work Regulations 1999; Continuous improvement; PDCA cycle
Target audience :	All managers with duties to manage work and assess risks All staff

### Introduction

1. The University promotes the use of sensible health & safety risk management for all its activities, through informed assessment and proportionate risk controls.
2. The principles of sensible risk management are:
  - a) Ensuring that employees, students and the public are properly protected
  - b) Ensuring compliance with legal requirements
  - c) Providing overall benefit to society by balancing benefits and risks, with a focus on reducing real risks – both those which give rise to less severe injury but occur more frequently, and those that are less likely to occur but if they do happen, could result in very serious consequences.
  - d) Enabling and supporting innovation and learning not stifling them
  - e) Ensuring that those who create risks manage them responsibly
  - f) Enabling individuals to understand that as well as the right to protection, they also have to exercise responsibility.

3. Risk management is NOT about creating a totally risk free society, or generating paperwork for the sake of it. It should not be used to exaggerate trivial risks, or stop learning activities where the risks are managed.

### Hierarchy of controls

4. These are specified in EU Council Directive 89/391/EEC and reproduced in the UK's Management of Health & Safety at Work Regulations 1999 as amended, in Regulation 4 and Schedule 1. <sup>1</sup>
5. The mnemonic ESCAPE summarises the legal hierarchy:
  - E**liminate exposure
  - S**ubstitute with a less hazardous alternative
  - C**ontain by engineering measures
  - A**dopt safe systems of work
  - use **P**recautionary signs
  - wear personal protective **E**quipment.

### Importance of design and procurement

6. In considering measures that could eliminate or avoid risk altogether, attention should be paid to careful design and procurement. Although the design concept is borrowed from legislation relating to safety in construction, it has much wider application.
7. In this context, "design" includes:
  - a) The design of items and systems to produce a larger item (eg building a lab, assembling a research rig, planning a fieldtrip)
  - b) The design and selection of processes (eg considering different means of achieving the same research objective or product; selecting alternatives to carcinogenic materials).
  - c) The mode of operation and the definition of operating parameters, e.g. safe limits of operation of equipment, or office lay-outs that provide sufficient space for people to move around in.
  - d) Consideration of human factors, including the man-equipment interface (eg the selection of personal protective equipment fit for purpose *and* comfortable to wear).

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<sup>1</sup> [http://www.legislation.gov.uk/uksi/1999/3242/pdfs/ukxi\\_19993242\\_en.pdf](http://www.legislation.gov.uk/uksi/1999/3242/pdfs/ukxi_19993242_en.pdf)

## What should sensible risk management aim to achieve?

8. Most health and safety legal requirements are to control the risk “so far as is reasonably practicable” (SFAIRP). There are a few more absolute regulations, typically relating to guarding parts of dangerous machines, but most are qualified by the term SRAIRP. This gives an employer some flexibility in selecting and using control measures that are most suited to the circumstances – providing the controls achieve the same degree of protection from risk. An alternative phrase is “as low as reasonably practicable” (ALARP) which effectively means the same thing.
9. Risk assessment is the process through which the decision about how to control risk is made, and a conclusion reached about the balance between weighing the risk of injury against the cost or sacrifice needed to control or reduce that risk. Because the Health & Safety at Work etc Act 1974 sets up a reverse burden of proof, risk assessments must show that to do more to control a risk would be “grossly disproportionate” to the benefits. That judgement **does not** take into account whether a control measure is affordable – otherwise, poorer employers would be able to avoid the duty to protect their staff altogether.
10. To take an obvious example, it would be disproportionate to spend £1 million on preventing a few people getting splinters from old desk tops. But it would be reasonably practicable to spend £1 million pounds to control the risk of a major explosion or fire that could kill or injure lots of people.

## Duties of Line Managers

11. At the University, the duty to ensure risk assessments are carried out is delegated through line management, and line managers should satisfy themselves that the arrangements they put in place are effective. The person most familiar with the activity or equipment giving rise to a risk will usually be the person directly involved on a daily basis, and that person should be consulted and informed about the contents of the risk assessment and should understand the steps they need to take to control the risk.
12. Managers and others carrying out risk assessments should involve Trade Union and staff safety representatives and should consult with them about changes to work activities that necessitate review or update of the risk assessments.

