
ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986

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ATOMIC ENERGY LICENSING ACT 1984

RADIATION PROTECTION (LICENSING) REGULATIONS 1986

IN exercise of the powers conferred by section 68 of the Atomic Energy Licensing Act 1984, the Minister makes the following regulations:

Act 304.

PART I

PRELIMINARY

1. (1) These Regulations may be cited as the **Radiation Protection (Licensing) Regulations 1986**.

Citation and commencement.

(2) These Regulations, except regulations 12, 13, 14, 17, the whole of Part V and the whole of Part VI, shall be deemed to have come into force on the 1st February 1985.

2. In these Regulations, unless the context otherwise requires-

Interpretation.

“amendment” of a licence means amendment of any of the particulars contained in a licence, but does not include an amendment which amounts to a transfer of the licence;

“application fee” means an administrative fee imposed by the appropriate authority upon the submission of an application to obtain, amend or renew any licence;

“approved registered medical practitioner” means a registered medical practitioner who is approved by the appropriate authority to be responsible for the medical surveillance of workers;

“construction licence” means a licence to start work on the building of a nuclear installation;

“full operation stage” means the stage where full operation of any nuclear installation, milling installation or waste treatment facility is allowed;

“irradiating apparatus” means an apparatus capable of producing ionizing radiation but does not include a sealed source apparatus;

“letter of intent” means a letter written to the Board informing it of the intention to site, construct and operate a nuclear installation, a milling installation or a waste treatment facility;

“licence fee” means a fee imposed on an applicant upon notification by the appropriate authority that his application to obtain, amend or renew any licence is successful;

“milling” means any activity involved in the concentration and beneficiation of any material containing or associated with radioactive materials, nuclear materials or prescribed substances;

“milling installation” means any installation built to undertake milling;

“register” means a book or a file kept by the appropriate authority in which all the particulars of licensees are recorded;

“sealed source” means a radiation source consisting of radioactive materials, nuclear material or prescribed substances firmly incorporated in solid and effectively inactive material, or sealed in an inactive container of sufficient strength to prevent, under normal conditions of use, any dispersion of its contents;

“sealed source apparatus” means any apparatus containing or using one or more sealed sources;

“sitting licence” means a licence to site any nuclear installation;

“temporary operation stage” means the stage where restricted operation of any nuclear installation, milling installation or waste treatment facility is allowed for the purpose of confirming their expected normal operating characteristics predicted by the design information;

“waste treatment facility” means any facility which is used for processing, treating or storing, prior to disposal, radioactive materials, nuclear materials or prescribed substances;

“worker” means any person working under the instruction of the licensee, whether or not employed by the licensee, in the handling or use of, or in any activity that will bring him into contact with, any radioactive material, nuclear material, prescribed substance or irradiating apparatus.

PART II

CLASSIFICATION OF LICENCES

Classification of licences.

3. Licences shall be classified into the following classes:

- (a) Class A;
- (b) Class B;
- (c) Class C;
- (d) Class D;
- (e) Class E;
- (f) Class F;
- (g) Class G; and
- (h) Class H.

Class A licence.

4. (1) A Class A licence is a licence to manufacture, trade in, produce, process, purchase, own, possess, use, transfer, handle, sell or store radioactive material.

(2) For the purposes of these Regulations, radioactive materials shall be divided into two types, namely, sealed source and unsealed source, which in turn shall be divided into four categories as set out in the First Schedule and Second Schedule respectively.

(3) A Class A licence in respect of the milling of materials containing or associated with radioactive materials or in respect of a waste treatment facility for radioactive materials shall be in three parts, namely-

- (a) the siting part;
- (b) the construction part; and
- (c) the operation part.

(4) The operation part of a Class A licence in respect of the milling of materials containing or associated with radioactive materials or in respect of a waste treatment facility for radioactive materials shall be issued in two stages, namely-

- (a) the temporary operation stage; and
- (b) the full operation stage.

5. (1) A Class B licence is a licence to manufacture, trade in, produce, process, purchase, own, possess, use, transfer, handle, sell or store nuclear material.

Class B
licence.

(2) A Class B licence in respect of the milling of materials containing or associated with nuclear materials or in respect of a waste treatment facility for nuclear materials shall be in three parts, namely-

- (a) the siting part;
- (b) the construction part; and
- (c) the operation part.

(3) The operation part of a Class B licence in respect of the milling of materials containing or associated with nuclear materials or in respect of a waste treatment facility for nuclear materials shall be issued in two stages, namely-

- (a) the temporary operation stage; and
- (b) the full operation stage.

6. (1) A Class C licence is a licence to manufacture, trade in, produce, process, purchase, own, possess, use, transfer, handle, sell or store irradiating apparatus.

Class C
licence.

(2) For the purpose of these Regulations, irradiating apparatus shall be divided into three categories as set out in the Third Schedule.

7. A Class D licence is a licence to transport radioactive materials, nuclear materials, prescribed substances or their wastes.

Class D
licence.

8. A Class E licence is a licence to export or import radioactive materials, nuclear materials, prescribed substances, irradiating apparatus or their wastes.

Class E
licence.

9. (1) A Class F licence is a licence to site, to construct or to operate a nuclear installation.

Class F
licence.

(2) A licence under Class F for operating a nuclear installation shall be issued in two stages, namely-

- (a) the temporary operation stage; and
- (b) the full operation stage.

Class G licence.

10. A Class G licence is a licence-

- (a) to dispose of radioactive materials, nuclear materials, prescribed substances or their wastes;
- (b) to store radioactive materials, nuclear materials, prescribed substances or their waste prior to their disposal; or
- (c) to decommission a milling installation, nuclear installation, waste treatment facility, irradiating apparatus or sealed source apparatus.

Class H Licence.

11. A Class H licence is a licence issued by the appropriate authority for the control of activities not covered by Classes A to G, inclusive.

PART III

GENERAL CONDITIONS FOR OBTAINING A LICENCE

General Conditions.

12. The general conditions for obtaining a licence shall be as follows:

- (a) the applicant shall employ or otherwise engage a person or persons having the necessary knowledge, skill and training to ensure that the activities sought to be licensed are carried out in such a manner as to protect the health of workers and members of the public and to minimize danger to life, property and the environment; and
- (b) the applicant's proposed equipment, facilities and procedures shall be adequate to protect the health of workers and members of the public and to minimize danger to life, property and the environment.

PART IV

APPLICATION FOR, AMENDMENT AND RENEWAL OF LICENCE

Application for licence

13. (1) Subject to sub-regulation (2), any person who intends to obtain a licence classified under Class A or Class B (other than a licence in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility), or under Class C, Class D, Class E or Class G, shall complete, sign and return the application form as prescribed in the Fourth Schedule, together with the application fee, to the Board.

- (2) Any person who intends to obtain a licence classified under-
- (a) Class A or Class B in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility; or
 - (b) Class F,

shall write a letter of intent to the Board which shall give such instructions as it deems necessary.

(3) The person mentioned in sub-regulation (2) shall allow a representative of the appropriate authority to be present as an observer at meetings where matters related to the letter of intent are discussed.

(4) Any person who intends to apply for a licence classified under Class H shall write to the Board giving details of the activity to be undertaken and shall provide all the information required by the appropriate authority.

14. (1) Any licensee who intends to amend or to renew a licence classified under Class A or Class B (other than a licence in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility), or under Class C, Class D, Class E or Class G, shall complete, sign and return the application form as prescribed in the Fourth Schedule, together with the application fee, to the appropriate authority.

