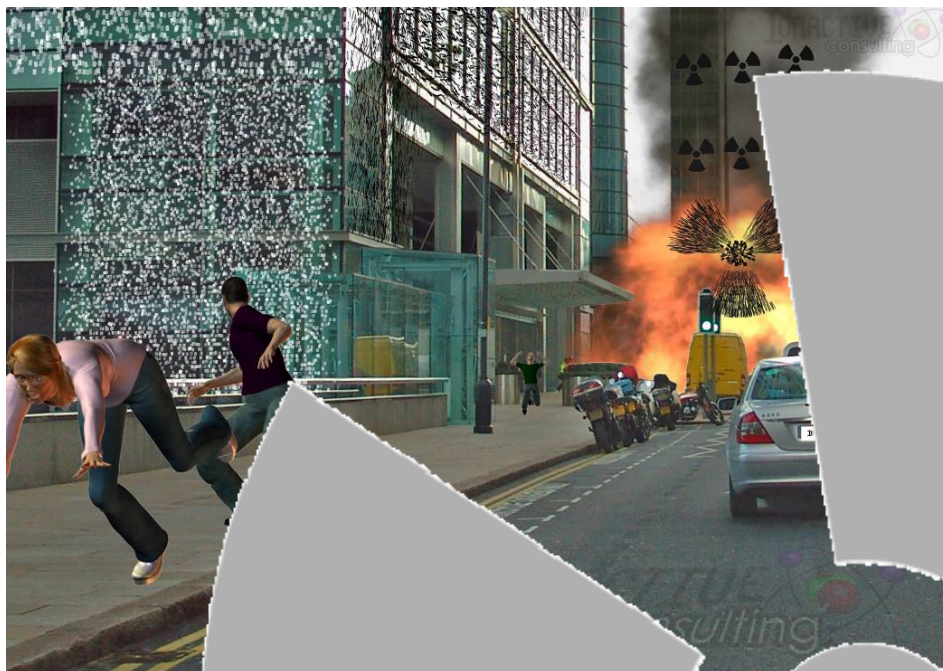


# Radiation Protection Training

R & N in CBRN

**UK Emergency services**



'Good course. A must for all D.I.M qualified Emergency Service Personnel. Good to hear the Police Service side of actions / procedures. Excellent presentations, pitched at the right level '

**Police / Fire Service CBRN Course, Wales, Sept 2009**

**23-25 March 2010, Cardiff, Wales**



## R & N IN CBRN RADIATION PROTECTION TRAINING

### Scope

This 3-day course is designed specifically for the UK Emergency Services. The course was piloted by the staff of Police National CBRN Centre and was found to be of value. Invaluable feedback allowed the course to progress with delivery being made to the Metropolitan Police Force, British Transport Police, Essex Police and more. With further refinement the course has now been delivered at venues in Scotland and Wales with delegates from all 'three blue lights'.

Whilst the course originally focused on the Police Force, more recent attendance by Fire & Rescue Service delegates has allowed HAZMAT / DIM issues to be incorporated too. Delegates from all services have commended the combined approach.

We will provide a cost effective, interesting and enjoyable training course - to the UK recognised standard of a Radiation Protection Supervisor (RPS) – as specified in the UK *Ionising Radiations Regulations 1999 (IRR99)*.

Whilst providing 'RPS standard' training, this course is very different to the majority currently available (indeed it is quite different from our own regular monthly RPS courses). With contingency in mind, this course provides appropriate and proportional training based around radiation protection principles. Whilst the core basics are covered (i.e. nature of ionising radiations, biological effects etc) at every stage the material is presented in an 'operational context' so that the delegate can utilise and build on the knowledge at the incident site or at the planning stage.

The course has been put together by Mark Ramsay from Ionactive who is an operational Radiation Protection Adviser (RPA), consultant to industry, an Emergency Controller (for a nuclear licensed site), an Emergency Exercise designer (and Exercise Manager) and a recognised RPS training provider. This experience, based around contingency and incident response, has been combined with Ionactive's recognised training service to provide a unique course to the emergency services.

