Only persons holding a possession licence issued under the Radiation Safety Act 1999 are allowed to be in possession of a radiation source in Queensland.

In order to possess a radiation source, the licensee may either manufacture or otherwise produce the source, or as is most commonly the case, the licensee may acquire the source from another licensee within Queensland or from a person in another jurisdiction.

If a Queensland licensee in possession of a radiation source no longer wishes to be in possession of a radiation source, the licensee may:

- supply the source to another licensee in Queensland – in this case the person acquiring the source needs to apply for, and be granted, an approval to acquire before the transfer takes place; or
- supply the source to a person in another jurisdiction – in this case the possession licensee needs to apply for, and be granted, an approval to relocate the source before the transfer takes place; or
- dispose of the radiation source – in this case, rules specific to the type of source being disposed of must be followed.

This approval system provides the means by which the Director-General of the Department of Health (chief executive) can control the radiation sources in the possession of individuals and companies in Queensland. This is a fundamental function of the Radiation Safety Act 1999. The chief executive keeps a register of the radiation sources in Queensland, and amongst other things, uses this information to study developments and trends in the use of radiation at the state level.

This information sheet describes the processes relating to the acquisition, relocation and disposal of radiation sources.

**What is the process for acquiring a radiation source?**

Only a possession licensee is allowed, under the Radiation Safety Act 1999, to acquire a radiation source. In addition, a possession licensee must have been granted an approval to acquire a radiation source before taking possession of the source.

A possession licensee seeking approval to acquire a source needs to apply for an approval to acquire the source describing the details of each radiation source to be acquired. An application for approval to acquire may be made for:

- The acquisition of a specific radiation source (e.g. a diagnostic X-ray unit, or a Cs137 sealed radioactive substance in an industrial gauge), or
- the continuing (i.e. routine) acquisition of an unsealed radioactive substance (e.g. weekly delivery of a Tc99m generator used for diagnostic nuclear medicine), or
- the continuing (i.e. routine) acquisition of iodine 125 seeds with an activity of no more than 40MBq per seed, used for brachytherapy.
As it is expected that, in order to provide sufficient detail for the acquisition of a specific source, the commercial or other arrangement to obtain the source has already been settled subject to the approval to acquire being granted, an approval for the acquisition of a radiation source will be given the limited term of one month to allow time for the physical transfer of the source to take place.

A continuing approval to acquire is valid for the term of the approval, which may be up to the expiry date of the applicant’s possession licence.

If an application for approval to acquire is approved, the applicant is immediately taken to have assumed legal responsibility for the source. It is therefore important that if, despite the approval being granted, the acquisition does not proceed the chief executive is advised as soon as possible by the applicant, in writing.

These requirements have been put in place to provide a means by which the chief executive can be assured that each possession licensee who wants to acquire a radiation source has, prior to obtaining the source, the necessary safety and risk management arrangements in place to satisfactorily prevent or minimise the effect of the radiation hazards from that source.

**What is the process for relocating a radiation source?**

Only a possession licensee is allowed, under the Radiation Safety Act 1999, to relocate a radiation source. In addition, the possession licensee must hold an approval to relocate a radiation source before relocating the source.

A possession licensee seeking approval to relocate a radiation source to a place outside of Queensland (whether in or outside Australia) needs to apply for an approval to relocate the source, describing the details of the radiation source proposed to be relocated.

An approval to relocate provides the mechanism by which the chief executive can formally advise the regulator in the destination jurisdiction that a radiation source from Queensland will be transferring to its jurisdiction.

As the radiation source to be relocated is intended to be transferred to another jurisdiction, the regulatory authority in that jurisdiction must be provided the opportunity to accept or reject the transfer of the source thereby ensuring the source remains within a regulatory context. To assist the process of obtaining an approval to relocate, the Queensland possession licensee seeking the approval is required to attach the written approval of the destination regulatory authority to the application to relocate.

*Note: It is a condition of all approvals to relocate that the possession licensee must notify the chief executive within 7 days after the relocation of a radiation source. The radiation source will remain on the possession licensee’s inventory until such time as satisfactory evidence that this relocation has occurred has been received.*

**What are the requirements relating to disposal?**

- **Disposal of radioactive material**

A person may dispose of radioactive material without a specific approval if the concentration of the radioactive material is less than that prescribed in the Radiation Safety Regulation 2010. Radionuclide concentration limits for disposal into the air, water or sewerage system are given in sections 15 and 16 of the Regulation. Concentration levels for the disposal of radioactive material other than via the air, water or sewerage system are detailed in section 17 of the Regulation.

These concentrations are set at a lower level than the prescribed concentrations for which a person must obtain a licence. This is to ensure that no person will receive an unacceptable dose of radiation as a result of the disposal.
An Approval to Dispose is required if a person wishes to dispose of radioactive material in excess of the radionuclide concentration levels prescribed in the Regulation. In considering such an application, the chief executive will assess the potential radiation hazard to both people and the environment as a result of the disposal of the radioactive material and will therefore require some detailed information to be provided as part of such an application.

- **Disposal of radiation apparatus**

  Possession licensees may dispose of a radiation apparatus (i.e. an X-ray apparatus, laser apparatus or solarium) provided it is first rendered incapable of ever producing radiation and relevant signage removed. This may be achieved by destroying the main components involved in the production of radiation, eg. the X-ray tube, and destroying the signage warning of a radiation hazard.

  If a radiation apparatus is disposed of, it is a requirement under the Radiation Safety Act 1999 that the possession licensee must notify the chief executive within 7 days after the disposal of the apparatus. The radiation apparatus will remain on the possession licensee’s inventory until such time as satisfactory evidence that this disposal has occurred has been received.

**Enquiries**

For further information, please contact the Radiation Health, Health Protection Unit of the Department of Health. The contact details for Radiation Health are:

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