Amendment
or renewal
of licences.

(2) Notwithstanding sub-regulation (1), any person who intends to amend any of the particulars of such licence other than particulars relating to-

- (a) the class of the licence; or
- (b) the details of any apparatus, material or installation,

shall write a letter to the appropriate authority.

(3) Any licensee who intends to amend or to renew a licence classified under-

- (a) Class A or Class B in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility;
- (b) Class F; or
- (c) Class H,

shall write a letter to the appropriate authority.

15. (1) The application fee for all classes of licence except-

- (a) Class A or Class B in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility;

Application
fee and
licence
fee.

(b) Class F; and
(c) Class H,
shall be fifteen ringgit for each application, amendment or renewal and shall not be refundable.

(2) There is no application fee for a licence classified under-

- (a) Class A and Class B in respect of the milling of materials containing or associated with radioactive material or nuclear materials or in respect of a waste treatment facility;
- (b) Class F; and
- (c) Class H,

(3) The licence fee for all classes of licence shall be as prescribed in the Fifth Schedule.

Waiver of fees.

16. The appropriate authority shall waive the application fee and the licence fee in respect of-

- (a) the transfer or radioactive materials, nuclear materials, prescribed substances or irradiating apparatus for charitable or non-profit purposes;
- (b) an amendment which does not relate to-
 - (i) the class of the licence; or
 - (ii) the details of any apparatus, material or installation.

Register of licensees.

17. The appropriate authority shall record the particulars of all successful applicants in a register before licence are issued.

Form of licence.

18. The licence issued by the appropriate authorities shall be in the form prescribed in the Sixth Schedule.

PART V

INFORMATION

CHAPTER 1-Information Required for Class F Licences

Information required for a siting licence.

19. An application for a siting licence shall contain the following information:-

- (a) a description of the proposed installation and activities;
- (b) the physical characteristics of the site, namely, the geology, hydrology, meteorology and seismology, flora, fauna and aquatic biota;
- (c) the population distribution around the site, including the future trend of the population growth and the distances of the population centres from the site;
- (d) the present land use in and around the site;

- (e) an assessment of the environmental impact from the normal operation of the proposed installation including a preliminary analysis of the radiation hazards foreseen;
- (f) a programme for the pre-operational environmental monitoring;
- (g) a description of storage facilities for radioactive materials or nuclear materials on the site; and
- (h) a description of the decommissioning plan, its rationale and a plan for post-operational monitoring.

20. (1) An application for a construction licence shall contain all the information required under regulation 19, and shall also contain the following information:

- (a) a general layout and detailed plan and design of the facility, including its conceptual safety design;
- (b) a description of the foreseen radiation and chemical hazards to the workers and members of the public during normal operation of the proposed installation, taking into account the anticipated chemical and physical characteristics and radioactive contents of all the effluents to be discharged and emissions from the facility; and
- (c) a statement with respect to potential accidents and unscheduled releases of wastes and hazardous materials from the facility.

Information required for a construction licence.

(2) The statement referred to in paragraph (c) of sub-regulation (1) shall include-

- (a) a statement of conditions which could lead to accidents and unscheduled releases of waste and hazardous materials;
- (b) a statement on the probable effect of such accidents and releases on the health and safety of workers and members of the public and on the environment;
- (c) a statement on the programme for inspection and maintenance proposed to prevent the occurrence of such accidents and releases; and
- (d) a statement on the emergency plan and preparedness programme and mitigative measures to deal with such accidents and releases.

21. An application for the temporary operation stage of a licence to operate a nuclear installation shall contain all the information required under regulations 19 and 20, and shall also contain the following informations:

- (a) any charges, in the material used or in the design, introduced during the construction of the installation;

Information required for the temporary operation stage.

- (b) a description of the proposed measures to control radiation exposures, including the operational radiation monitoring programme designed for the workers, members of the public and the environment, together with a complete list of the supporting services and facilities;
- (c) a detailed medical surveillance programme;
- (d) a programme for the initial and periodic training of workers on general safety and radiation protection;
- (e) the facilities and equipment designed to contain spillage and the procedures to followed in handling spillage of radioactive materials, nuclear materials or prescribed substances;
- (f) the proposed plan and procedures to prevent loss, theft or unauthorized use of radioactive materials, nuclear materials or prescribed substances;
- (g) the plan for operational monitoring of the quality and quantity of effluents to be discharged and emissions from the facility, including-
 - (i) the frequency and points of sampling;
 - (ii) the types of equipment and analytical methods to be used;
 - (iii) the contingency plan in the event of abnormal results; and
- (h) a description of the proposed procedures to prevent accidents and the proposed contingency plan in the event of an accident.

Information required for the full operation stage.

22. An application for the full operation stage of a licence to operate a nuclear installation shall contain a Safety Analysis Report which shall contain a Safety Analysis Report which shall include-

- (a) all valid information submitted for the temporary operation stage; and
- (b) all new information and all the changes to the plan, design and operation introduced following actual operation during the temporary operation stage, if any.

Chapter 2-Information Required for Class A or Class B Licences in respect of the Milling of Materials Containing or Associated with Radioactive Materials or Nuclear Materials or in respect of a Waste Treatment Facility

Information required for application to site, construct and operate a milling installation.

23. (1) An application for a licence to site, construct and operate a milling installation shall contain the information specified in Chapter 1, and shall also contain the following information:

- (a) a detailed flow sheet, including a calculation of the input and output of materials and water balance and a description of the sump system, including its capacity, if any;

- (b) the proposed dust control system;
 - (c) a description of the measures designed to control mill site drainage;
 - (d) information on the grade and quantities of the materials to be processed and, if the materials are to be imported, the average monthly or yearly quantities to be imported;
 - (e) the emergency preparedness programme and mitigative measures to deal with accidental releases, including emergency monitoring and removal of released tailings;
 - (f) a detailed engineering plan of water diversions and treatment facilities and detailed monitoring plans and contingency measures for the construction phase of the facility; and
 - (g) the anticipated quantities of any tailings or waste rock material to be used for backfilling at the facility.
- (2) An application for the temporary operation stage of the operation part shall, in addition to the information mentioned in sub-regulation (1), contain the following information:
- (a) the nominal daily and annual capacity of the mill, the anticipated recovery, and the anticipated composition of mill feed, concentrates and tailings;
 - (b) the procedures for handling and storage of materials containing radioactive materials, nuclear materials or prescribed substances; and
 - (c) the plan and programme for the stabilization of tailings and rehabilitation of the tailing areas.
24. An application for a licence to site, construct and operate a waste treatment facility shall contain the following information:
- (a) a detailed flow sheet including a calculation of the input and output of materials and water balance;
 - (b) all structures and equipment designed to control the quality and quantity of all effluents to be discharged and emissions from the facility; and
 - (c) a statement on flood control and the method of controlling the movement of water in the existing water ways, if any.

Information required for application to site, construct and operate a waste treatment facility.

Chapter 3 – General

25. The appropriate authority may, at any time during the construction and development of the facility, require, in writing, the applicant to furnish such information as it may consider reasonably necessary in order to evaluate the health and safety of workers and members of the public, the security of the country and the environmental aspects of the development and future operation of the facility.

Additional information.

Plan and drawing.

26. Prior to the construction and development of any part of the facility, all principal plans and drawings shall be submitted to the appropriate authority for approval, and the approved plans, drawings and materials shall not be changed during the construction and development of the facility unless prior approval from the appropriate authority is obtained.

PART VI

MISCELLANEOUS

Notification form.

