

# Technical Compliance Article

Reference Number: IAC/TCA/IRR99/0002

**Title:**

**Choosing a Radiation Protection Adviser: Competence & Experience**

**Status:**

Open (Issue 1)

This TCA provides information and guidance on choosing a competent and suitable Radiation Protection Adviser (RPA). It's principally aimed at radiation employers working in the non-nuclear sector. The article is designed to equip the radiation employer with the questions to ask, and the information to seek, for selecting their adviser. It also aims to demystify generic terms like 'experience' and 'accredited'. The sections in this TCA are:

**Scope:**

- 1) Synopsis
- 2) Radiation Protection Legislation / Definitions
- 3) Useful (and not so useful) terminology
- 4) Competence and Suitability
- 5) **Choosing your Radiation Protection Adviser\***
- 6) Radiation Protection Adviser Case Studies

**It is the radiation employer who is legally responsible for ensuring their appointed RPA is *suitable***

*\*Fast track:* go to **Section 5** now if you are short of time.

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**Use:**

This article is provided for general use by all interested users of ionising radiations sources. It may also be of use to the regulator or RPA. Ionactive Consulting Ltd accepts no liability for any outcome (including errors or omissions) arising from using the information presented. If you are in any doubt about how this TCA might apply to your circumstances contact a suitable RPA.

**Legislation:**

Ionising Radiations Regulations 1999 (SI1999/3232)  
Radioactive Substances Act 1993



## 1) Synopsis

It is clear from the current UK HSE Statement on Radiation Protection Advisers (RPA) that core competence is essentially recognised by either assessing bodies (e.g. RPA2000 / BNFL scheme), or by undertaking a N/SVQ level 4 in Radiation Protection Practice. The statement is derived from the Euratom Basic Safety Standards Directive (96/29/Euratom) which requires member states to have *Qualified Experts*.

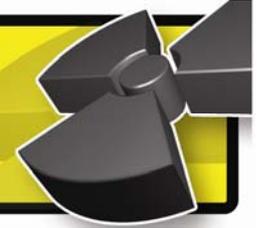
HSE criteria clearly states that whilst the RPA demonstrates *competence*, it is up to the employer to satisfy themselves that the RPA is *suitable* to give advice appropriate for specific uses of ionising radiations. This requirement is also clearly stated in the UK *Ionising Radiations Regulations 1999 (IRR99)*. In addition, the UK regulators for the *Radioactive Substances Act 1993 (RSA93)* appear to have settled on the term 'RPA' as meeting the description of a Qualified Expert. This has appeared in recent authorisations which require provision for consultation with suitable RPAs.

Determining suitability may well be an established practice within the nuclear industry. But what of the small user in the non-nuclear sector, perhaps just starting out using ionising radiations? How do they assess suitability as they are legally required to do? Should they rely on a prospective RPA telling them they are suitable? Do they require seeing a CV, or perhaps undertaking an interview? Who takes the lead and who really makes the decision for the radiation employer?

This article explores these issues and provides some advice and guidance for the radiation employer. It will allow the radiation employer to pause and make a valid judgement on what they need from their RPA.

It should be noted that the information, guidance and opinions contained in this article are that of the RPA, Mark Ramsay, and may not necessarily represent the position of the regulators or other RPA providers.

The reader may wish to consult some of the other TCA articles on the Ionactive website at [www.ionactive.co.uk/articlelist.html?c=2](http://www.ionactive.co.uk/articlelist.html?c=2).



## 2) Radiation Protection Legislation / Definitions

Before we delve into the main subject area of this article it is useful to briefly review relevant legislative which requires the consultation and appointment of a suitable RPA.

IRR99 places duties on employers and particularly 'radiation employers' (employers that work with ionising radiation). The regulations in their entirety can be found via the Ionactive website: [www.ionactive.co.uk/links\\_listings.html?c=19](http://www.ionactive.co.uk/links_listings.html?c=19).

The relevant regulation is shown below:

### Regulation 13 'Radiation Protection Adviser':

(1) Subject to paragraph (3), every radiation employer shall consult such **suitable** radiation protection advisers as are necessary for the purpose of advising the radiation employer as to the observance of these Regulations and shall, in any event, consult one or more suitable radiation protection advisers with regard to those matters which are set out in Schedule 5.

