

# L2 Newsletter

August 2011 : Issue No.5



**Nuclear Industry News**

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**Learning from Experience**

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# Welcome

**This is our fifth newsletter aimed at our customers and other stakeholders with an interest in our activities. This issue includes the latest information on our activities, industry and regulatory developments. We hope that the information in this Newsletter will be shared within your organisation and welcome any feedback you would like to make.**

It has been a busy period on the UK Nuclear New Build market with positive progress on a number of the facilitative actions from Government including parliamentary approvals of the Energy Planning Reforms as part of the National Policy Statements. From a nuclear regulatory regime perspective we also saw the launch of the new Office of Nuclear Regulation (ONR) initially as an Agency of HSE pending new legislation to enact it as a Corporate Body. Also on 14 July 2011, ONR and Environment Agency issued a joint GDA Issues Report for the EPR and AP1000 together with action plans for both applicants to resolve. Pending issue of the final ONR report in Autumn 2011 it is envisaged that ONR/EA will issue Interim Design Acceptance Confirmation (IDAC) and Interim Statement of Design Acceptability (ISoDA) respectively for both vendor designs.

Following this activity in Jul 2011, EDF Energy

announced significant steps on it's plans for nuclear new build project at Hinkley Point C including the District Council approved the Preparatory Works at Hinkley Point C site which then followed on the 29 July 2011 by the submittal to ONR it's Nuclear Site Licence application for the plant. It is envisaged that EDF Energy will now commence placing major procurements with the supply chain.

In Radiological Protection regulatory space the Department for Transport (DfT) plans to amend CDG2009 to meet European Union Directive 2010/35/EU. The DfT Compliance Inspection Programme of industrial users of radioactive materials is continuing with its risk based inspection programme. The Newsletter contains useful guidance on a number of areas of compliance that DfT have focussed on. As always we have included some useful insights in Learning from Experience (LfE).

# Nuclear Industry News

## European Council Directive on Radioactive Waste

In July 2011 the European Council has adopted the “radioactive waste and spent fuel management directive”, proposed by the European Commission on 3rd November 2010. With this adoption, the Directive will enter into force at the latest in September 2011 and Member States have to submit the first national programmes in 2015.

“This is a major achievement for nuclear safety in the EU” said Energy Commissioner Günther Oettinger. “After years of inaction, the EU for the very first time commits itself to a final disposal of nuclear waste. With this directive, the EU becomes the most advanced region for the safe management of radioactive waste and spent fuel.”

The directive reaffirms that Member States are responsible for the management of spent fuel and radioactive waste, the Directive creates a EU framework with important obligations imposed on Member States, covering:

- Member States will have to draw up national programmes and notify them to the Commission by 2015 at the latest. The Commission will examine them and can require changes. National programmes have to include plans with a concrete timetable for the construction of disposal facilities, as well as a description of the activities needed for the implementation of disposal solutions, costs assessments and a description of the financing schemes. They will have to be updated regularly.
- Safety standards drawn up by the International Atomic Energy Agency become legally binding.
- Information shall be made available to the general public and workers. The public shall also be given the opportunities to participate effectively in the decision making process. Member States are required to invite periodically international peer reviews to exchange experience and ensure the application of the highest standards. This shall be done at least every 10 years.
- Two or more Member States can agree to use a disposal facility in one of them.
- Exports to countries outside the EU is allowed under very strict and binding conditions: The third country needs to have a final repository in operation, when the waste is being shipped.

Under existing EU Directives the shipment of spent fuels and radioactive waste, the export to African, Pacific and Caribbean Countries as well to Antarctica is already ruled out.

## Creation of Office for Nuclear Regulation

On the regulatory side, the Office for Nuclear Regulation came into being in April 2011, with the Government announcing its intentions to bring forward legislation to create a new

independent statutory body outside of the HSE to regulate the nuclear power industry. The new statutory corporation would be known as the Office for Nuclear Regulation (ONR) and would take on the relevant functions currently carried out by the Health and Safety Executive and the Department for Transport. The ONR will be a new independent regulator, formally responsible in law for delivering its regulatory functions. The creation of the ONR will consolidate civil nuclear and radioactive transport safety and security regulation in one place. Pending new legislation ONR exists as an agency of HSE.

One of the first outputs from ONR on the 18 May 2011 was the Chief Nuclear Inspector Interim ‘lessons learnt’ report containing early analysis of Fukushima Dai-Chi nuclear accident, which made 26 recommendations for UK nuclear industry.