27. The form to be used for notifying the appropriate authority under section 25 (4) of the Act shall be as prescribed in the Seventh Schedule.

Form of returns.

28. The returns of sale or possession of radioactive materials, nuclear materials, prescribed substances, irradiating apparatus or sealed source apparatus shall be in the form prescribed in the Eighth Schedule.

Form of register.

29. The register under regulation 17 shall be in the form prescribed in the Ninth Schedule.

PART VII

REVOCAATION

Revocation.
P.U. (A)
297/75.

30. The Radioactive Substances (Fees) Rules 1975 are revoked.

FIRST SCHEDULE

CATEGORIES OF SEALED SOURCES

(Regulation 4)

Category A	Type of Sealed Sources B
1	Any sealed source with activity not greater than 40 Megabecquerel.
2	Radiation gauges and other sealed sources not specified in this Schedule.
3	Medical therapy sources with activity not greater than 400 Gigabecquerel, industrial radiography sources, veterinary radiotherapy sources, borehole logging sources.
4	Medical therapy sources with activity greater than 400 Gigabecquerel, irradiation cell for sterilization purposes, research irradiating cell.

SECOND SCHEDULE
CATEGORIES OF UNSEALED SOURCES
(Regulation 4)

Category A	Type of Unsealed Source B				
1 (Low radiotoxicity)	Radionuclides in this category shall be as follows:				
	$^3\text{H}_1$	$^{15}\text{O}_8$	$^{37}\text{Ar}_{18}$	$^{51}\text{Mn}_{25}$	$^{52\text{m}}\text{Mn}_{25}$
	$^{53}\text{Mn}_{25}$	$^{56}\text{Mn}_{25}$	$^{58\text{m}}\text{Co}_{27}$	$^{60\text{m}}\text{Co}_{27}$	$^{61}\text{Co}_{27}$
	$^{62\text{m}}\text{Co}_{27}$	$^{59}\text{Ni}_{28}$	$^{69}\text{Zn}_{30}$	$^{71}\text{Ge}_{32}$	$^{76}\text{Kr}_{36}$
	$^{79}\text{Kr}_{36}$	$^{81}\text{Kr}_{36}$	$^{83\text{m}}\text{Kr}_{36}$	$^{85\text{m}}\text{Kr}_{36}$	$^{85}\text{Kr}_{36}$
	$^{80}\text{Sr}_{38}$	$^{81}\text{Sr}_{38}$	$^{85\text{m}}\text{Sr}_{38}$	$^{87\text{m}}\text{Sr}_{38}$	$^{91\text{m}}\text{Y}_{39}$
	$^{88}\text{Nb}_{41}$	$^{89(66\text{m})}\text{*Nb}_{41}$		$^{89(122\text{m})}\text{*Nb}_{41}$	
	$^{97}\text{Nb}_{41}$	$^{98}\text{Nb}_{41}$	$^{93\text{m}}\text{Mo}_{42}$	$^{101}\text{Mo}_{42}$	$^{96\text{m}}\text{Tc}_{43}$
	$^{99\text{m}}\text{Tc}_{43}$	$^{103\text{m}}\text{Rh}_{45}$	$^{113\text{m}}\text{In}_{49}$	$^{116}\text{Te}_{52}$	$^{123}\text{Te}_{52}$
	$^{127}\text{Te}_{52}$	$^{129}\text{Te}_{52}$	$^{133}\text{Te}_{52}$	$^{120\text{m}}\text{I}_{53}$	$^{121}\text{I}_{53}$
	$^{128}\text{I}_{53}$	$^{129}\text{I}_{53}$	$^{134}\text{I}_{53}$	$^{131\text{m}}\text{Xe}_{54}$	$^{133}\text{Xe}_{54}$
	$^{125}\text{Cs}_{55}$	$^{127}\text{Cs}_{55}$	$^{129}\text{Cs}_{55}$	$^{130}\text{Cs}_{55}$	$^{131}\text{Cs}_{55}$
	$^{134\text{m}}\text{Cs}_{55}$	$^{135}\text{Cs}_{55}$	$^{135\text{m}}\text{Cs}_{55}$	$^{138}\text{Cs}_{55}$	$^{137}\text{Ce}_{58}$
	$^{191\text{m}}\text{Os}_{76}$	$^{193\text{m}}\text{Pt}_{78}$	$^{197\text{m}}\text{Pt}_{78}$	$^{203}\text{Po}_{84}$	$^{205}\text{Po}_{84}$
	$^{207}\text{Po}_{84}$	$^{227}\text{Ra}_{88}$	$^{235}\text{U}_{92}$	$^{238}\text{U}_{92}$	$^{239}\text{U}_{92}$
	$\text{U}_{92}^{\text{nat}}$	$^{235}\text{Pu}_{94}$	$^{243}\text{Pu}_{94}$	$^{237}\text{Am}_{95}$	$^{239}\text{Am}_{95}$
	$^{245}\text{Am}_{95}$	$^{246\text{m}}\text{Am}_{95}$	$^{246}\text{Am}_{95}$	$^{249}\text{Cm}_{96}$	

* referring to the half-life of the radionuclide

Category A	Type of Unsealed Source B				
2 (Moderate radiotoxicity)	Radionuclides in this category shall be as follows:				
	$^7\text{Be}_4$	$^{14}\text{C}_6$	$^{18}\text{F}_9$	$^{24}\text{Na}_{11}$	$^{31}\text{Si}_{14}$
	$^{32}\text{P}_{15}$	$^{33}\text{P}_{15}$	$^{35}\text{S}_{16}$	$^{38}\text{Cl}_{17}$	$^{41}\text{Ar}_{18}$
	$^{42}\text{K}_{19}$	$^{43}\text{K}_{19}$	$^{47}\text{Ca}_{20}$	$^{47}\text{Sc}_{21}$	$^{48}\text{Sc}_{21}$
	$^{48}\text{V}_{23}$	$^{51}\text{Cr}_{24}$	$^{52}\text{Mn}_{25}$	$^{54}\text{Mn}_{25}$	$^{52}\text{Fe}_{26}$
	$^{55}\text{Fe}_{26}$	$^{59}\text{Fe}_{26}$	$^{55}\text{Co}_{27}$	$^{56}\text{Co}_{27}$	$^{57}\text{Co}_{27}$
	$^{58}\text{Co}_{27}$	$^{63}\text{Ni}_{28}$	$^{65}\text{Ni}_{28}$	$^{64}\text{Cu}_{29}$	$^{65}\text{Zn}_{30}$
	$^{69\text{m}}\text{Zn}_{30}$	$^{72}\text{Ga}_{31}$	$^{73}\text{As}_{33}$	$^{74}\text{As}_{33}$	$^{76}\text{As}_{33}$
	$^{77}\text{As}_{33}$	$^{75}\text{Se}_{34}$	$^{82}\text{Br}_{35}$	$^{74}\text{Kr}_{36}$	$^{77}\text{Kr}_{36}$
	$^{87}\text{Kr}_{36}$	$^{88}\text{Kr}_{36}$	$^{86}\text{Rb}_{37}$	$^{83}\text{Sr}_{38}$	$^{85}\text{Sr}_{38}$
	$^{89}\text{Sr}_{38}$	$^{91}\text{Sr}_{38}$	$^{92}\text{Sr}_{38}$	$^{90}\text{Y}_{39}$	$^{92}\text{Y}_{39}$
	$^{93}\text{Y}_{39}$	$^{86}\text{Zr}_{40}$	$^{88}\text{Zr}_{40}$	$^{89}\text{Zr}_{40}$	$^{95}\text{Zr}_{40}$
	$^{97}\text{Zr}_{40}$	$^{90}\text{Nb}_{41}$	$^{93\text{m}}\text{Nb}_{41}$	$^{95}\text{Nb}_{41}$	$^{95\text{m}}\text{Nb}_{41}$
	$^{96}\text{Nb}_{41}$	$^{90}\text{Mo}_{42}$	$^{93}\text{Mo}_{42}$	$^{99}\text{Mo}_{42}$	$^{96}\text{Tc}_{43}$
	$^{97\text{m}}\text{Tc}_{43}$	$^{97}\text{Tc}_{43}$	$^{99}\text{Tc}_{43}$	$^{97}\text{Ru}_{44}$	$^{103}\text{Ru}_{44}$
	$^{105}\text{Ru}_{44}$	$^{105}\text{Rh}_{45}$	$^{103}\text{Pd}_{46}$	$^{109}\text{Pd}_{46}$	$^{105}\text{Ag}_{47}$
	$^{111}\text{Ag}_{47}$	$^{109}\text{Cd}_{48}$	$^{115}\text{Cd}_{48}$	$^{115\text{m}}\text{In}_{49}$	$^{113}\text{Sn}_{50}$