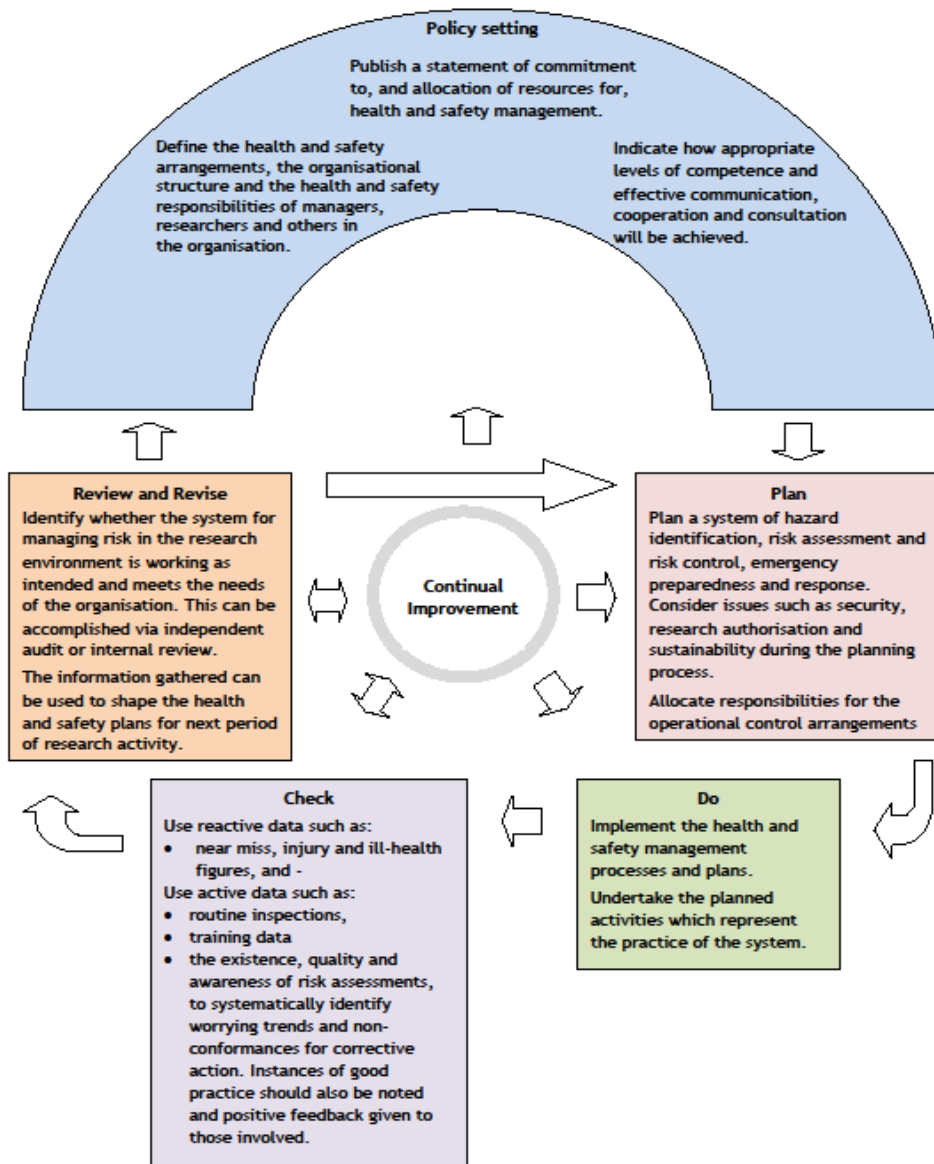
## Types of risk assessment and risk assessment forms

13. Just as there are many different types of risk, so there are many different forms or ways of recording risk assessment and the University does not require a particular format to be used. However, for the majority of purposes, [the](#)

[University's risk assessment form](#) can be used. If alternative templates are used, they must address the same questions.

## Using risk assessments to promote continuous improvement

14. The Management of Health and Safety at Work Regulations 1999 require employers to have appropriate arrangements in place for 'the effective planning, organisation, control, monitoring and review' of their risk identification and control systems. These should be incorporated into an overall organisational health and safety management system, such as the one illustrated below<sup>2</sup>.



<sup>2</sup> Illustration taken from Managing health & safety in research, Guidance for the not-for-profit research sector, draft 8, UCEA/USHA, due for publication Autumn 2012.

15. These cycles can be seen at strategic level (eg the University has a campus-wide policy statement, organisations, and arrangements that extend across the whole gamut of its activities), at School and Directorate level, and also at smaller scales within managed units, eg within a research team. Other arrangements chapters describe some of these systems in more detail.

### **Special cases under the Management of Health & Safety at Work Regulations 1999 as amended**

16. New and expectant mothers (regulation 16) – where the work activity involves a risk to a new or expectant mother or her baby, the risk assessment for the workplace or activity must include this risk. Such risks could include working conditions or processes (such as standing for long periods) and physical, chemical, biological or radiological agents. On receipt of a notification that someone is pregnant, has given birth or is breast-feeding, the existing risk assessment should be reviewed. If it does not already cover risks to this group of people, it must be amended. Advice should be sought from Occupational Health.

17. Protection of young persons (regulation 19) – risk assessments for young persons (under the age of 18) must take into account their relative lack of experience, and any lack of awareness of potential risks. If a young person is recruited or is on a work experience placement, existing risk assessments should be reviewed and amended as necessary.

18. Lone working – the University has approved particular arrangements to do with risk assessments for lone working (see [Chapter 10](#)).

### **University Guidance**

19. The Safety Office has issued the following guidance on risk assessments:

- [General guidance](#) in the form of FAQs
- [The role of generic and dynamic risk assessments](#)

Document control box	
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Owner of this chapter	Occupational Health, Safety & Training Advisory Group (OHSTAG) Chair : Professor Nalin Thakker Secretary: Dr Melanie Taylor