

**Guidance on the Criteria of Core Competence Contained in HSE's
Statement on Radiation Protection Advisers**

Issued February 2007

Introduction

This document provides guidance on the HSE Criteria of Core Competence for Radiation Protection Advisers (RPA) contained within the HSE's Statement on Radiation Protection Advisers published in October 2006. This guidance is intended for use by RPA assessing bodies and those seeking recognition as an RPA and particularly addresses the nature, quality and extent of evidence required of an applicant to demonstrate that they meet the criteria of core competence

Core Competence

Applicants who meet HSE's criteria of core competence have the knowledge, skills and experience to give advice as RPAs, and are issued with certificate of core competence. A general ability in radiological protection or health physics is required of an RPA, but the HSE criteria of core competence are a measure of a person's competence to advise an employer or dutyholder on compliance with the Ionising Radiations Regulations 1999 (IRR99). The certificate of core competence should not be used as an indicator of suitability, and HSE does not intend it to be used as a formal qualification, such as a degree or membership of a chartered society.

Interpretative Guidance on Criteria of Core Competence

Statement	Guidance
<p><i>ANNEX 1, Part 1, Para 3. To obtain a certificate from an Assessing Body, individuals must provide evidence from education, training and/or experience that is sufficient to satisfy that Body that the individuals have:</i></p> <p><i>(a) a knowledge and understanding that meet the level stated for each topic referred to in Annex 3 of this Statement;</i></p> <p><i>(b) a detailed understanding of IRR99 and its ACoP, together with a knowledge of non-statutory HSE guidance in 'Work with Ionising Radiation' (HSE Books L121).</i></p> <p><i>(c) knowledge of operational radiation protection methods, especially</i></p> <p><i>(i) interpretation and application of radiation protection data</i></p> <p><i>(ii) work supervision; radiological measurements;</i></p> <p><i>(iii) control procedures for work involving the potential for significant radiation exposure; and</i></p> <p><i>(d) The ability to give adequate advice to duty holders and employers on compliance with IRR99</i></p>	<p>In (a), Annex 3 of the Statement refers to the Basic Syllabus for the RPA, Guidance on which is given on page 4 of this document. Items listed in (b) and (c) expand upon the Basic Syllabus topics that require Detailed Understanding, they are not additional competence requirements.</p> <p>Applicants wishing to demonstrate that they meet HSE's criteria of core competence must show that they are able to interpret the IRR99, Approved Code of Practice (ACoP) and non-statutory guidance in practical situations. They must show they know the relevant requirements of the IRR99, and are aware of the difference between ACoP and non-statutory guidance. They do not need an encyclopaedic knowledge of the IRR99.</p> <p>Operational radiation protection is the application of basic radiation exposure control measures in work situations. Applicants must have knowledge of these methods but may not need to demonstrate practical experience of them except where there is a Detailed Understanding requirement.</p> <p>Radiation protection data include such things as dose rates, personal doses, contamination information and results of monitoring. 'Interpretation' means for the purpose of giving advice on compliance with the IRR99</p> <p>This concerns the ability to give advice on compliance with the IRR99 in accordance with the radiation employer's requests or requirements. Adequate advice means advice that is a) technically correct, and b) informs the duty holder or employer as to what course of action he should take, clearly distinguishing between what is required by law and what is expected in terms of best practice.</p> <p>HSE does not require an assessing body to consider whether an employer has heeded such advice as a measure of its adequacy.</p>

	<p>Furthermore, in accordance with the IRR99, the duty to define the scope of advice rests with the radiation employer, not the RPA.</p>
<p><i>ANNEX 1, Part 1, Para 4 (extract): The evidence required should be proportionate, and take into account the candidate's qualifications, training and experience</i></p>	<p>Proportionate means that the assessing body must take account of an applicant's training, educational background and work history. In most circumstances details of an applicant's current post and job description will also be relevant. It is expected that details of education, training, and relevant work history will be sufficient to satisfy the Basic Syllabus topics requiring General Awareness and Basic Understanding.</p> <p>Proportionate also means that evidence presented under the General Awareness and Basic Understanding topics will not need to be as extensive or as detailed as the evidence presented under the Detailed Understanding topics.</p> <p>Assessors should use their judgement to decide whether an applicant possesses the General Awareness and Basic Understanding competencies, on the balance of probabilities. The applicant must provide some evidence for all topics in the basic syllabus, but the assessors should apply judgement in forming a view as to whether the evidence as a whole is good enough, rather than focusing on whether every individual element is good enough.</p>
<p><i>ANNEX 3: Basic Underpinning Knowledge for Radiation Protection Advisers</i></p> <p><i>Depth of knowledge</i></p> <p><i>GA - General Awareness: knows that the topic exists and aware of its significance to work activities in context. Also knows how and where to obtain help on the topic if needed.</i></p>	<p>'General Awareness' can be gained through training or education: it is not something that has to be maintained or demonstrated through practise. Applicants may therefore refer to their training or education as evidence of their 'general awareness' of a topic.</p> <p>Acceptable evidence may include: Post Graduate course in Radiological Protection MSc in radiological protection related subject Degree or HND in a science subject with module(s) in a subject relevant to radiological protection Relevant in-house training Attendance at relevant conferences Work experience of radiological protection</p>

BU - Basic Understanding: has a basic understanding of the topic with a level of detail that allows the RPA to apply it to familiar work activities in context. If necessary, can research further knowledge using readily available sources and apply it in less familiar circumstances.