Category A	Type of Unsealed Source B				
	$^{125}\text{Sn}_{50}$	$^{122}\text{Sb}_{51}$	$^{121}\text{Te}_{52}$	$^{121\text{m}}\text{Te}_{52}$	$^{123\text{m}}\text{Te}_{52}$
	$^{125\text{m}}\text{Te}_{52}$	$^{127\text{m}}\text{Te}_{52}$	$^{129\text{m}}\text{Te}_{52}$	$^{131}\text{Te}_{52}$	$^{131\text{m}}\text{Te}_{52}$
	$^{132}\text{Te}_{52}$	$^{133\text{m}}\text{Te}_{52}$	$^{134}\text{Te}_{52}$	$^{120}\text{I}_{53}$	$^{123}\text{I}_{53}$
	$^{130}\text{I}_{53}$	$^{132}\text{I}_{53}$	$^{132\text{m}}\text{I}_{53}$	$^{133}\text{I}_{53}$	$^{135}\text{I}_{53}$
	$^{135}\text{Xe}_{54}$	$^{132}\text{Cs}_{55}$	$^{136}\text{Cs}_{55}$	$^{137}\text{Cs}_{55}$	$^{131}\text{Ba}_{56}$
	$^{140}\text{La}_{57}$	$^{134}\text{Ce}_{58}$	$^{135}\text{Ce}_{58}$	$^{137\text{m}}\text{Ce}_{58}$	$^{139}\text{Ce}_{58}$
	$^{141}\text{Ce}_{58}$	$^{143}\text{Ce}_{58}$	$^{142}\text{Pr}_{59}$	$^{143}\text{Pr}_{59}$	$^{147}\text{Nd}_{60}$
	$^{149}\text{Nd}_{60}$	$^{147}\text{Pm}_{61}$	$^{149}\text{Pm}_{61}$	$^{151}\text{Sm}_{62}$	$^{153}\text{Sm}_{62}$
	$^{152\text{m}}\text{Eu}_{63}^{(9\text{h})^*}$		$^{155}\text{Eu}_{63}$	$^{153}\text{Gd}_{64}$	$^{159}\text{Gd}_{64}$
	$^{165}\text{Dy}_{66}$	$^{166}\text{Dy}_{66}$	$^{166}\text{Ho}_{67}$	$^{169}\text{Er}_{68}$	$^{171}\text{Er}_{68}$
	$^{171}\text{Tm}_{69}$	$^{175}\text{Yb}_{70}$	$^{177}\text{Lu}_{71}$	$^{181}\text{W}_{74}$	$^{185}\text{W}_{74}$
	$^{187}\text{W}_{74}$	$^{183}\text{Re}_{75}$	$^{186}\text{Re}_{75}$	$^{188}\text{Re}_{75}$	$^{185}\text{Os}_{76}$
	$^{191}\text{Os}_{76}$	$^{193}\text{Os}_{76}$	$^{190}\text{Ir}_{77}$	$^{194}\text{Ir}_{77}$	$^{191}\text{Pt}_{78}$
	$^{193}\text{Pt}_{78}$	$^{197}\text{Pt}_{78}$	$^{196}\text{Au}_{79}$	$^{198}\text{Au}_{79}$	$^{199}\text{Au}_{79}$
	$^{197}\text{Hg}_{80}$	$^{197\text{m}}\text{Hg}_{80}$	$^{203}\text{Hg}_{80}$	$^{200}\text{Tl}_{81}$	$^{201}\text{Tl}_{81}$
	$^{202}\text{Tl}_{81}$	$^{203}\text{Pb}_{82}$	$^{206}\text{Bi}_{83}$	$^{212}\text{Bi}_{83}$	$^{220}\text{Rn}_{86}$

* referring to the half-life of the radionuclide.

Category A	Type of Unsealed Source B				
	$^{222}\text{Rn}_{86}$	$^{226}\text{Th}_{90}$	$^{231}\text{Th}_{90}$	$^{234}\text{Th}_{90}$	$^{233}\text{Pa}_{91}$
	$^{231}\text{U}_{92}$	$^{237}\text{U}_{92}$	$^{240}\text{U}_{92}$	$^{240}\text{U}_{+92}$	$^{240}\text{Np}_{93}$
	$^{239}\text{Np}_{93}$	$^{234}\text{Pu}_{94}$	$^{237}\text{Pu}_{94}$	$^{245}\text{Pu}_{94}$	$^{238}\text{Am}_{95}$
	$^{240}\text{Am}_{95}$	$^{244\text{m}}\text{Am}_{95}$	$^{244}\text{Am}_{95}$	$^{238}\text{Cm}_{96}$	$^{250}\text{Bk}_{97}$
	$^{244}\text{Cf}_{98}$	$^{245}\text{Fm}_{100}$			
3 (High radiotoxicity)	Radionuclides in this category shall be as follows:				
	$^{22}\text{Na}_{11}$	$^{36}\text{Cl}_{17}$	$^{45}\text{Ca}_{20}$	$^{46}\text{Sc}_{21}$	$^{60}\text{Co}_{27}$
	$^{90}\text{Sr}_{38}$	$^{91}\text{Y}_{39}$	$^{93}\text{Zr}_{40}$	$^{94}\text{Nb}_{41}$	$^{106}\text{Ru}_{44}$
	$^{110\text{m}}\text{Ag}_{47}$	$^{115\text{m}}\text{Cd}_{48}$	$^{114\text{m}}\text{In}_{49}$	$^{124}\text{Sb}_{51}$	$^{125}\text{Sb}_{51}$
	$^{124}\text{I}_{53}$	$^{125}\text{I}_{53}$	$^{126}\text{I}_{53}$	$^{131}\text{I}_{53}$	$^{134}\text{Cs}_{55}$
	$^{140}\text{Be}_{56}$	$^{144}\text{Ce}_{58}$	$^{152}\text{Eu}(13\text{a})_{63}$		$^{154}\text{Eu}_{63}$
	$^{160}\text{Tb}_{65}$	$^{170}\text{Tm}_{69}$	$^{181}\text{Hf}_{72}$	$^{182}\text{Ta}_{73}$	$^{192}\text{Ir}_{77}$
	$^{204}\text{Tl}_{81}$	$^{212}\text{Pb}_{82}$	$^{207}\text{Bi}_{83}$	$^{210}\text{Bi}_{59}$	$^{211}\text{At}_{85}$
	$^{224}\text{Ra}_{88}$	$^{228}\text{Ac}_{89}$	$^{232}\text{Th}_{90}$	Th_{90}nat	
	$^{230}\text{Pa}_{91}$	$^{236}\text{U}_{92}$	$^{244}\text{Pu}_{94}$	$^{242}\text{Am}_{95}$	$^{241}\text{Cm}_{96}$
	$^{249}\text{Bk}_{97}$	$^{249}\text{Cf}_{98}$	$^{253}\text{Cf}_{98}$	$^{253}\text{Es}_{99}$	$^{254\text{m}}\text{Es}_{99}$
	$^{255}\text{Fm}_{100}$	$^{256}\text{Fm}_{100}$			

* referring to the half-life of the radionuclide.