(2) Where a radiation protection adviser is consulted pursuant to the requirements of paragraph (1) (other than in respect of the observance of that paragraph), the radiation employer shall appoint that radiation protection adviser in writing and shall include in that appointment the scope of the advice which the radiation protection adviser is required to give.

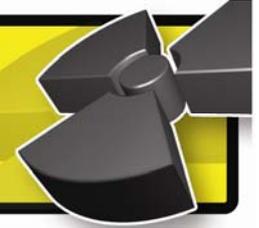
(3) Nothing in paragraph (1) shall require a radiation employer to consult a radiation protection adviser where the only work with ionising radiation undertaken by that employer is work specified in Schedule 1.

Some important clauses and sections have been left out for clarity. The essential points contained in this regulation are:

- It does apply completely unless the only work undertaken is specified in Schedule 1 (in which case section 13(3) will then apply).
- If it applies the radiation employer must at least consult a Radiation Protection Adviser (RPA) and in most cases will need to appoint them in writing.

With respect to the first bullet point above, you may wish to read our TCA Article '*HSE Notification & the Radiation Protection Adviser*' (Ref: IAC/TCA/IRR99/0002). There are some fairly limited circumstances where a RPA consultation is not required. A direct link to this article can be found at:

[www.ionactive.co.uk/pdfs/TCA\\_IRR99\\_Schedule1.pdf](http://www.ionactive.co.uk/pdfs/TCA_IRR99_Schedule1.pdf).



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RSA93 makes no reference to the RPA – there is no direct equivalent. However, Article 47.2 of *European Community Basic Safety Standards Directive 96/29/Euratom* makes reference to Qualified Experts. The UK non-nuclear sector has not adequately defined what a Qualified Expert is, but many have assumed (correctly and incorrectly depending on suitability) that a RPA can be this person.

Whether an RPA can be a Qualified Expert is down to their '*suitability*' – i.e. are they able to offer advice on compliance with RSA93? The term 'RPA' is now being widely used in authorisation certificates (for the accumulation and disposal of radioactive wastes) issued under RSA93 by the Agencies (e.g. Environment Agency). A typical extract of a modern authorisation certificate will state the following:

*...provision for consultation with such suitable RPAs...for the purpose of advising the user as to compliance with the limitations and conditions of this authorisation...*

The above statement will normally be found in Schedule 1, section 1.a of a typical authorisation. The above statement has been shortened for clarity but will include words to the effect '*...RPAs or other suitable qualified persons which may be agreed with the Agency in writing...*'.

You will note that the term '*suitable*' appears frequently and we emphasize again that it is the radiation employer who has the legal duty to determine this (see Reg.13, paragraph 1 above).

Regulation 2 of IRR99 defines the RPA as follows:

*...radiation protection adviser... an individual who, or a body which, meets such criteria of competence as may from time to time be specified in writing by the Executive....*

We can therefore summarise as follows:

- The *competence* required of the RPA (their core knowledge) is that specified by the HSE. In order for a person (or body) to be a RPA they must demonstrate they have met the competence criteria. *The RPA is responsible for this.*
- The *suitability* of the RPA relates to how their skills and experiences can be used to provide advice on particular types and uses of ionising radiation sources. *The radiation employer is responsible for determining RPA suitability.*



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We explore competence and suitability in a little more detail in Section 4, and in Section 5 provide advice on how you – as a radiation employer – can be certain that both are met when choosing your RPA.

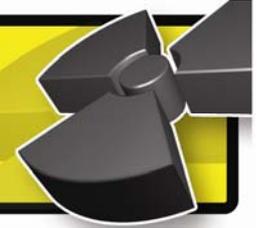
### 3) Some useful (and not so useful) terminology

In this section we briefly summarise and explain some of the terminology which you may come across when searching for an RPA. Some of the terms / phrases are useful and indeed may have legal meaning which you need to understand. Typically these might include:

- Radiation Employer
- Suitable RPA
- Experienced RPA
- Certificated RPA
- RPA Body

The terms above can be taken to mean the following:

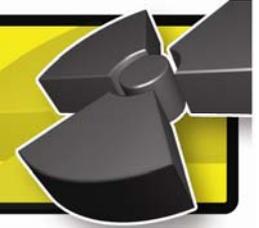
<i>Radiation Employer</i>	An employer who in the course of his business carries out work with ionising radiation. For the purposes of this article this is any entity which works with x-ray generators, or with sealed or unsealed radioactive material.
<i>Suitable RPA</i>	A <i>suitable</i> RPA has the necessary experience, skills and knowledge – over and above that required of a competent RPA – to provide radiation protection advice on specific sources and types of ionising used by a radiation employer.
<i>Experienced RPA</i>	An <i>experienced</i> RPA does not mean the same as <i>suitable</i> RPA. Experience in this context will mean that the RPA has obtained necessary skills and knowledge – but these may not be suitable for providing advice on particular types and sources of ionising radiation.
<i>Certificated RPA</i>	A certificated RPA will generally have a ‘ <i>Certificate of Competence to be a Radiation Protection Adviser</i> ’. That person can not practice or be appointed as a RPA without this certificate (or equivalent if a S/NVQ is awarded) being held.



<p><i>RPA Body</i></p>	<p>An RPA body is a legal entity or partnership formally recognised by the HSE. Essentially, the appointed RPA is the 'body' (a collection of individuals) rather than a single named person. Every RPA body must have at least one person who satisfies the criteria of competence for individual RPAs by holding a certificate or a relevant N/SVQ.</p> <p>A RPA body does not need to contain solely certificated RPA's, it could for example use technicians or trainees. A key requirement for HSE recognition is that the RPA Body must be able to demonstrate it has QA / Management procedures to ensure that formal RPA advice is traceable to an individual recognised as a RPA. This is important since if you appoint a RPA Body you may not receive your advice from a recognised RPA.</p> <p><i>Ionactive Consulting Limited has chosen not to be a RPA Body since each and every RPA it employs is a certificated individual recognised as a RPA in their own right.</i></p> <p>It is also important to note that the HSE recognition of the RPA Body only relates to quality assurance procedures for <i>traceability and accountability</i> – <i>it does not assess suitability, the quality, or the appropriateness of radiation protection advice or services.</i></p>
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Some of the less useful terms, or phrases which you need to carefully consider when choosing an RPA are:

<p><i>Accredited RPA</i></p>	<p>'<i>Accredited RPA</i>' is not a recognised term – either by the HSE, IRR99 or the industry at large. If you see this term being used you should make an enquiry to ensure that the RPA is 'certificated' or otherwise recognised as a RPA under the definition in IRR99.</p>
<p><i>'RPA with 25 years experience'</i></p>	<p>We advise that you should treat this (and similar) statements with caution. We entirely concur that experience is invaluable – and generally 'the more the better' is very true. However, what is more important is that the experience is: <i>recent, reflects modern best practice</i>, and consists of the <i>skills and knowledge</i> required to advise you on your particular uses of ionising radiation. As you might expect, what you really want to know is</p>



	if the RPA is <i>suitable</i> – suitability is more important than experience alone. ‘RPA Experience’ will not enable you, as a radiation employer, to meet your legal duty to select a suitable RPA unless the experience demonstrates <i>suitability</i> .
<i>HSE approved RPA</i>	The HSE does not ‘approve’ the RPA. Single RPA’s are recognised by the HSE (by default) if they are certificated or hold a valid S/NVQ. A RPA Body is not approved by the HSE, rather they are formally recognised as such.

## 4) Competence *and* Suitability

### Competence

Core competence is addressed in Regulation 2 of IRR99, which defines an RPA as ‘*an individual who, or a body which, meets such criteria of competence as may from time to time be specified in writing by the Executive*’ – we looked at this in Section 2.

Competence can be defined in a number of ways but essentially is the knowledge, skills and experience required to carry out the desired task (i.e. that of the RPA). It also requires an awareness of limitation – this is closely related to suitability.

The HSE has issued the criteria of competence for individuals who wish to practice as a RPA. This has also been issued to RPA Bodies.

Recognition by HSE that a RPA meets these criteria is achieved by:

- An individual holding a Level 4 S/NVQ in Radiation Protection Practice
- An individual holding a certificate issued by an Assessing Body recognised by the HSE
- A RPA Body being formally recognised by the HSE. (At least one or more individuals in the body will need to satisfy one of the above two bullets).