DU - Detailed Understanding: has a good understanding of the topic and the underlying principles and can apply the knowledge in appropriate contexts. Can apply the knowledge working from basic principles to deal with situations in new or unfamiliar areas and can identify and influence the peripheral and long term issues arising from its application.

Applicants who have a 'Basic Understanding' of a topic would be able to apply their knowledge of it to work activities. In order for an applicant to demonstrate either a 'General Awareness' or 'Basic Understanding', topic-specific and/or detailed work examples should not be necessary.

Evidence may include:

General Awareness for these categories and a work history as an operational health/medical physicist in, for example, nuclear facilities, medical establishments, research laboratories, industrial radiography, radiation protection consultancy, regulatory organisations or an RPA Body. Applicants with less extensive work history will need to refer to details of their education and training.

The five 'Detailed Understanding' topics clearly require a level of knowledge, skill and experience in excess of General Awareness and Basic Understanding. Applicants are required to submit practical examples, in addition to evidence of their education and training or work history, that show that they not only understand basic principles but can apply them to realistic workplace situations.

Practical examples are only required for the five 'Detailed Understanding' topics in the Basic Syllabus. The evidence provided for these topics should include examples of advice given to an employer or dutyholder in real workplace situations to enable them to comply with the IRR99. Where real examples are not available, evidence from simulations will be acceptable.

The Table below identifies, for each Detailed Understanding Topic, the Elements of Competence that applicants should address in their evidence. These Elements of Competence should form the basis for the assessment of Detailed Understanding by an Assessing Body.

Table: Assessment of Detailed Understanding by means of practical examples

Topic	Elements of competence to be demonstrated by the applicant	Examples of acceptable evidence submitted by the applicant could include:
<p>1. IRR99 Understanding of IRR99 and its ACOP, together with a knowledge of non-statutory HSE guidance L121</p>	<p>Possess a thorough understanding of the IRR99, and the practical measures for compliance with those regulations, in accordance with the ACoP and HSE guidance L121, where relevant.</p> <p>Interpret regulatory requirements in practical situations.</p>	<p>An example of advice given to a duty holder or employer, assessing a stated work situation, explaining which IRR99 regulations apply and what actions are required for compliance with regulatory requirements, referring to relevant parts of the ACoP and citing any relevant non-statutory guidance.</p>
<p>2. Hazard & risk assessment (excluding environmental impact)</p>	<p>Understand the concept of risk assessment & practical application to work with radiation</p> <p>Identify sources or potential sources of radiation exposure, and assess risks of exposure (including calculation of projected exposure)</p>	<p>Advice to a duty holder or employer on radiation hazard and risk assessment, such as:</p> <p>Prior examination of plans for installations and acceptance of physical control measures for sources introduced into service;</p> <p>Periodic examination and testing of physical control measures and checking systems of work;</p> <p>Critical assessment of sufficiency of a dutyholder's risk assessment including consideration of existing & possible additional control measures;</p> <p>Advice in relation to shortcomings in assessments & improvements thereof.</p>
<p>3. Minimisation of risk (including ALARP); Work supervision; Interpretation and application of radiological protection data.</p>	<p>Identify & propose appropriate actions to restrict radiation exposure in accordance with the principles of ALARP.</p> <p>Interprete and apply radiation protection data (e.g. radionuclide decay and emission data, source outputs, dose histories, workplace monitoring results, manufacturers data, shielding calculations)</p>	<p>Advice to a duty holder or employer on minimisation of risk, such as:</p> <p>Local rules, contingency plans, and other relevant working procedures</p> <p>Advice on practical implementation of findings of risk assessment, such as the suitability of control measures;</p> <p>Advice on implementation of a hierarchy of controls (engineering, administrative, PPE).</p>

<p>4. Monitoring: area, personal dosimetry (external, real time & internal), biological. Radiological measurements.</p>	<p>Understand how to measure radiation fields, assess radiation contamination levels, and specify personal dosimetry arrangements.</p> <p>Interpret dosimetry and monitoring data</p>	<p>Advice to dutyholders or employers on suitability of monitoring arrangements, such as:</p> <p>Interpretation of recorded exposures or monitoring records as part of an assessment of radiation controls</p> <p>Selection or technical review of monitoring equipment or dosimetry methods.</p> <p>Identify shortfalls in monitoring arrangements</p>
<p>5. Designation of areas & classification of workers. Control procedures for work involving the potential for significant radiation exposure.</p>	<p>Identify the need for area designation as Supervised or Controlled.</p> <p>Identify appropriate access control measures for designated areas</p> <p>Identify the need for classification & monitoring of workers</p>	<p>Advice to dutyholders or employers on designation of areas and classification of workers, including implementation arrangements such as demarcation, signs, monitoring etc.</p>