Category A	Type of Irradiating Apparatus B				
4 (Very high radiotoxicity)	Radionuclides in the category shall be as follow:				
	$^{210}\text{Pb}_{82}$	$^{210}\text{Po}_{84}$	$^{223}\text{Ra}_{88}$	$^{255}\text{Ra}_{88}$	$^{226}\text{Ra}_{88}$
	$^{228}\text{Ra}_{88}$	$^{227}\text{Ac}_{89}$	$^{227}\text{Th}_{90}$	$^{228}\text{Th}_{90}$	$^{229}\text{Th}_{90}$
	$^{230}\text{Th}_{90}$	$^{231}\text{Pa}_{91}$	$^{230}\text{U}_{92}$	$^{232}\text{U}_{92}$	$^{233}\text{U}_{92}$
	$^{234}\text{U}_{92}$	$^{237}\text{Np}_{93}$	$^{236}\text{Pu}_{94}$	$^{238}\text{Pu}_{94}$	$^{239}\text{Pu}_{94}$
	$^{240}\text{Pu}_{94}$	$^{241}\text{Pu}_{94}$	$^{242}\text{Pu}_{94}$	$^{241}\text{Am}_{95}$	$^{242\text{m}}\text{Am}_{95}$
	$^{243}\text{Am}_{95}$	$^{240}\text{Cm}_{96}$	$^{242}\text{Cm}_{96}$	$^{243}\text{Cm}_{96}$	$^{244}\text{Cm}_{96}$
	$^{245}\text{Cm}_{96}$	$^{246}\text{Cm}_{96}$	$^{247}\text{Cm}_{96}$	$^{248}\text{Cm}_{96}$	$^{248}\text{Cf}_{98}$
	$^{249}\text{Cf}_{98}$	$^{250}\text{Cf}_{98}$	$^{251}\text{Cf}_{98}$	$^{252}\text{Cf}_{98}$	$^{254}\text{Cf}_{98}$
	$^{254}\text{Es}_{99}$	$^{255}\text{Es}_{99}$			

* referring to the half-life on the radionuclide.

THIRD SCHEDULE

CATEGORIES OF IRRADIATING APPARATUS

(Regulation 6)

Category A	Type of Irradiating Apparatus B
1	Dental X-ray units, mobile and fixed medical X-ray units, mobile veterinary X-ray units, X-ray gauges, other irradiating apparatus not specified in this Schedule.
2	Industrial radiography X-ray units, X-ray analysis units chiropractic X-ray units, X-ray therapy units not operable above 500 peak kilovolt.
3	Computerised tomography units, accelerators, neutron generators, X-ray therapy units operable above 500 peak kilovolt

3a. APPLICANT'S NAME

3b. APPLICANT'S MAILING ADDRESS

4. PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
 - (b) Identity card/passport number
 - (c) Designation
 - (d) Telephone number
-
-

5. ADDRESS WHERE RADIOACTIVE MATERIAL IS TO BE USED OR STORED OR PROCESSED

6. PARTICULARS OF PERSONS(S) WHO WILL SUPERVISE THE USE OF RADIOACTIVE MATERIAL

Name A	Designation B	Date of birth C	Identity card/passport number D

7. NAME OF RADIATION PROTECTION OFFICER

8. PARTICULARS OF OPERATOR(S) OR PERSON(S) USING THE RADIOACTIVE MATERIAL

Name A	Date of birth B	Identity card/passport number C

9. DESCRIPTION AND THE INTENDED USE OF THE RADIOACTIVE MATERIAL TO BE LICENSED

Element and mass number A	Chemical and/or physical form B	Name of manufacturer and model number (if available) C	Activity		Intended use (use relevant code given below) F
			sealed source (per source) D	unsealed source E	

CODE FOR COLUMN F

- | | |
|---------------------------------|----------------------|
| 1. Industrial radiography | 6. Medical diagnosis |
| 2. Radiation gauge | 7. Borehole logging |
| 3. Research | 8. Calibration |
| 4. Research with human subjects | 9. Irradiation cell |
| 5. Medical therapy | 10. Others (specify) |

10. ADDITIONAL INFORMATION ON RADIOACTIVE MATERIAL LISTED IN ITEM 9

11. STORAGE OF SEALED SOURCES (IF APPROPRIATE)

Type of container and/or device for storage A	Supplier (if applicable) B	Model number (if applicable) C

12. RADIATION DETECTION OR MEASURING INSTRUMENT CURRENTLY POSSESSED (IF ANY)

Type of instrument A	Supplier B	Model number C	Number available D	Radiation detectable E	Range F

13. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 12

(tick where appropriate and attach the relevant certification)

By applicant

Others (state the name and address of the calibrating agency)

Attach a resume describing the method and frequency of calibration, date of last calibration and standards used for instrument calibration.

14. PERSONNEL MONITORING

Type (tick where appropriate) A	Supplier B	Evaluating agency C	Frequency of evaluation D
<input type="checkbox"/> Film badge <input type="checkbox"/> Thermoluminescence dosimeter (TLD) <input type="checkbox"/> Others (specify)			

15. STORAGE AND HANDLING FACILITIES FOR THE RADIOACTIVE MATERIAL

(tick where appropriate)

Laboratory facilities, plant facilities, including those equipped with fume hoods, etc.

Storage facilities, containers, special shielding (fixed or temporary), etc.

Remote handling tools or equipment, etc.

Personal protective appliances, etc.

Applicant is required to attach sketch(es) and description of the relevant items.

16. STORAGE/DISPOSAL OF WASTE (APPROPRIATE)

Specify the nature of radioactive waste. Specify the types and activities of the radionuclides. Describe in detail the proposed methods for storage/disposal of radioactive waste. If the application is for sealed sources, state whether the sealed sources will be returned to the supplier upon termination of use.

17. RADIATION PROTECTION PROGRAMME

Describe the radiation protection programme to be adopted

18. QUALIFICATION AND EXPERIENCE OF SUPERVISOR, RADIATION PROTECTION OFFICER AND OPERATOR

(a) State the qualifications of the Supervisor, Radiation Protection Officer and operator. List relevant courses attended and attach certified copies of certificate(s) obtained.

Name A	Designation B	Qualification/Courses attended C

(b) State the experience of the Supervisor, Radiation Protection Officer and operator and attach the appropriate resume if available.

Name A	Designation B	Organization C	Duration D	Year E

19. DECLARATION

I.....
(full name)

identity card/passport number.....
hereby declare-

(a) that this application is made on my own behalf/on behalf of.....
.....

(b) that the particulars given in this form, including all supplements attached hereto,
are true and correct.