The full HSE statement which addresses the above issues can be found at the following link:

[www.hse.gov.uk/radiation/ionising/rpa/statementrpa.htm#\\_Toc90437590](http://www.hse.gov.uk/radiation/ionising/rpa/statementrpa.htm#_Toc90437590).

The S/NVQ route has been fairly unpopular, so it is the awarding bodies (principally RPA 2000) that are likely to have issued a certificate of competence to the RPA that



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you wish to appoint. It is desirable that the radiation employer checks that the chosen RPA has a valid certificate (see Section 5).

### Suitability

The certificate issued by the Awarding Body (e.g. RPA 2000), or the possession of a suitable S/NVQ, does not make the RPA suitable for a particular radiation employer using specific sources of ionising radiation.

Whilst it is good practice for the radiation employer to ask to see the certificate of a prospective RPA, it says nothing about their suitability. Remember, Regulation 13(1) requires that ‘...every radiation employer will consult such **suitable Radiation Protection Advisers as is necessary...**’. Therefore, the radiation employer has not met their legal responsibility required in this regulation by merely checking that the RPA is competent to act.

Assessing Bodies did intend to issue ‘specialist certificates’ to those RPA’s who wished to demonstrate suitability in certain areas (e.g. x-rays, radioactive waste management etc). However, due to resource commitments very few such certificates have been issued.

It is appropriate to consider a practical case study.

### **Case Study A**

You are a manufacturer and supplier of medical linac equipment. The linac equipment is manufactured, assembled and tested in the factory within specially designed shielded bunkers. The equipment is capable of operating at 16MeV. You are in need of a new RPA and have made some enquires. One provider seems ‘good value’ and says they have worked with ‘x-rays’. You have checked their core competence by ensuring that have a valid certificate from RPA 2000 (or equivalent).

One option is to appoint the RPA and see how things go – the wrong option!

On making some enquiries into the suitability of the RPA you discover that their ‘x-ray’ knowledge and experience is with 30-60 KeV XRD and XRF equipment used in the university sector. They appear to have extensive experience in this area and know about the radiation hazards (e.g. soft x-ray, high dose rate exposures to extremities).

You then begin to ask some specific questions about the radiation protection aspects of the linac equipment you manufacture and test. For example, you mention:



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- Pulsed photon radiation and enquire about their knowledge of suitable radiation instrumentation.
- You mention neutron generation and activation thresholds in various materials.
- You mention ozone production and question the relative risk compared to residual short half-life activation products (when making an entry to the bunker).

You probably discover that whilst the RPA is competent they are not suitable to advise you on your particular sources of ionising radiation.

The above case study is a simple example and will not be appropriate in all cases. For example, there is nothing to stop the radiation employer appointing the RPA and offering additional training / awareness sessions. In addition, there is nothing to stop the RPA using the initiative and meeting up with another RPA who is experienced in this particular area of work.

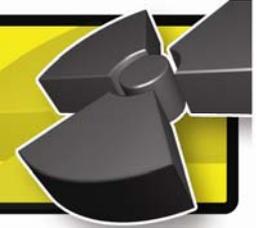
What the example intends to show is that a relatively simple enquiry by the radiation employer can determine the likely suitability of the RPA.

## 5) Choosing your Radiation Protection Adviser\*

(\**Fast track* – if you have come here first then welcome! We encourage you to read the rest of this article when you have time so you will be able to appreciate the information in context)

There are no hard and fast rules for the methodology of choosing your RPA. In no particular order it is likely that the following factors / issues will be considered:

- Cost (daily rate or annual contract)
- RPA suitability
- RPA certification
- Proximity of RPA to location of work
- Recommendation (word of mouth)
- Website
- Professional Indemnity Insurance
- Known experience with the sources of ionising radiation being used
- Included contract services (monitor calibration, leak testing)
- Type of ad hoc support via email / phone
- Appointment of a RPA or a RPA Body
- Past history (may have used RPA previously)



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- Associated Radiation Protection Training services
- Government Body, Limited Company, Partnership, Sole Trader
- Quality Assurance
- Emergency response services

It is quite probable that cost is going to be fairly near the top of the list – but it should not be number one! This is not only due to the *competency* and *suitability* issues discussed elsewhere in this article, but also because there are so many ways to ‘price’ a contract with all its inclusions and exclusions. The purpose of this article is not to discuss the cost effectiveness of one RPA provider over another although this is clearly an issue, particularly when going out for tender. That being said, there have been some additions to the market place over the last few years (i.e. Ionactive Consulting Ltd). It is therefore wise to seek quotes from RPA providers around contract renewal time, you may be quite surprised.