## UK Energy Planning Reforms Approved by Parliament

Developers of major energy projects in England and Wales will now have greater certainty on how planning applications will be considered after the Energy National Policy Statements (NPS) were designated during July 2011.

The independent Infrastructure Planning Commission will now use the NPSs to inform planning decisions. The NPS’s will be used in future for recommendations by the IPC’s successor, subject to passage of the Localism Bill through parliament.

The designation means that the NPS’s now have effect when companies submit planning applications for new nuclear power stations at any of the eight locations listed in the Nuclear NPS.

## EDF - Hinkley Point C

A number of the Government’s key enabling activities culminated in July 2011, including the Planning Reforms mentioned above and including the publication on the



14 July 2011 of the joint ONR and Environment Agency GDA Issues that still need resolving plus actions plans for both the EPR and AP1000.

Following this EDF Energy announced significant steps on it’s plans for nuclear new build project at Hinkley Point C:

- West Somerset District Council approved the Preparatory Works at Hinkley Point C site
- On 29 July 2011 EDF Energy submitted to ONR it’s Nuclear Site Licence application for the plant – this will be followed by around a 18 month assessment by ONR
- EDF Energy has signed a contract with Areva for reactor components for Hinkley Point C



## Nuclear Industry News

### **Funded Decommissioning Programmes for Nuclear Power Stations**

On 27 January 2011 the Department of Energy and Climate Change (DECC) laid the Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2011 (SI 2011/134) before Parliament and came into force on 6 April 2011.

These Regulations set out the detailed requirements for submitting a Funded Decommissioning Programme (FDP) to the Secretary of State for approval.

The Energy Act 2008 requires operators who apply for a nuclear site licence to have put in place a Funded Decommissioning Programme (FDP) to pay for the costs of future waste and decommissioning liabilities of its sites, to prevent future subsidy from public funds.

These new regulations support the earlier issued The Nuclear Decommissioning and Waste Handling (Designated Technical Matters) Order 2010, which specifies designated technical matters for the purposes of section 45(6)(a) of the Energy Act 2008 (c.32). A person subject to section 45(1) of that Act must prepare and submit to the Secretary of State a funded decommissioning programme and that programme must, in particular, contain estimates of the costs in connection with the designated technical matters and the funding of those costs.

The Government legislated in the Energy Act 2008 to ensure that operators of new nuclear power stations will have secure financing arrangements in place to meet the full costs of decommissioning and their full share of waste management and disposal costs. Before construction begins, an operator of a new nuclear power station will have to submit a Funded Decommissioning Programme (FDP) for approval by the Secretary of State. The independent Nuclear Liabilities Financing Assurance Board (NLFAB) was established to provide impartial scrutiny and advice on the suitability of FDP's.

L2 provide specialist advice on decommissioning and waste management strategies, methodologies and liabilities estimates.

### **Recent L2 Contracts**

**Review of German Nuclear Reactor Decommissioning Provisions**

**Cost Estimates for Decommissioning of NORM contaminated facility**

**Critical Examination of Industrial Radiography Facility**

**Preparation of Prequalification Document for Client into Sellafield Limited**

**Support to Client in updating Quality and Safety Management Systems**

## Adapting QA Management Systems for Nuclear

L2 provide consultancy advice on establishing, maintaining and improving Management Systems across QA, Health & Safety and Environmental functions. In recent months we have begun to work with the supply chain in helping clients adapt their management systems to better reflect the demands of the nuclear sector, in particular the prospective requirements of New Nuclear Power.

We work with companies to embed the requirements of IAEA Safety Requirements GS-R-3 'The Management Systems for Facilities and Activities' into their existing Quality Management System based on ISO9001:2008 by consultancy support, training and audits. Typically a supply chain organisation will prepare and implement a Nuclear Quality Programme which establishes the specific nuclear industry

requirements to be complied with on nuclear projects in addition to any client code/standards (such as NQA-1, ETC, RCM, ASME,...) plus typically clients will also use a graded approach to quality (eg. Safety Related, Safety Significant and Non-Safety Related).

Some of the key aspects not in ISO9001 but are covered in GS-R-3 are:

- Nuclear Industry Specific
- Nuclear Safety
- Nuclear Safety culture
- Role of Regulatory bodies
- Knowledge management
- Self-assessment
- Managing organisational change

# Radiological Protection News

## **Ionising Radiations Regulations 1999**

### **BASIC SAFETY STANDARDS DIRECTIVE**

The new Euratom BSSD, which forms the basis of ionising radiations regulations, is continuing its passage through the EU. The timetable for legal status is still uncertain but the draft version is currently with the Atomic Questions Group for Member States to negotiate before it becomes mandatory for Member States to implement. There are main changes being proposed namely a reduced dose limit for the lens of the eye and a European Radiation Passbook.

