SOURCE LICENCE APPLICATION

Group 3

High hazard sources

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| --- |
| Use this form to apply for:   1. A source licence to deal with high hazard sources, that is, sources in Group 3 in section 4 of the Australian Radiation Protection and Nuclear Safety Regulations 2018   \* Low and medium hazard sources may also be included  **OR**   1. An amendment to an existing source licence to add a Group 3 source   *Applicants should refer to the* [*Regulatory Guide: How to apply for a source licence*](https://www.arpansa.gov.au/sites/g/files/net3086/f/legacy/pubs/regulatory/guides/REG-LA-SUP-240E.pdf) |

*Indicate the purpose of this application:*

A. New Licence

B. Amendment to Source Licence S

# Section A: Applicant information

|  |  |
| --- | --- |
| **department or commonwealth body** |  |
| **portfolio** |  |
| **PERSON MAKING THE APPLICATION** **(Department Secretary, CEO or other authorised delegate[[1]](#footnote-1))**  name:  POSITION:  BUSINESS ADDRESS:  PH:  EMAIL: | |
| **NOMINEE (where applicable)**  name:  POSITION:  BUSINESS ADDRESS:  PH:  EMAIL: | |
| **RADIATION SAFETY OFFICER (or contact person)**  NAME:  POSITION:  BUSINESS ADDRESS:  PH:  EMAIL: | |

**Declaration by person making the application**

I hereby declare that the information provided on this form and in support of this application is, to the best of my knowledge, complete and true in every particular.

Print name:

Signature:

Date:

# Section B: Description of source and proposed dealing

## Indicate the kind of controlled material or controlled apparatus in the table below

|  |  |  |
| --- | --- | --- |
| GROUP 1\* ITEM | Kind of controlled material or controlled apparatus | Select |
| G1-1 | Sealed source for calibration purposes of activity of 40 MBq or less |  |
| G1-2 | Sealed source in a fully enclosed analytical device |  |
| G1-3 | Sealed source with activity of 400 MBq or less in a fixed gauge |  |
| G1-4 | Sealed source in a blood irradiator |  |
| G1-5 | Sealed source in a bone densitometer |  |
| G1-6 | Sealed source that:(a) is in storage and awaiting disposal; and (b) has a nuclide with a maximum activity of not more than 109 times the activity value for that nuclide in Part 1 of Schedule 1 |  |
| G1-7 | Unsealed source, or sources, in a laboratory or particular premises, having nuclides of one kind only with a maximum activity of not more than 102 times the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations |  |
| G1-8 | Unsealed source, or sources, in a laboratory or particular premises, having nuclides such that when the maximum activity of each nuclide in the source, or sources, is divided by the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations, the total of the results for all nuclides in the source, or sources, is not more than 102 |  |
| G1-9 | Mammographic x-ray unit |  |
| G1-10 | Conventional dental x-ray unit |  |
| G1-11 | X-ray unit used for bone densitometry |  |
| G1-12 | X-ray unit used for veterinary radiography |  |
| G1-13 | Fully enclosed x-ray analysis unit |  |
| G1-14 | Baggage inspection x-ray unit |  |
| G1-15 | Mobile or portable medical x-ray unit |  |
| G1-16 | Magnetic field non-destructive testing device |  |
| G1-17 | Induction heater or induction furnace |  |
| G1-18 | Industrial radiofrequency heater or welder |  |
| G1-19 | Radiofrequency plasma tube |  |
| G1-20 | Microwave or radiofrequency diathermy equipment |  |
| G1-21 | Industrial microwave or radiofrequency processing system |  |
| G1-22 | Optical source, other than a laser product, emitting ultraviolet radiation, infra-red or visible light. |  |
| G1-23 | A laser product with an accessible emission level more than the accessible emission limit of a Class 3R laser product as set out in AS/NZS IEC 60825.1:2014 |  |
| G1-24 | An optical fibre communication system exceeding Hazard Level 3R as defined by AS/NZS IEC 60825.2:2011 |  |
| G1-25 | Sealed source not mentioned in another item of this table or in the definition of Group 2 or Group 3, dealings with which do not have the potential for accidental exposure likely to exceed the dose limits mentioned in sections 77 and 79 of the Regulations  ***Select from (a) to (f)\*\* below. If none apply, provide a brief description*** |  |
| 1. Sealed source for training and education purposes of 40 MBq or less |  |
| 1. Manufactured item or component containing thorium |  |
| 1. Item or device containing up to 1 MBq of radium 226 and no other controlled material |  |
| 1. Item or device containing up to 1 GBq of promethium 147 and no other controlled material |  |
| 1. Item or device containing tritium 100 GBq or less |  |
| 1. Tritium as an ionisation source |  |
|  | 1. Sealed source in a static eliminator or aerosol neutraliser |  |
| G1-26 | Controlled apparatus that produces ionizing radiation or non‑ionizing radiation and is not mentioned in another item of this table or in the definition of ***Group 2*** or ***Group 3***, dealings with which do not have the potential for accidental exposure likely to exceed the dose limits mentioned in sections 77 and 79 (for ionizing radiation) of the Regulations or the appropriate non‑ionizing radiation exposure limits mentioned in section 4 of the Regulations:  ***Select from (a) to (k)\*\* below. If none apply, provide a brief description:*** |  |
| 1. Fully enclosed x-ray unit (radiography for special purposes) |  |
| 1. Portable handheld dental x-ray apparatus |  |
| 1. Optical source, other than a laser product, emitting ultraviolet radiation, infrared or visible light – solar tower array |  |
| 1. Ion beam etching unit |  |
| 1. *Intentionally blank* |  |
| 1. Dual energy x-ray absorptiometry (DEXA) unit for veterinary studies |  |
| 1. Fully enclosed x-ray biological irradiator (low power) |  |
| 1. CT, SPECT/CT or PET/CT scanner for imaging of small animals |  |
| 1. Klystron amplifier for radio communication or radar |  |
| 1. Laser used on animals |  |
| 1. Handheld backscatter x-ray security inspection system |  |
| **GROUP 2\* ITEM** |  |  |
| G2-1 | Sealed source for calibration purposes of activity of more than 40MBq |  |
| G2-2 | Sealed source in a partially enclosed analytical device |  |
| G2-3 | Sealed source of activity of more than 400MBq in a fixed gauge |  |
| G2-4 | Sealed source in a mobile gauge |  |
| G2-5 | Sealed source for medical or veterinary diagnostic nuclear medicine use |  |
| G2-6 | Unsealed source, or sources, in a laboratory or premises, having nuclides of one kind only with a maximum activity of more than 102, but not more than 104, times the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations |  |
| G2-7 | Unsealed source, or sources, in a laboratory or particular premises, having nuclides such that when the maximum activity of each nuclide in the source, or sources, is divided by the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations, the total of the results for all nuclides in the source, or sources, is more than 102 but not more than 104 |  |
| G2-8 | Unsealed sources used for tracer studies |  |
| G2-9 | Industrial radiography X-ray unit |  |
| G2-10 | Fixed medical X-ray unit, including a unit used for fluoroscopy, tomography and chiropractic radiography |  |
| G2-11 | Partially enclosed X-ray analysis unit |  |
| G2-12 | Medical therapy simulator |  |
| G2-13 | CT scanner |  |
| G2-14 | Sealed source not mentioned in another item of this table, or in the definition of Group 1 or Group 3, dealings with which have the potential for accidental exposure likely to exceed a dose limit mentioned in sections 77 and 79 of the Regulations but unlikely to result in acute effects  ***Select from (a) to (d)\*\* below. If none apply, provide a brief description*** |  |
| 1. Sealed source for training and education purposes of more than 40 MBq |  |
| 1. Item or device containing more than 1 MBq of radium 226 and no other controlled material |  |
| 1. Item or device containing more than 1 GBq of promethium 147 and no other controlled material |  |
| 1. Item or device containing more than 100 GBq of tritium |  |
| G2-15 | Controlled apparatus that produces ionising radiation not mentioned in another item of this table, or in the definition of Group 1 or Group 3, dealings with which have the potential for accidental exposure likely to exceed a dose limit mentioned in sections 77 and 79 of the Regulations but unlikely to result in acute effects  ***Select from (a) to (j)\*\* below. If none apply, provide a brief description*** |  |
| 1. Mobile backscatter X-ray security inspection system |  |
| 1. Mobile fluoroscopic X-ray apparatus |  |
|  | 1. CT scanner for imaging of non-human objects |  |
|  | 1. Fixed medical x-ray unit used for research purposes, including a unit designed for fluoroscopy, tomography, mammography and chiropractic radiography |  |
|  | 1. Personnel security screening system using backscatter x-rays |  |
|  | 1. Orthopantomogram (OPG) (dental panoramic x-ray unit) |  |
|  | 1. Fully enclosed x-ray biological irradiator |  |
|  | 1. Personnel anti-smuggling screening system using transmission x-rays |  |
|  | 1. Handheld X-ray Fluorescence Analyser |  |
|  | 1. Portable Deuterium-Deuterium Neutron Generator for materials analysis |  |
| **GROUP 3\* ITEM** |  |  | |
| G3-1 | Sealed source for industrial radiography |  | |
| G3-2 | Sealed source for medical and veterinary radiotherapy |  | |
| G3-3 | Sealed source in a bore hole logger |  | |
| G3-4 | Sealed source not mentioned in another item of this table or in the definition of Group 1 or Group 2, dealings with which have the potential for accidental exposure likely to exceed a dose limit mentioned in sections 77 and 79 of the Regulations and likely to result in acute effects  ***Select (a)\*\* below if it applies. Otherwise, provide a brief description*** |  | |
| 1. Reactor start-up source |  | |
| G3-5 | Unsealed source, or sources, in a laboratory or particular premises, having nuclides of one kind only with a maximum activity of more than 104, but not more than 106, times the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations |  | |
| G3-6 | Unsealed source, or sources, in a laboratory or particular premises, having nuclides such that when the maximum activity of each nuclide in the source, or sources, is divided by the activity value for that nuclide set out in Part 1 of Schedule 1 of the Regulations, the total of the results for all nuclides in the source, or sources, is more than 102 but not more than 106 |  | |
| G3-7 | Veterinary or medical radiotherapy unit |  | |
| G3-8 | Controlled apparatus that produces ionising radiation not mentioned in another item of this table or the definition in Group 1 or Group 2, dealings with which have the potential for accidental exposure likely to exceed a dose limit mentioned in sections 77 and 79 of the Regulations and likely to result in acute effects  ***Select from (a) to (g)\*\* below. If none apply, provide a brief description*** |  | |
| 1. Industrial irradiator containing less than 100TBq of a controlled material |  | |
| 1. Neutron Beam Instrument |  | |
| 1. Low Energy Implanter |  | |
| 1. Portable/mobile Deuterium-Tritium (± Deuterium-Deuterium) Neutron Generator |  | |
| 1. Industrial irradiator containing at least 100TBq but not more than 1 PBq of a controlled material |  | |
| 1. Sealed source in a fully enclosed and interlocked cabinet used for calibration purposes |  | |
| 1. X-ray based industrial irradiator |  | |