Signature

Name (capital letters)

Designation

Official Stamp

Date

ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986
APPLICATION FROM TO OBTAIN, RENEW OR AMEND LICENCE
(Regulations 13 and 14)

Form LPTA/BP/2	NUCLEAR MATERIAL
----------------	------------------

This application form shall be completed in duplicate and submitted together with an application fee of \$15.00 to:

Executive Secretary,
Atomic Energy Licensing Board,
12th and 13th Floor,
Plaza Pekeliling,
No. 2 Jalan Tun Razak,
50400 Kuala Lumpur.

or (for renewal or amendment of a licence for a medical purpose):

Ketua Pengarah Kesihatan,
Kementerian Kesihatan,
Jalan Cenderasari,
50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

<p>1a. APPLICATION FOR (tick where appropriate)</p> <p><input type="checkbox"/> New licence.</p> <p><input type="checkbox"/> Amendment.</p> <p><input type="checkbox"/> Licence number.....</p> <p><input type="checkbox"/> Renewal.</p> <p><input type="checkbox"/> Licence number.....</p> <p>1b. PERIOD NEEDED..... (minimum 1 year, maximum 3 years)</p>	<p>2. PURPOSE OF ACTIVITY (tick where appropriate)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> manufacturing</td> <td><input type="checkbox"/> transferring</td> </tr> <tr> <td><input type="checkbox"/> trading</td> <td><input type="checkbox"/> handling</td> </tr> <tr> <td><input type="checkbox"/> producing</td> <td><input type="checkbox"/> selling</td> </tr> <tr> <td><input type="checkbox"/> processing</td> <td><input type="checkbox"/> storing</td> </tr> <tr> <td><input type="checkbox"/> purchasing</td> <td><input type="checkbox"/> using</td> </tr> <tr> <td><input type="checkbox"/> owing</td> <td><input type="checkbox"/> others (specify)</td> </tr> </table>	<input type="checkbox"/> manufacturing	<input type="checkbox"/> transferring	<input type="checkbox"/> trading	<input type="checkbox"/> handling	<input type="checkbox"/> producing	<input type="checkbox"/> selling	<input type="checkbox"/> processing	<input type="checkbox"/> storing	<input type="checkbox"/> purchasing	<input type="checkbox"/> using	<input type="checkbox"/> owing	<input type="checkbox"/> others (specify)
<input type="checkbox"/> manufacturing	<input type="checkbox"/> transferring												
<input type="checkbox"/> trading	<input type="checkbox"/> handling												
<input type="checkbox"/> producing	<input type="checkbox"/> selling												
<input type="checkbox"/> processing	<input type="checkbox"/> storing												
<input type="checkbox"/> purchasing	<input type="checkbox"/> using												
<input type="checkbox"/> owing	<input type="checkbox"/> others (specify)												

3a. APPLICANT'S NAME

3b. APPLICANT'S MAILING ADDRESS

4 PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
- (b) Identity card/passport number
- (c) Designation
- (d) Telephone number

5. ADDRESS WHERE NUCLEAR MATERIAL IS TO BE USED OR STORED OR PROCESSED

6. PARTICULARS OF PERSON(S) WHO WILL SUPERVISE THE USE OF THE NUCLEAR MATERIAL

Name A	Designation B	Date of birth C	Identity card/ passport number D

P.U. (A) 149.

766

7. NAME OF RADIATION PROTECTION OFFICER

8. DESCRIPTION AND THE INTENDED USE OF THE NUCLEAR MATERIAL TO BE LICENSED

Element and mass number A	Chemical and/or physical form B	Maximum quantity C	Intended use D

9. RADIATION DETECTION OR MEASURING INSTRUMENT CURRENTLY POSSESSED (IF ANY)

Type of instrument A	Supplier B	Model number C	Number available D	Radiation detectable E	Range

 10. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 9

(tick where appropriate and attach the relevant certification)

By applicant

Others (State the name and address of the calibrating agency)

Attach a resume describing the method and frequency of calibration, date of last calibration and standards used for instrument calibration.

11. PERSONNEL MONITORING

Type (tick where appropriate) A	Supplier B	Evaluating agency C	Frequency of evaluation
<input type="checkbox"/> Film badge			
<input type="checkbox"/> Thermoluminescence dosimeter (TLD)			
<input type="checkbox"/> Others (specify)			

12. STORAGE AND HANDLING FACILITIES FOR THE NUCLEAR MATERIAL

(tick where appropriate)

Laboratory facilities, plant facilities, including those equipped with fume hoods, etc

Storage facilities, containers, special shielding (fixed or temporary), etc.

Remote handling tools or equipments, etc

Personal protective appliances, etc.

Applicant is required to attach sketch (es) and description of the relevant items.

13. STORAGE/DISPOSAL OF WASTE (IF APPROPRIATE)

Specify the nature of nuclear waste. Specify the types and activities of the radionuclides.
Describe in detail the proposed method for storage/disposal of nuclear waste.

14. RADIATION PROTECTION PROGRAMME

Describe the radiation protection programme to be adopted.

15. QUALIFICATION AND EXPERIENCE OF SUPERVISOR, RADIATION PROTECTION OFFICER AND OPERATOR

(a) State the qualifications of the Supervisor, Radiation Protection Officer and operator.
List relevant courses attended and attach certified copies of certificate(s) obtained.

Name A	Designation B	Qualification/Courses attended C

(b) State the experience of the Supervisor, Radiation Protection Officer and operator and attach the appropriate resume if available.

Name A	Designation B	Organization C	Duration D	Year E

16. DECLARATION

I.....
(full name)

identity card/passport number.....

hereby declare-

- (a) that this application is made on my own behalf/on behalf of.....
 (b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature

Name (capital letters)

Official stamp

Date

ATOMIC ENERGY LICENSING ACT 1984
 RADIATION PROTECTION (LICENSING) REGULATIONS 1986
 APPLICATION FORM TO OBTAIN, RENEW OR AMEND LICENCE
 (Regulations 13 and 14)

FORM LPTA/BP/3

IRRADIATING APPARATUS

This application form shall be completed in duplicate and submitted together with an application fee of \$15.00 to:

Executive Secretary,
 Atomic Energy Licensing Board,
 12th and 13th Floor,
 Plaza Pekeliling,
 No. 2 Jalan Tun Razak,
 50400 Kuala Lumpur.

or (for renewal or amendment or a licence for a medical purpose):

Ketua Pengarah Kesihatan,
 Kementerian Kesihatan,
 Jalan Cenderasari,
 50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

1a. APPLICATION FOR
(tick where appropriate)

- New licence.
- Amendment.
- Licence number.....
- Renewal.
- Licence number.....