As mentioned in the last Newsletter one of the main changes is a proposal for the dose limit for occupational exposure to the lens of the eye to be reduced to 20 mSv/y (from 150 mSv/y). This has been justified in a recently published ICRP draft report on "Early and late effects of radiation in normal tissues and organs: threshold doses for tissue reactions and other non-cancer effects of radiation in a radiation protection context". The report includes a summary of new evidence for development of lens opacities which is based on data from Japanese A-bomb survivors, therapeutic radiotherapy (both non-malignant disease and cancer), repeated CAT scans, Astronauts, residents of contaminated buildings, victims of the Chernobyl accident and other events.

The Association of Heads of European Radiological Competent Authorities (HERCA) has approved the content of a 'harmonized European Radiation Passbook' which it plans to refer to the European Commission for consideration in the BSSD revision. Radiation Employers will be pleased to note that the format is largely identical to that used in the UK in accordance with Regulation 21(3) and 21(5) of the Ionising Radiations Regulations 1999.

### **HPA ONLINE DOSIMETRY SERVICES**

HPA are currently rolling out a free additional element of their Personal Dosimetry Service which enables users to access their employee dose data, order/amend TLD orders and other tasks on a new secure website.

To take advantage of this HPA request that current users send an email ([doserecords@hpa.org.uk](mailto:doserecords@hpa.org.uk)) and ask for a Secure Client Access form to complete.

### **NPL GOOD PRACTICE GUIDE FOR ELECTRONIC PERSONAL DOSEMETERS**

The National Physical Laboratory (NPL) have published Measurement Good Practice Guide No.113 - The Examination and Testing of Electronic Personal Dosimeters which describes recommended procedures for the examination and testing of electronic personal dosimeters in order to satisfy the requirements of the Ionising Radiation Regulations 1999 and

the Provision and Use of Work Equipment Regulations 1998 (PUWER).

IRR99 and corresponding ACoP are not explicit about the use and testing of electronic personal dosimeters but as they serve a number of valuable functions in the workplace there is a need to examine and test them. EPDs used as warning devices to alert the wearer to local high dose rates are regulated in IRR99 8(2) in order to restrict exposure and 10(1) to ensure that they are properly maintained, examined and tested at suitable intervals. However, Regulation 5 of PUWER states "Every employer shall ensure that work equipment is maintained in an efficient state, in efficient working order and in good repair".

Whilst the test procedures recommended in the Guide are not legally binding: they are general methods based on currently accepted good practice and provide an appropriate level of testing recommended for dosimeters used in normal operating conditions.

## **Carriage of Dangerous Goods & The Use of Transportable Pressure Equipment Regulations 2009**

### **AMENDMENTS TO CARRIAGE OF DANGEROUS GOODS & THE USE OF TRANSPORTABLE PRESSURE EQUIPMENT REGULATIONS 2009?**

The DfT has carried out a Consultation to amend CDG2009 following the approval of the European Parliament and the Council of the European Union Directive 2010/35/EU on transportable pressure equipment last year. This now requires Member States to implement the Directive by end June 2011. The preferred option for implementation of the new Directive is to issue The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011 ie complete set of new



legislation not needed. In general this will have little or no effect on employers who just carry radioactive substances with the main impact relating to minor changes in the Radiological Emergencies Plan (Schedule 2 to CDG2009).

In addition DfT has recently commenced another consultation on amendments to CDG: Approved Derogations and Transitional Provisions which is made under Regulation 13 of CDG2009. This document needs updating to remove obsolete derogations and recognise new ones. Overall, the proposed changes will have little or no effect on employers who just carry radioactive substances with the main impact relating to Road Derogation 3 which exempts from the requirements relating to fire-fighting

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equipment for the carriage of certain Class 7 goods by road. This has been amended to include the provision that the dangerous goods specified in paragraph 1 of the derogation (excepted, Limited Quantities, Instruments or Articles, uranium, natural thorium etc) may be carried with dangerous goods of other classes in certain specified circumstances.

L2 will keep clients updated on the outcome of both consultations and any subsequent changes in legislation.

## DfT INSPECTIONS

The DfT Compliance Inspection Programme of industrial users of radioactive materials is continuing with its risk based inspection programme. One Prohibition Notice has now been issued and a Register of Enforcement Notices (Class 7) issued by DfT has now recently been added to the HSE website which goes back to late 2007.