### Course Summary

#### Day One

- Nature of Ionising Radiation
- CBRN - The Radiological & Nuclear Hazard
- Radiation Protection Principles
- Internal / External hazards
- Biological Effects

#### Day Two

- Demonstration and Hands On use of Current CBRN Radiation Monitoring Equipment
- Communicating Radiation Risk to the Public and Colleagues
- Tabletop Exercise on Hazard, Risk and Controls
- UK Radiation Protection Legislation in a CBRN context

#### Day Three

- Radioactive Materials Transport - how this applies to CBRN
- Decontamination
- The radiological threat
- Source security
- Project Cyclamen - how this applies to Emergency Services
- Table Top Exercise: '*The Dirty Bomb*'



## R & N IN CBRN RADIATION PROTECTION TRAINING

### Who should attend?

This course has been designed to be suitable for all Emergency Service personnel who have operational / planning responsibility. CBRN Operations Officers, CBRN Trainers, CBRN Policy / Coordination, HAZMAT / DIM officers and similar will all benefit.

In addition, if space allows the course may also be offered to key individuals in local authorities (or similar) who have emergency planning responsibilities.

### Course Content

The course is split into a number of modules and is delivered by class room lecture, group discussion, exercises, practical hands on tasks, videos and animations. Each delegate receives a high quality colour training manual which provides an on-going reference source long after the training is completed. The course content is currently as follows:

#### Day 1

- The Nature of ionising Radiation, effects and quantification of harm.
- The Principles of Radiation Protection.
- Case Study: The ALARP (as low as reasonably practicable) Principle.
- Internal and External Hazards from Radiation/ Contamination.
- Dose, Dose rate and quantification of Exposure.
- Workshop: The External Radiation Hazard.
- Biological effects and radiological risk.
- The Employer, RPA, the RPS and Local Rules (how these all apply in a CBRN event).

#### Delegate Feedback

*'The 'R&N' CBRN folder is excellent and is the clearest information on radiation that I have received.*

*Presentation style was very good. The course has enhanced my knowledge greatly – really enjoyed the course and found it interesting and useful'*

**SS, Met Police. May 2009**

*'Probably the best radiation training that I have received in 25 years in the Fire Service'*

**DD, East Midlands DIM Team**

*'I learned a lot more about the subject in three days than I did in a full week at the Fire Service College Hazmat Course. Excellent depth of knowledge from instructor'*

**Police / Fire CBRN Course, Wales, Sept 2009**

*'Very informative course reducing the fear of the R and N'*

**Essex Police (Sept 2008)**



## R & N IN CBRN RADIATION PROTECTION TRAINING

### Day 2:

- Radiation Dosimetry and Personal Protection.
- Demonstration and Hands On use of Current CBRN Radiation Monitoring Equipment using the Home Office Approved List of equipment.
- The UK Emergency Response Arrangements for the R&N Hazard.
- Workshop: Applying the law in a CBRN Emergency Environment.
- Communicating Radiation Risk to the Public and Colleagues.
- Tabletop Exercise on Hazard, Risk and Controls for the Emergency Services.
- Decontamination of people and equipment.
- Case Study: "How Clean is Clean".
- The Uses of Radiation in Medicine, Industry and the Environment.
- The Radiological Threat.

### Day 3:

- Source Security (International Efforts/Local Source Accountancy).
- Transportation of Radioactive Material and how it applies to CBRN.
- Project Cyclamen and how it applies to the Emergency Services.
- Tabletop Exercise: "The Dirty Bomb".
- Course Revision, Summary & Assessment.

### Delegate Feedback

*"PNCBRNC has worked with Mark Ramsay of Ionactive Consulting to create a bespoke RPS course which meets the required standard, but is weighted towards Police needs"*

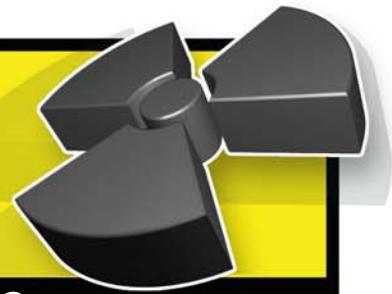
#### **PNCBRNC, Ryton**

*'I found the course very informative and was not only relevant, but parts were totally new as well as others being a good refresher. As a Fire Service DIM trained officer I now feel more confident in dealing with radiation incidents at my level. Excellent!'*

