Nuclear safety and security of Great Britain’s nuclear industry is regulated by the Office for Nuclear Regulation (ONR), an agency of the Health and Safety Executive (HSE). ONR seeks to secure the protection of people and society from the hazards of the nuclear industry, by ensuring compliance with relevant legislation and by influencing the nuclear industry to create an excellent health, safety and security culture. This poster gives examples of our work with respect to radiological protection.

### Protection of Workers
1. ONR Specialist regularly assesses nuclear licensees’ arrangements for compliance with the Ionising Radiations Regulations 1999 (IRR99). A key focus is to ensure that doses are kept as low as reasonably practicable (ALARP).
2. During the period 2005–2007 ONR carried out a structured in-depth review of such arrangements across 20 UK nuclear licensed sites including civil nuclear reactors, nuclear chemical facilities and defense facilities.
3. We found very few areas that were below standard and these were subsequently addressed. Overall we found a wide range of good practices including:
   - Management commitment to ALARP practices and RP training (general and task-specific).
   - Dose Reduction Working Groups involving relevant stakeholders.
   - Work planning and scheduling techniques involving ALARP checksheets.
   - Protection using an appropriate hierarchy of control measures.
   - Management using dose budgets and challenging targets for specific tasks.
   - Through investigation of actual and potential radiological events.
4. Overall we concluded that the management of occupational exposures at these UK nuclear licensed sites was generally adequate and, for many aspects, good.

### Protection of the Public
1. ONR regulates licensees’ arrangements for ensuring that public radiation exposures resulting from direct radiation from their operations are restricted, so far as is reasonably practicable.
2. We work with the environment agencies to provide an open check of the public’s exposure to radiation as a result of activities on these sites. Assessed doses are summarised in annual reports ‘Radiactivity in Food and the Environment’ (RIFE); www.food.gov.uk/ourwork/radiation/rife.
3. Results from the monitoring programme support the UK in meeting its international treaty obligations.
4. All doses related to nuclear licensed sites were well within the statutory limit of 1 mSv in 2010.
5. For further details see poster ‘The Importance of Effective Communication of Radiological Protection Information to the Public and the Media’ by S Walker.

### Safety Case Assessment
1. ONR (as an agency of HSE) is responsible for regulating the safety of nuclear installations in Great Britain. This includes granting nuclear site licences with appropriate conditions and granting permissions.
2. Under nuclear site licence conditions, licensees must have an adequate nuclear safety case to provide them with the information required to enable safe management of their facilities and activities.
3. ONR’s inspectors use ‘Safety Assessment Principles’ (SAPs) and supporting ‘Technical Assessment Guides’ (TAGs) to guide regulatory decisions in the nuclear permitting process by providing inspectors with a framework for making consistent regulatory judgements on nuclear safety cases.
4. Such judgements are underpinned by the legal requirement on nuclear site licensees to reduce risks ALARP.
5. SAPs and TAGs cover a range of disciplines including Engineering, Fault Analysis, Accident Management, Emergency Preparedness, Leadership and Management for Safety, Contaminated Land and Radiological Protection.

### Nuclear New Build
1. The UK has established arrangements for responding to nuclear emergencies. Both on- and off-site.
2. Over the last few years, applications for nuclear sites (or parts of sites) to be delicensed have been increasing as sites are no longer needed for licensable activities.
3. The relevant law requires that, in most circumstances, the licensees’ period of responsibility continues until, in the opinion of ONR, there has ‘ceased to be any danger from ionising radiations from anything on the site’.
4. HSE, in 2010, published a consultation document ‘Delicensing’ of nuclear installations. The aim of the consultation is to ensure that the licence holders are in a position to properly decommission the site.
5. This approach has enabled successful delicensing of a number of areas.

### Delicensing
1. In the UK, sites rather than specific facilities are licensed by ONR (on behalf of HSE) for the purpose of carrying out certain operations.
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### Dosimetry (with HSE)
1. Under the Ionising Radiations Regulations 1999 (IRR99) employees are required to engage in dosimetry services to undertake dose assessments for certain employees and to maintain dose records.
2. Dosimetry services are currently approved by HSE or, for those providing services to the nuclear industry, ONR, for:
   - a) the assessment of doses arising from external radiation, intake of specified chemicals and doses following an accident; or
   - b) co-ordination and record-keeping of individual dose assessments.
3. HSE’s Requirements for Approval (RADS) and guidance is available. Approval involves assessment against RADS, an inspection visit and a successful performance test (where appropriate).
4. Approval attracts a fee and is required to be renewed every five years by (assessment) or 7y (Co-ordination and Record Keeping).
5. For details see poster ‘Approval of Dosimetry Services’ by M. Nettleton and A. Mayor.

### Emergency Response
1. The UK has established arrangements for responding to nuclear emergencies.
2. ONR has a regulatory role in these arrangements – both on and off the nuclear site - and also a national support and response role.
3. We are currently supporting the UK’s Department for Energy and Climate Change (DECC) and working with the UK environment agencies, Local Authorities and many other agencies, through the Nuclear Emergency Planning Liaison Group (NEPLG), in helping to develop a National Strategic Framework. The aim is to improve the UK’s preparedness and response arrangements in response to a nuclear emergency and ensure that lessons are learned from the Fukushima accident.
4. Areas of interest include: integrating arrangements for safety / security / sustainability; the extendability of existing detailed emergency response arrangements in the very unlikely event of severe nuclear accidents; emergency dose limits; radiological monitoring capability and recovery planning.

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### Office for Nuclear Regulation

**Securing the protection of people and society from the hazards of the nuclear industry**

**Regulating Radiological Protection Aspects of Great Britain’s Nuclear Industry**

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