The above mentioned Prohibition Notice related to packages, containing radioactive sources, which did not comply with relevant statutory provisions in respect of marking and labelling.

DfT have recently highlighted a number of areas of concern as reported in our L2 Newsletter Issue 3 and in particular two areas that employers should check their own arrangements in order to identify improvements. These are:

- Package markings and labelling – missing, incorrect, insufficient, illegible, torn
- Security – lack of awareness of potential transport issues

## Packages

Employers should review all containers currently used for transport and check that they meet requirements relating to UN Number and Proper Shipping Name, Type A including vehicle registration code and either manufacturer or other identification specified by the competent authority and gross mass if exceeding 50 kg. These markings must be legible and durable.

## Security

In order to improve security awareness, as required by ADR (section 1.10.2), DfT recommend that employers derive their security regime using the information provided on the DfT website and then give training to drivers to raise understanding and awareness of the important role that they play in the reducing the risks of interference to goods from criminals and terrorists.

To assist employers in this matter L2 will be running half-day training sessions in security awareness and reviewing transport procedures to incorporate the latest advice from DfT in areas such as everyday security, driver advice, dangerous load cards, documentation, police or VOSA inspections etc.

## REGULATORY GUIDANCE MATERIAL

DfT Dangerous Goods Guidance Note number 14 on Emergency Plans has been revised to reflect current requirements. The Guidance contains eight questions which the employer must consider, however, the list is not exhaustive and it will be reviewed when CDG regulations are revised as detailed above.

In accordance with CDG regulation 24(2), Schedule 2 the carrier and consignor must immediately notify DfT of the occurrence of a notifiable event using in the first instance the following numbers:

- Office hours – 0207 944 5749
- Silent hours – 0207 944 5999

## ADR 2011

The latest 2 yearly revision of ADR has been issued and is available on the United Nations Economic Commission for Europe (UNECE) website ([http://live.unece.org/trans/danger/publi/adr/adr\\_linguistic\\_e.html](http://live.unece.org/trans/danger/publi/adr/adr_linguistic_e.html)).

ADR 2011 has revised (emergency) 'Instructions in Writing' for carriers (4-page document) which must be carried in the vehicle crew's cab and be readily available as required by section 5.4.3.1. This is mandatory from the 1st July 2011.

## Environmental Permitting (England and Wales) Regulations 2010 / Radioactive Substances Act 1993

## QUALIFIED EXPERTS - RADIOACTIVE WASTE ADVISERS

The UK Environmental Agencies have published a Statement on proposals to ensure compliance with requirements relating to Qualified Experts (QE), to be known as Radioactive Waste Advisers, under the Basic Safety Standards Directive (BSSD). BSSD specify a number of functions which must be fulfilled by a QE which are addressed by other legislation and associated regulators. For example, the role of the QE covers personnel safety (RPA), patient safety, instrument calibration and maintenance, transport (DGSA) and waste management (RWA).

This Statement contains proposals for Permit Holders and RWAs which are very similar to that covering Radiation Protection Advisers under IRRs.

BSSD requires employers to appoint a QE to advise them about work with radioactivity that may affect people and the environment. This is not likely to change under the new BSSD currently being approved by the EU as mentioned above.

The Statement is supported by guidance on specific topics relating to RWAs and will be updated and amended as required. The key elements for the Permit Holder are:

- Consult RWA on matters such as achieving and maintaining an optimal level of protection of the environment and population



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eg technical aspects of surveillance, equipment, procedures, calibration of measuring instruments etc

- Appoint a suitable RWA, in writing, when Permit covers accumulation and disposal of radioactive waste

### ANNUAL CHARGES – APRIL 2011

The EA will still have to recover all its costs and the charges for 2011-12 have been published in document 'Environmental Permitting Charging Scheme Guidance, April 2011'. Again this is a large document (128 pages) but the main section relating to radioactive substances is section 5.7.

In general, the Charging Scheme is based on the level of risk posed to the environment by the activities undertaken. The level of risk and the required level of regulation are divided into 3 Tiers, namely:

- Tier 1 - Low
- Tier 2 - Medium
- Tier 3 - High

Table 57 in this document gives a list of Tier 2 activities and their

associated Permit Type. For most industrial users who keep and use one or more high-activity source (and accumulation/disposal) their Tier is number '2' and Permit Type is 'D'. Tier 2 charges are fixed and the charges which maybe incurred are tabulated below:

Charge Type	Cost (£)
Application	2,000
Normal Variation	1,910
Transfer (part/full)	950
Surrender	370
Annual Subsistence	1,450

In the future the annual subsistence charge will be adjusted according to your Compliance Rating ie breaches identified during annual inspection. However, this will not be introduced during this current annual period. For nuclear licensed site clients, as previous the EA continues to recover actual costs of regulatory work incurred.