#### **CBRN Scotland Delegate, June 2009**

*'A very good and comprehensive course. Delivery style and trainer approach conducive to learning. Knowledge and approachability of trainer a very positive benefit (no question too difficult and proper answers given!). Very enjoyable and beneficial – thank you!'*

#### **Police / Fire CBRN Course, Wales, Sept 2009**

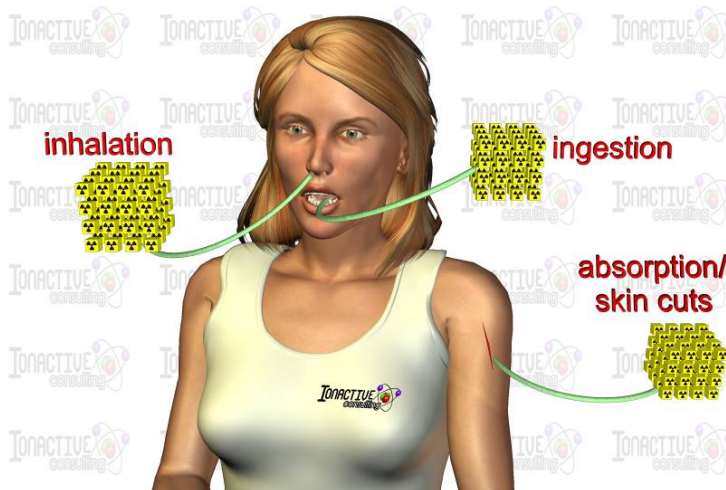


## R & N IN CBRN RADIATION PROTECTION TRAINING

### Delivery Style

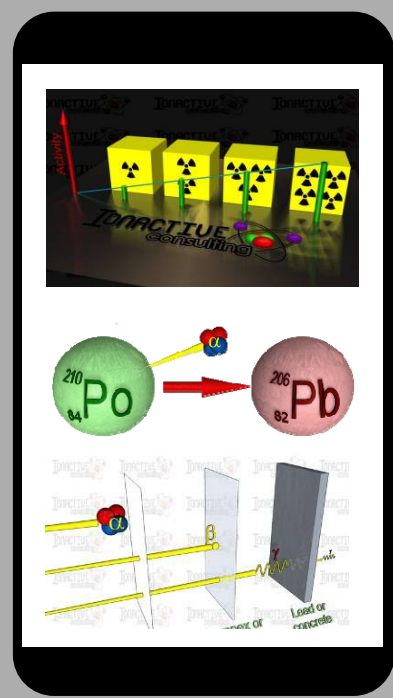
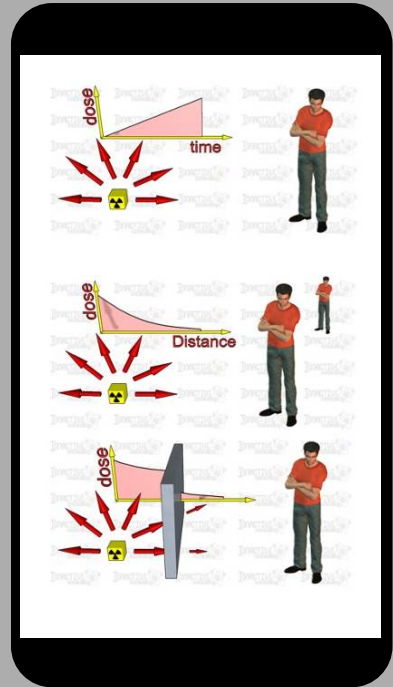
Many delegates who attend our course have a preconceived idea of what they think they are about to receive. This may have been formed from previous training experiences, worry about academic expectation, or simply because 'radiation' issues sound 'complicated'. We hope our examples of delegate feedback provide reassurance that there is little to be concerned about.

All concepts are taken back to the beginning - there are no educational prerequisites or pre-reading. Some delegates have also expressed anxiety about mathematics. Whilst we do consider numbers throughout the course, maths is not a big component – in most cases all concepts are illustrated by colourful diagrams, rich animations or demonstration.