The path to your chosen RPA is likely to be via the following six steps. This assumes that you are going to be working with ionising radiation for the first time. If you are already working with ionising radiation then steps (1) and (2) may not be required.

- 1) Determine your sources of ionising radiation
- 2) Do you need a RPA (\*may need a RPA to help you answer this)
- 3) Find a RPA (a web search is a good start)
- 4) Determine their competence and suitability
- 5) Choose them
- 6) Appoint them (usually after prior consultation)

### Step 1: Determine your sources of ionising radiation

In order for you to determine if you need a RPA (2), and then if that RPA is suitable (4), you need to be sure you understand your intended uses of ionising radiation. The following extracts are taken from our website and show you the diversity of possible uses.

**In Industry . . .**

- level gauge on a fluid process tank
- thickness gauge on a paper making / textiles machine
- static eliminator source in a paint spraying booth
- static eliminator source on a weighing balance
- x-rays facilities for quality control
- irradiator (for food irradiation or process sterilisation)
- radiography of pipe welds
- neutron moisture / density measurements in construction
- radioactive waste incineration assessment

**In Universities and Colleges . . .**

- unsealed sources in biomedical research
- sealed sources in physics research
- x-ray crystallography equipment in materials research
- static eliminator source on a weighing balance
- irradiator
- legacy source and radioactive waste issues

**In Museums . . .**

- geological specimens
- radioactive antique articles (watches, dials, pottery)



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Once you are clear about your uses of ionising radiation you can move to Step (2).

### Step 2: Do you need a RPA

For some, the phrase '*Which came first, the chicken or the egg?*' comes to mind. The problem is that many radiation employers do not know the answer to this question. *Do you need a RPA to tell you that you need a RPA?*

We believe a good RPA should be able to tell you objectively and provide some written evidence of their advice – *free of charge*.

Alternatively, or as a back up, the radiation employer may decide himself to look at the legislative position. This is indeed a legal requirement but can still prove difficult without RPA support.

To assist you in this process, Ionactive Consulting Limited has produced some free guidance on this matter in our TCA: '*HSE Notification & the Radiation Protection Adviser*'. This document clearly explains the legal basis for requiring a RPA and provides lots of case studies. The article can be downloaded from the following page:

[www.ionactive.co.uk/articlelist.html?c=2](http://www.ionactive.co.uk/articlelist.html?c=2)

The next thing you need to do is find a RPA.

### Step 3: Finding a RPA

There are numerous ways to find a RPA, some of which are as follows:

- Search for 'Radiation Protection Adviser' on [www.google.com](http://www.google.com)
- Talk to other radiation employers and ask for recommendations
- Visit the Society of Radiological Protection (SRP) at [www.srp-uk.org](http://www.srp-uk.org)
- Try Ionactive (you are already on our site after all...)

### Step 4: Determine their competence and suitability

Step (4) takes a rather large leap from step (3) and there may have been some intermediary stages (e.g. invitation to tender for large contracts, inviting the RPA to visit site to discuss the ionising radiation sources, discussions over the phone / email etc). However, you are now at the stage where, armed with some information about your own intended (or actual) use of ionising radiation, you may ask one or more of the following questions:



Question	Advice & Guidance
Are you a certificated RPA?	You are looking for 'yes' and some evidence of this (e.g. a RPA 2000 certificate). If the answer from a particular individual is 'no' it might be that they are part of a RPA Body. Our advice would be to ask to speak to their certificated RPA.
Are you a RPA Body?	If the answer is 'yes' then ask to see their 'HSE letter of recognition'. You may also wish to ask if you will be dealing directly with a certificated RPA. If this is not the case you may wish to enquire about how any advice you are given will be traceable to a certificated RPA.
Do you have other clients using similar types and sources of ionising radiation?	You are looking for a 'yes' and perhaps some names or even references of some of the most relevant. There will sometimes be confidentiality issues, but a RPA provider who provides a list of clients is going to give you some confidence that they are suitable. Ionactive publishes a list of current clients on the website ( <a href="http://www.ionactive.co.uk/clients.html">www.ionactive.co.uk/clients.html</a> ).
Can you summarise your experience of providing advice on our types of ionising radiation sources?	The RPA should be able to provide a written description of relevant experience and perhaps provide some examples of reports (sanitised as required if confidentiality is an issue).
Can your previous experience add value to our use of ionising radiation?	You might wish to see if the RPA can demonstrate that they add value through optimisation of protection, novel methods of control, or even process optimisation. You will often find that RPA's who have extensive relevant experience are likely to have been consulted widely and therefore contributed to business growth outside their immediate remit.
Do you have transferable skills / experience that could be applied to our area of ionising radiation use?	This question could be particularly useful if suitability is not immediately obvious. For example, an RPA who has experience of interlock systems used for work in Co-60 irradiators might be able to apply that experience to high energy linac applications using search and lock-up enclosures. However some caution is needed since there are still likely to be significant radiation protection differences (i.e. possibility of neutron activation in linac systems).



Question	Advice & Guidance
<p>Are you value for money?</p>	<p>True, not really a question of suitability. Or is it? An RPA who is suitable for your area of ionising radiation use should be an asset to you as well as being a necessary overhead. All we would suggest is that you shop around and ask for quotes. There are now newer providers such as Ionactive Consulting LTD who may have moved the market in a more desirable direction (from a clients point of view).</p>
<p>Are references available from clients using similar sources of ionising radiation?</p>	<p>This is a reasonable question to ask. The RPA should be able to provide written references, or at the very least be willing to provide you with contact details of a relevant client who you can talk to.</p>
<p>Are you undertaking a programme of Continuing Professional Development (CPD)?</p>	<p>It is important to establish that the RPA you choose is maintaining knowledge and experience, and particularly in your area of ionising radiation use. It may be difficult to prove CPD, but you should expect reasonable answers to questions you pose which relate specifically to your industry.</p>
<p>Do you provide radiation protection training (and if so are there references)?</p>	<p>It is likely that an RPA provider will also provide training services. However, please note that being a RPA does not necessary imply training skills that will be acceptable to your training needs. An RPA who provides standard and custom made courses is likely to be useful to you. Seek references and delegate comments (asking for written documented evidence if required).</p>
<p>Do you belong to SRP (The Society for Radiological Protection) or other relevant organisation?</p>	<p>Memberships of such organisations are not a prerequisite for being a suitable RPA. However, it is likely that an RPA who is a member will be best placed to keep in contact with their peers and exchange ideas, latest information and best practice. Ask the RPA what their role is in such organisations, a suitable RPA may be a proactive one who 'gives something back' to the profession (but not always).</p>
<p>Have you been a member of any government / influential group, committee or similar (e.g. Small Users Liaison Group) or industry forum?</p>	<p>As above, holding such positions on a committee or similar is not a prerequisite for being a suitable RPA. However, like before, holding such positions may indicate a proactive approach to radiation protection.</p>



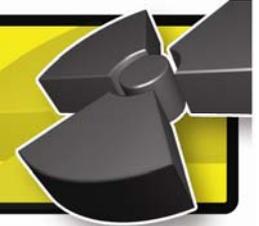
Question	Advice & Guidance
<p>Do you or your RPA Body (as appropriate) have a Corporate Governance Statement, Health &amp; Safety Policy and Quality Assurance Statement?</p>	<p>Notwithstanding the legal need (or otherwise) to have these statements, it is suggested that a RPA / RPA Body who can provide you with such documents is likely to demonstrate suitability in answers to the other questions raised in this table. This is because their services are more likely to quality assured and meet best practice. It also demonstrates that the RPA takes an integrated approach to health and safety. The holding of formal quality certificates (e.g. ISO 9001) is also welcome.</p> <p>(It should be noted that HSE recognition of a RPA Body is not a demonstration of Quality Assurance in line with ISO 9001).</p>
<p>What sources / uses of ionising radiation are you not suitable to offer advice on?</p>	<p>No RPA is likely to be suitable for every use and type of ionising radiation. Recognition of this is important and is a requirement if being a competent and suitable RPA. Ionactive Consulting Limited will not offer advice on dental or veterinary x-ray sources, but is suitable to offer advice on most other x-ray sources (e.g. radiography, XRD, XRF, Flash X-ray and similar).</p>