In respect of transport "Employees should check their own arrangements in order to identify improvements"



## Learning from Experience

### OTHEA - THE NEW RADIATION INCIDENT DATABASE

This is the new database which replaces the Ionising Radiations Incident Database (IRID) previous operated by HPA on behalf of the Health & Safety Executive. OTHEA replaces IRID and is a joint venture between HPA and their French equivalent CEPN. There are also other stakeholders including the Society for Radiological Protection and other national societies and associations.

The purpose of OTHEA is to share the lessons learnt from radiation incidents that have occurred in the industrial, medical, research

and other non-nuclear sectors. The website is bi-lingual (French and English) and contains a collection of anonymous incident reports, categorised by sector and the type of application (eg non-destructive testing) and a search/filter facility. As an example under NDT there are 20 incident reports covering a wide range of 'typical' incidents such as source disconnections, source stuck, source recoveries, interlock failures, high doses, damaged equipment, stolen/lost source, unauthorised entry into controlled area etc.

## Learning from Experience

The incident reports can be freely downloaded and used. To date all incident reports are less than 10 years old. L2 intends to incorporate relevant information in all future training courses and publications such as this newsletter.

Each incident report is in three sections,

- Brief summary of events
- Radiological consequences
- Lessons learnt

The aim of the database is not to capture every incident but to provide a range of reports selected according to the value of the lessons learnt.

To submit an incident report there is a form available via the website ([www.othea.net](http://www.othea.net)) which must be completed and send to HPA. For the database to be a success it needs to be sustained with new reports.

### RECENT INCIDENTS

The Health and Safety Executive latest edition of Radiation Protection News (February 2011) includes an article on a recent successful prosecution against a company following an incident for failing to produce a suitable and sufficient risk assessment and implement adequate control measures. These aspects of radiological protection were the subject of our last Newsletter.

A Learning From Experience communication was sent out by L2 highlighting the lessons to be learnt and the most basic one was always use a radiation monitor (which is working correctly)!

### SITE RADIOGRAPHY 7 DAY NOTIFICATION

HSE require advance notification of site radiography work (see IRR99 Regulation 6 and ACoP paragraphs 27 to 33) and this should be 7-days prior to the intention to start work. The purpose of the 7-day notification is to allow sufficient of time for the work to be planned and safely implemented eg risk assessments, specific local rules, inductions, access/egress arrangements etc. From the HSE's point of view they need sufficient time to arrange to carry out an inspection as they are charged with ensuring appropriate standards of radiation safety are maintained with the non-destructive testing sector. Site radiography is transient and mainly undertaken outside normal hours, hence, it is extremely important that HSE are given precise information of the time and place that the work is being carried out.

In general radiation employers are good at providing HSE with sufficient overall job notification but on certain projects where the actual radiography is intermittent over a period of time and/or heavily dependent on the progress of the overall project then HSE require a 7-day Look Ahead Notification on a weekly basis together with brief update information. Where possible the

proposed programme of radiography work within the overall project should be given with the 7-day notification to minimise excessive repeat notifications. The basic requirement is for the radiation employer to provide sufficient detail to allow HSE to inspect the work.

### ALARP/ALARA

Regulation 8 of IRR99 contains a requirement for every radiation employer to take all necessary steps to restrict so far as is reasonably practicable the extent to which employees and others are exposed to ionising radiations. This is a corner stone requirement of radiological protection as is known as the ALARP Principle in the UK. The rest of the world knows it as ALARA. Some employers and employees struggle to understand this principle and an attempt to explain it is made below.

This principle has often been considered as a tool that aims to balance the cost of a radiation workers protection against their radiological risks. This is a common simplification of the concept of optimisation, which has considerably evolved since the establishment of the concept of "reasonable practicability" or "reasonable achievability" - the so-called ALARP-ALARA principle - 70 years ago. This concept was first introduced into UK case law (*Edwards v. National Coal Board* in 1949) after a rockfall in a coal mine killed a worker. The original wording, which explains how ALARP/ALARA came to be interpreted, was "risks must be averted unless there is a gross disproportion between the costs and benefits of doing so".