1b. PERIOD NEEDED.....
(minimum 1 year, maximum 3 years)

2. PURPOSE OF ACTIVITY
(tick where appropriate)

- | | |
|---|--|
| <input type="checkbox"/> manufac-
turing | <input type="checkbox"/> trans-
ferring |
| <input type="checkbox"/> trading | <input type="checkbox"/> handling |
| <input type="checkbox"/> producing | <input type="checkbox"/> selling |
| <input type="checkbox"/> processing | <input type="checkbox"/> storing |
| <input type="checkbox"/> purchasing | <input type="checkbox"/> using |
| <input type="checkbox"/> owning | <input type="checkbox"/> others
(specify) |
-
-

3a. APPLICANT'S NAME

3b. APPLICANT'S MAILING ADDRESS

4. PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
 - (b) Identity card/passport number
 - (c) Designation
 - (d) Telephone number
-
-

5. ADDRESS WHERE IRRADIATING APPARATUS IS TO BE USED OR STORED OR PRODUCED

6. PARTICULARS OF PERSON(S) WHO WILL SUPERVISE THE USE OF IRRADIATING APPARATUS

Name A	Designation B	Date of birth C	Identity card/ passport number D

7. NAME OF RADIATION PROTECTION OFFICER

8. PARTICULARS OF OPERATOR(S) OR PERSON(S) USING IRRADIATING APPARATUS (IF APPROPRIATE)

Name A	Date of birth B	Identity card/ passport number C

9. DESCRIPTION AND THE INTENDED USE OF THE IRRADIATING APPARATUS TO BE LICENSED

Type and Model	Maximum peak kilovolt	Maximum milli-ampere	Maximum power level kilowatt	Serial number of control panel	Serial number of tube head	Supplier	Intended use (use relevant code given)
A	B	C	D	E	F	G	H

CODES FOR COLUMN H

- | | |
|---------------------------|--------------------------------|
| 1. Dental | 7. X-RAY analysis |
| 2. Medical diagnosis | 8. X-RAY gauge |
| 3. Medical therapy | 9. Research with human subject |
| 4. Chiropractic | 10. Research |
| 5. Veterinary | 11. Others (specify) |
| 6. Industrial radiography | |

10. ADDITIONAL INFORMATION ON APPARATUS LISTED IN ITEM 9

11. RADIATION DETECTION OR MEASURING INSTRUMENT CURRENTLY POSSESSED (IF ANY)

Type of instrument A	Supplier B	Model number C	Number available D	Radiation detectable E	Range F

12. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 11

(tick where appropriate)

By applicant

Others (state the name and address of the calibrating agency)

Attach a resume describing the method and frequency of calibration, date of last calibration and standards used for instrument calibration.

13. PERSONNEL MONITORING

Type (tick where appropriate) A	Supplier B	Evaluating agency C	Frequency of evaluation D
<input type="checkbox"/> Film badge <input type="checkbox"/> Thermoluminescence dosimeter (TLD) <input type="checkbox"/> Others (specify)			

14. DESCRIPTION OF FACILITY AND EQUIPMENT TO BE INSTALLED

Detailed layout plan submitted shall contain at least the following information:

- (a) room: location and dimensions;
- (b) wall, ceiling and floor: material used and thickness;
- (c) windows, doors and other openings: position, size and material used;
- (d) equipment: specification of the irradiating apparatus, its position in the room and the position of the operating console; and
- (e) surrounding: use of spaces adjoining to the room including those above and below.

15. RADIATION PROTECTION PROGRAMME

Describe the radiation protection programme to be adopted.

16. QUALIFICATION AND EXPERIENCE OF SUPERVISOR, RADIATION PROTECTION OFFICER AND OPERATOR

- (a) State the qualifications of the Supervisor, Radiation Protection Officer and operator.
List relevant courses attended and attach certified copies of certificate(s) obtained.

Name A	Designation B	Qualification/Courses attended C

- (b) State the experience of the Supervisor, Radiation Protection Officer and operator.
and attach the appropriate resume if available.

Name A	Designation B	Organization C	Duration D	Year E

17. DECLARATION

I.....
(full name)

identity card/passport number.....

hereby declare-

(a) that this application is made on my own behalf/on behalf of.....

(b) that the particulars given in this form, including all supplements attached hereto,
are true and correct.

Signature

Name (capital letters)

Position

Official stamp

Date

ATOMIC ENERGY LICENSING ACT 1984

RADIATION PROTECTION (LICENSING) REGULATIONS 1986

APPLICATION FORM TO OBTAIN, RENEW OR AMEND LICENCE

(Regulation 13 and 14)

FORM LPTA/BP/4

TRANSPORTATION

This application form shall be completed in duplicate and submitted together with an application fee of \$15.00 to:

Executive Secretary,
Atomic Energy Licensing Board,
12th and 13th Floor,
Plaza Pekeliling,
No. 2 Jalan Tun Razak,
50400 Kuala Lumpur.

or (for renewal or amendment of a licence for a medical purpose):

Ketua Pengarah Kesihatan,
Kementerian Kesihatan,
Jalan Cenderasari,
50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

1a. APPLICATION FOR
(tick where appropriate)

- New licence.
- Amendment.
Licence number.....
- Renewal.
Licence number.....

1b. PERIOD NEEDED.....
(minimum 1 year,
maximum 3 years)

2. TRANSPORTATION OF
(tick where appropriate)

- Radioactive material
- Radioactive waste
- Nuclear material
- Nuclear waste
- Others (specify)

3. TRANSPORTATION MODE
(tick where appropriate)

- Sea
- Road
- Others (specify)
- Air
- Rail

4a. APPLICANT'S NAME

4b. APPLICANT'S MAILING ADDRESS

5. PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
- (b) Identity card/passport number
- (c) Designation
- (d) Telephone number

6. ADDRESS OF FACILITY OR AGENCY

7. IF USING TRANSPORTATION SERVICE COMPANY, STATE THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE COMPANY

8. NAME OF RADIATION PROTECTION OFFICER

 9. DESCRIPTION OF PACKAGE
(a) *Description of packaging*

- (i) Type of package
 - (ii) Package identification number
 - (iii) Model number
 - (iv) Main material of packaging, weight, dimensions and its fabrication and also its design in detail
 - (v) Gross weight
-

(b) *Description of contents*

- (i) Name(s) of radioactive material or radioactive waste and its maximum activity (if applicable)
 - (ii) Name(s) of nuclear material or nuclear waste and its maximum quantity (if applicable)
 - (iii) Chemical and physical form
 - (iv) Maximum weight
-

10. COMPETENT AUTHORITY'S APPROVAL CERTIFICATE

The applicant shall submit the approval test certificates issued by the Atomic Energy Licensing Board or, where the tests are conducted in any country outside Malaysia, by the competent authority of that country and endorsed by the Atomic Energy Licensing Board.

11. RADIATION DETECTION OR MEASURING INSTRUMENTS CURRENTLY POSSESSED (IF ANY)

Type of Instrument A	Supplier B	Model number C	Number available D	Radiation detectable E	Range F

12. CALIBRATION OF INSTRUMENT LISTED IN ITEM 11

(tick where appropriate and attach the relevant certification)

- By applicant
 Other (state name and address of the calibrating agency)

Attach a resume describing the method and frequency of calibration, date of last calibration and standards used for instrument calibration.

13. PERSONNEL MONITORING

Type (tick where appropriate) A	Supplier B	Evaluating agency C	Frequency of evaluation D
<input type="checkbox"/> Film badge <input type="checkbox"/> Thermolumi- nescence dosimeter (TLD) <input type="checkbox"/> Others (specify)			

14. RADIATION PROTECTION PROGRAMME

Describe the radiation protection programme to be adopted including the contingency plan.

15. QUALIFICATION AND EXPERIENCE OF SUPERVISOR AND RADIATION PROTECTION OFFICER

(a) State the qualifications of the Supervisor and Radiation Protection Officer. List relevant courses attended and attach certified copies of certificate(s) obtained.

Name A	Designation B	Qualification/Courses attended C

(b) State the experience of the Supervisor and Radiation Protection Officer and attach the

Name A	Designation B	Organization C	Duration D	Year E

16. DECLARATION

I.....
(full name)

identity card/passport number.....

hereby declare-

(a) that this application is made on my own behalf/on behalf of.....