\* See section 4 of the Regulations

\*\* These numbers have been created for purposes of ARPANSA’s Licence Administration Database. As such, they will not appear in section 4 of the Regulations.

## Describe the source(s)

## Describe the proposed dealing

## Provide the physical address of the source(s)

# Section C: Source details

*Complete the Excel Spreadsheet known as the Source Inventory Workbook (SIW) for any sources used in connection with the facility.* [*Click here for template*](https://www.arpansa.gov.au/sites/g/files/net3086/f/legacy/pubs/regulatory/applications/SourceInventoryWorkbook.xlsx)

Note: For sealed sources, a copy of any source certificate or special form certificate should accompany the application as per item 1(d) in the table in subsection 47(2) of the Regulations.

# Section D: Plans & arrangements for managing safetys

*Describe the plans and arrangements for managing the safety of sources (include reference to codes and standards where relevant). These plans and arrangements may be listed, captured in multiple documents or contained in a single Radiation Management Plan. These documents may make reference to, and utilise, other documented safety procedures and work practices.*

## Effective control arrangements

## Safety management plan

## Radiation protection plan

## Radioactive waste management plan

## Ultimate disposal or transfer plan

## Security plan

## Emergency plan

# Section E: Matters to be taken into account by the CEO

## International Best Practice in Radiation Protection and Nuclear Safety

*Describe how international best practice in radiation protection and nuclear safety will be considered with respect to the source*

## Information asked for by the CEO

*Confirm that all information asked for by the CEO has been provided*

### Undue risk

*Provide information to show that there is no undue risk from radiation associated with the facility*

### Net benefit

*Provide information that demonstrates a net benefit from the proposed conduct*

### Optimisation of protection

### Provide information in relation to the proposed dealing that demonstrates protection has been optimised so that radiation risks are as low as reasonably achievable. The level of protection should be the best under prevailing circumstances and should provide for an adequate margin of benefit over harm. The applicant must show that the likelihood of incurring exposures, the number of people exposed and the magnitude of exposures are as low as reasonably achievable, having regard to economic and societal factors.

### Capacity to comply

*Provide information to show that the applicant has the capacity to comply with the Regulations and any licence conditions that may be imposed*

### Authorised signatory

*Confirm that the application has been signed by an office holder of the applicant or a person authorised by an office holder of the applicant*

## Checklist

|  |  |  |
| --- | --- | --- |
| **Item** | **Check** | **N/A** |
| 1. Completed and signed Section A – Applicant information |  |  |
| 1. Copy of Instrument of Authorisation for authorised person |  |  |
| 1. Organisational chart showing nominee |  |  |
| 1. Completed Section B – Description of proposed dealing |  |  |
| 1. Documents to support Section B |  |  |
| 1. Completed Section C – SIW (email attachment) |  |  |
| 1. Copy of sealed source or special form certificate(s) |  |  |
| 1. Completed Section D – Plans and Arrangements (including identification of relevant codes and standards) |  |  |
| 1. Documents to support Section D |  |  |
| 1. Completed Section E – Matters to be taken into account |  |  |
| 1. Documents to support Section E |  |  |
| 1. Application fee |  |  |

# Submitting the application

This application form and all supporting documents should be sent to [licenceadmin@arpansa.gov.au](mailto:licenceadmin@arpansa.gov.au)

# Application fee

Applicants should refer to Part 5 Division 4 of the Regulations to determine the appropriate fee. The fee should be paid by cheque or EFT and must be received before the application can be assessed.

1. A copy of the instrument of authorisation must accompany the application if it has been signed by an authorised delegate [↑](#footnote-ref-1)