Consequently, until the end of the 1980's there was a focus on cost-benefit analysis as a means of radiological risk management. However, it is now recognised that ALARA is far more than this.

The optimisation principle applies to all exposure situations where there is a potential radiological risk for employees and/or public. In the non-nuclear sector (such as industrial radiography), important steps have been made by most radiation employers but ALARP awareness can still be improved. However, the main objective for ALARP is still to continue to reduce individual doses, especially the highest ones, because spreads in doses, which are not acceptable, are still seen.

ALARA is essentially a culture and can be described as 'a state of mind and an attitude allowing an individual/organisation to act in a responsible way in order to manage radiation risks and giving radiation protection the priority it should have'.

The ALARA culture is characterised by risk awareness and balanced judgement of risks and benefit. It requires support by all levels of management, commitment, guidance, training/information and monitoring.



## Safety Culture

Developing and maintaining an appropriate safety culture is a priority for nuclear site licensees and the supporting supply chain. It underpins the way in which their organisations are designed and managed. This should be reflected in the leadership, procedures and behaviours which place an overriding priority on safety. This is reinforced by the ONR Safety Assessment Principles which set clear regulatory expectations for effective leadership and management of effective safety. In the UK, the licensee's responsibility for nuclear safety extends through all levels of the delivery supply chain.

The International Nuclear Safety Advisory Group (INSAG) Report 4 defines safety culture as: "that

assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance."

Safety Culture is not something that can be activated or programmed but takes time to develop and grow.

The focus of industry and regulators on Nuclear Safety Culture has been increasing in recent years, against the background L2 have developed a bench marking tool which can be applied across the supply chain to measure Nuclear Safety Culture and make recommendations for areas for improvement.



## International Radiation Protection News

The International Atomic Energy Agency (IAEA) have issued a Specific Safety Guide for Radiation Safety In Industrial Radiography (SSG-11).

IAEA was set up by Statute under the United Nations to establish, in consultation with recognised relevant bodies, standards of safety for the protection of health and to provide for their application.

IAEA Safety Guides indicate an international consensus and present international good practices, and reflect best practices, to help users striving to achieve high levels of safety.

The Guide states that industrial radiography work poses a negligible risk if it is performed in a safe manner. However, incidents have resulted in high doses to workers, causing severe health consequences such as radiation burns and, in a few cases, death. Members of the public have also suffered radiation overexposures.

SSG-11 contains chapters on all essential elements of good radiation protection practice for industrial radiography including duties and responsibilities, risk assessment, designated areas, radiation monitoring, control measures, dosimetry, local rules and emergency preparedness. There is a very good appendix on accidents which explains their causes and lessons to be learnt.

It is reassuring to know that our own IRR99 regulations and associated ACoP address all of the elements in the Guide.

“IAEA was set up by Statute under the United Nations to establish, in consultation with recognised relevant bodies, standards of safety for the protection of health and to provide for their application”.

## Training

L2 Business Consulting offer a range of public and bespoke training for industrial and nuclear customers covering:

- RSA93/EPR10 Permitting
- Radiation Protection Supervisor/Refresher
- Ionising Radiation Worker
- Security
- RAM Transport
- Nuclear Site Licensing & Permitting
- Waste Management
- QA Requirements for Nuclear Industry
- Emergency Preparedness

Our courses can be undertaken at our site, client premises or other suitable venues and are all delivered by experienced practiconers in the relevant fields. The courses include a mixture of classroom based training combined with group and practical exercises. They can also be customised to a client's individual requirements.

## MENA Nuclear Construction Conference 2011

As part of our exploration of overseas markets, L2 will be attending and exhibiting at the 2nd MENA Nuclear Construction Conference in UAE on 26-27 September 2011. It looks like an exciting event for the region with speakers from EDF, Iberdrola, Horizon Nuclear Power, Rosatom, Westinghouse, RWE, KEPCO, KA CARE, IAEA, WANO and Jordan Atomic Energy Commission. We hope we will see you there, for more info check out

<http://www.nuclearenergyinsider.com/mena/>







L2 Business Consulting Limited  
Maling Studios, Hoults Yard  
Walker Road  
Newcastle upon Tyne  
NE6 2HL

Telephone: 0191 276 2070

E-Mail: [sales@l2businessconsulting.com](mailto:sales@l2businessconsulting.com)

Web: [www.l2businessconsulting.com](http://www.l2businessconsulting.com)



[www.l2businessconsulting.com](http://www.l2businessconsulting.com)