## 6) Radiation Protection Adviser – Case Studies

In the following cases studies it is assumed that the competency of the RPA has been proved (e.g. they hold a certificate from RPA 2000 or equivalent). The studies are based on the experiences of Ionactive Consulting Ltd and the clients they advise. However, it should be noted that no single study represents a particular client (any similarities are coincidence).

### Case Study A

Ionactive were approached by a museum (Client 'A') and asked to provide RPA advice on radioactive geological specimens. The client needed a complete RPA service including visits, advice and training. They also needed some specific advice about specimen storage and radon accumulation issues.



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It was relatively easy to demonstrate suitability in this particular case.

- Ionactive is RPA to a client (national museum) which holds the largest collection of uranium & thorium specimens in the UK. Client 'A' was therefore provided with a direct contact referee at the museum.
- Ionactive was able to demonstrate its knowledge and experience in specimen storage and radon gas accumulation, and offer to apply these skills at the prospective client's premises.
- Having been present during a number of regulator (Environment Agency) inspections at other similar establishments, Ionactive were able to quickly identify an improvement programme for an inspection that was about to take place at the clients site.

## Case Study B

Ionactive were approached by prospective Client 'B' who operated a large private dental practice. Client 'B' were using a large 'national' RPA provider but were concerned about fees and remoteness (they did not believe that one visit a year was enough). They liked the look of the Ionactive website stating that '*the company appeared to be approachable*', so asked for a quote.

Ionactive visited the client and looked around the extensive facilities which included a large IDT panoramic x-ray facility as well more conventional 2 dimensional facilities in a number of treatment rooms.

After careful consideration Ionactive declined the opportunity to offer RPA advice to this facility (in doing so Ionactive put prospective Client 'B' in touch with one of their competitors). Some reasons for declining included:

- Little working knowledge of dental x-ray systems
- Little working knowledge of IDT systems as applied to dental treatment
- Whilst recognising the basic requirements for radiation protection in the *Ionising Radiations Regulations 1999*, Ionactive did not believe Client 'B' was applying the requirements of the *Ionising Radiations (Medical Exposures) Regulations 2000*. It was felt that a RPA with 'Medical Physics Expert' status would be more suitable.

There are a few interesting points that arise out of Case Study B:



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- Ionactive informed Client 'B' that it was not suitable to advise as their RPA, at no point did Client 'B' indicate this or indeed ask for evidence of experience. This is one of the drivers for producing this TCA.
- Ionactive has a clear policy for referring RPA work to their competitors where its resource, experience or suitability profile does not match client requirements. There is no requirement for this to be reciprocated (nor has this been done so).

### Case Study C

Ionactive were approached by a company (Client 'C') and asked to provide RPA advice on sterilising installations using Co-60 and electron beam facilities. The scope of the contract required being appointed in writing as RPA, undertaking site visits and providing advice across the full spectrum of radiation protection and associated legislation (dealing with ionising radiation, radioactive substances, transport and contingency).

At the point of enquiry, Ionactive were not directly involved in RPA work using these types of ionising radiation sources in this particular way (sterilisation). However, it was relatively easy to demonstrate that the current suitability profile was entirely transferable.

- Ionactive's RPA work on a nuclear research reactor ensured that knowledge and experience of safety systems, safety cases and interlocks was transferable to the new plant of Client 'C'.
- Ionactive were able to demonstrate suitability for the electron beam systems through experience gained on medical and research accelerators. Recognition of the likely neutron production / activation profiles for different energy machines was important for shielding consideration and for commercial impact issues during downtime.
- Whilst not having previous experience with the large activities of Co-60 used in sterilisation plants, suitability was demonstrated by illustrating experience and knowledge of large sources used in radiography, calibration and research facilities. Knowledge of 'High Activity Sealed Source' (HASS) issues was also proved useful.

Case Study C demonstrates where skills and experience can be shown to be transferable – and therefore so can suitability.