We provide a comprehensive course assessment test – this is taken 'open book' and in the delegates own time after the course is completed. For this type of training we believe that the concepts should be absorbed and discussed between colleagues before taking the test. We have found this approach produces much better test results (compared with a test taken immediately after the course completes).

All delegates are awarded an achievement certificate, benchmarked to the role of the RPS.





## R & N IN CBRN RADIATION PROTECTION TRAINING

### Course administration

Course administration does differ between events – this sometimes depends on whether the course host is providing most of the delegates or if the delegates are coming from many different parts of the UK (or indeed service areas).

**We advise that you should check the specific details regarding accommodation, meals and similar with Mark Ramsay at [mark.ramsay@ionactive.co.uk](mailto:mark.ramsay@ionactive.co.uk) .**

Dress for the training course is smart-casual.

Please bring a pad and a pen.

A comprehensive training binder will also be provided which can be annotated throughout the training as required.

### Administration

**Date:** 23-25 March 2010 (0900 – 1700 daily)

**Course Ref:** IONCBRN

**Places available:** 14

**Course fee:** £550 + VAT per delegate

**Venue:** Cardiff Gate Training & Development Centre, Church Road, Old St.Mellons Cardiff, CF3 6YA, United Kingdom

**Register interest** on line at:

[www.ionactive.co.uk/contingency\\_training.html](http://www.ionactive.co.uk/contingency_training.html)

**Book the course** by downloading an application form via the same webpage; please complete and fax back to us.

Alternatively, email [mark.ramsay@ionactive.co.uk](mailto:mark.ramsay@ionactive.co.uk) directly for more details and to make a booking.

### Delegate Feedback

*'What I thought was going to be a long 2 days actually was an enjoyable 2 days, that is testament to instructional delivery and enthusiasm. '*

**PC, HDIM, October 2009**

*'Handout is excellent and easy to follow with good coverage of all subjects. Excellent knowledge of subject matter by instructor. Great to look at events worldwide to understand the threat and get a clearer picture of what types of incident could occur. A very worthwhile experience! "*

**LFB, London, CBRN  
March 2008**

*'Pleasantly surprised and glad that the basics of the subject matter were discussed in detail. Excellent course material. Mark made the course enjoyable and at no time did I feel as if the information was being rushed or skimmed over. Can honestly say that some of my fears associated with incidents involving radiation are now allayed. Many thanks'*

**West Midlands Fire  
Service (Training 2007)**



## R & N IN CBRN RADIATION PROTECTION TRAINING

### Terms and conditions

- 1) The course will be held on the date indicated subject to sufficient response. If all places on the course become full we may be able to arrange a repeat course.
- 2) Refreshments, lunch and a parking place will be provided.
- 3) Payment of fees must be made in advance of this course, either by a cheque (payable to 'Ionactive Consulting Ltd') or by BACS transfer (details supplied after confirmation of booking). Bookings will therefore be held as provisional until all fees have been paid.
- 4) Provisional bookings within 31 days of the course commencing can not be held until payment is received.
- 5) Invoices will be issued upon request. We will accept purchase orders but these will be treated for information only and not in lieu of payment of course fees. We will issue VAT receipts on request.
- 6) Cancellations of course places must be made in writing. Fees will be refunded where the cancellation is made up to 14 days prior to the course starting. Cancellations made within 14 days of the course commencing will not be refunded unless we can find a suitable replacement.
- 7) We will accept substitution of places held on this course.
- 8) All course material, notes and multi-media presentations remain the property of Ionactive Consulting Ltd who retains copyright. This material must not be copied in whole or in part other than for personal study of the delegate attending the course.
- 9) Our courses can not be recorded, visually or audibly, without the express permission of Ionactive Consulting Ltd.
- 10) We retain the right to make appropriate alterations to the timetable and course content specified in the course programme. A refund of fees would be made if we were required to cancel a course and this shall be the limit of our liability.

### Continued support

The Ionactive Consulting website provides a wealth of information – much will be useful to the newly trained emergency responder.

- Free newsletter
- Online guidance
- Extensive links
- Career guidance
- Multimedia

### Contact Details

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