(b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature

Name (capital letters)

Designation

Official stamp

Date

ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986
APPLICATION FORM TO OBTAIN, RENEW OR AMEND LICENCE
(Regulations 13 and 14)

FORM LPTA/BP/5	STORAGE PRIOR TO DISPOSAL/DISPOSAL
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This application form shall be completed in duplicate and submitted together with an application fee of \$15.00 to:

Executive Secretary,
Atomic Energy Licensing Board,
12th and 13th Floor,
Plaza Pekeliling,
No. 2 Jalan Tun Razak,
50400 Kuala Lumpur.

or (for renewal or amendment of a licence for a medical purpose):

Ketua Pengarah Kesihatan,
Kementerian Kesihatan,
Jalan Cenderasari,
50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

<p>1a. APPLICATION FOR (tick where appropriate)</p> <p><input type="checkbox"/> New licence.</p> <p><input type="checkbox"/> Amendment. Licence number.....</p> <p><input type="checkbox"/> Renewal. Licence number.....</p> <p>1b. PERIOD NEEDED..... (minimum 1 year, maximum 3 years)</p>	<p>2. PURPOSE OF LICENCE (tick where appropriate)</p> <p><input type="checkbox"/> Storage prior to disposal</p> <p><input type="checkbox"/> Disposal</p> <hr/> <p>3. TYPE OF WASTE (tick where appropriate)</p> <p><input type="checkbox"/> Radioactive waste</p> <p><input type="checkbox"/> Nuclear waste</p> <p><input type="checkbox"/> Others (specify)</p>
--	--

4a. APPLICANT'S NAME

4b. APPLICANT'S MAILING ADDRESS

5. PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
 - (b) Identity card/passport number
 - (c) Designation
 - (d) Telephone number
-
-

6. ADDRESS OF FACILITY OR AGENCY

7. METHODS OF DISPOSAL (tick where appropriate)

- Transfer to licensed disposal facility
 - At licensee's own disposal facility
 - Others (specify)
-
-

8. DESCRIPTION OF METHODS IN ITEM 7

(Fill in where necessary)

(a) *Transfer to disposal facility*

- (i) Name of facility
- (ii) Address of facility
- (iii) Transport mode
- (iv) Facility licence number
- (v) Method and period of agreement between the applicant and facility company for the purpose of the waste material disposal

(b) *At licensee's own disposal facility*

Attach relevant documents for site and facility approval

(c) *Others*

Explain in detail

P.U. (A) 149.**782**

9. DESCRIPTION OF WASTE

Type of waste A	Physical/Chemical form B	Activity C

10. NAME OF RADIATION PROTECTION OFFICER

11. RADIATION DETECTION OR MEASURING INSTRUMENT CURRENTLY POSSESSED (IF ANY)

Type of instrument A	Supplier B	Model number C	Number available D	Radiation detectable E	Range

12. CALIBRATION OF INSTRUMENT LISTED IN ITEM 11
(tick where appropriate and attach the relevant certification)

By applicant

Others (state name and address of the calibrating agency)

Attach a resume describing the method and frequency of calibration, date of last calibration and standards used for instrument calibration.

13. PERSONNEL MONITORING

Type (tick where appropriate) A	Supplier B	Evaluating agency C	Frequency of evaluation C
<input type="checkbox"/> Film badge			
<input type="checkbox"/> Thermolumi- nescence dosimeter (TLD)			
<input type="checkbox"/> Others (specify)			

14. RADIATION PROTECTION PROGRAMME

Describe the radiation protection programme to be adopted.

15. QUALIFICATION AND EXPERIENCE OF SUPERVISOR AND RADIATION PROTECTION OFFICER

(a) State the qualifications of the Supervisor and Radiation Protection Officer. List relevant courses attended and attach certified copies of certificate(s) obtained.

Name A	Designation B	Qualification/Courses attended C

(b) State the experience of the Supervisor and Radiation Protection Officer and attach the appropriate resume if available

Name A	Designation B	Organization C	Duration D	Year E

16. DECLARATION

I.....
(Full Name)

identity card/passport number.....

hereby declare-

(a) that this application is made on my own behalf/on behalf of.....

(b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature

Name (capital letters)

Designation

Official stamp

Date

ATOMIC ENERGY LICENSING ACT 1984
 RADIATION PROTECTION (LICENSING) REGULATIONS 1986
 APPLICATION FORM TO OBTAIN, RENEW OR AMEND LICENCE
 (Regulations 13 and 14)

FORM LPTA/BP/6	IMPORT OR EXPORT
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This application form shall be completed in duplicate and submitted together with an application fee of \$15.00 to:

Executive Secretary,
 Atomic Energy Licensing Board,
 12th and 13th Floor,
 Plaza Pekeliling,
 No. 2 Jalan Tun Razak,
 50400 Kuala Lumpur.

or (for renewal or amendment of a licence for a medical purpose):

Ketua Pengarah Kesihatan,
 Kementerian Kesihatan,
 Jalan Cenderasari,
 50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

<p>1a. APPLICATION FOR (tick where appropriate)</p> <p><input type="checkbox"/> New licence.</p> <p><input type="checkbox"/> Amendment. Licence number.....</p> <p><input type="checkbox"/> Renewal. Licence number.....</p> <p>1b. PERIOD NEEDED..... (minimum 1 year, maximum 3 years)</p>	<p>2. PURPOSE OF LICENCE (tick where appropriate)</p> <p><input type="checkbox"/> Import <input type="checkbox"/> Export</p> <hr/> <p>3. ITEM (tick where appropriate)</p> <p><input type="checkbox"/> Radioactive material</p> <p><input type="checkbox"/> Nuclear material</p> <p><input type="checkbox"/> Irradiating apparatus</p> <p><input type="checkbox"/> Others (specify)</p>
--	--

4a. APPLICANT'S NAME

4b. APPLICANT'S MAILING ADDRESS

5. PARTICULARS OF PERSON RESPONSIBLE FOR THE APPLICATION

- (a) Name (capital letters)
- (b) Identity card/passport number
- (c) Designation
- (d) Telephone number

6. ADDRESS OF THE AGENCY OR FACILITY

7. INFORMATION REQUIRED FOR IMPORT OR EXPORT LICENCE

(fill in where applicable)

General information required for the import or export of radioactive material, nuclear material, prescribed substance, or irradiating apparatus.

- (a) Name of the country imported from/exported to.....
- (b) Name and address of supplier.....
- (c) Purpose of import or export.....
- (d) Date of the first consignment.....
- (e) Date of the last consignment.....
- (f) Port of loading.....
- (g) Port of discharge.....

8. (a) Additional information required for the import or export of radioactive material.

Element and mass number A	Chemical and/or physical form B	Name of manufacturer and model number (if sealed source) C	Activity	
			sealed source (per source) D	unsealed source E

- (b) Specify the mode of transportation
- (c) Type of package
- (d) Freight container to be used (if any). State the number.

9. Additional information required for import or export of nuclear material.

- (a) Chemical or physical form of nuclear material and, for enriched uranium, the weight percentage of enrichment and PU-241 content.
- (b) Quantity in grams or kilograms of-
 - (i) the nuclear material in the form imported or exported
 - (ii) the uranium or plutonium content
 - (iii) the content of U-235 in enriched uranium.
- (c) Specify, the mode of transportation and the type of package to be used.
- (d) Financial security which covers the liability for nuclear damage (attach relevant documents).

10. Additional information required for the import or export of irradiating apparatus.

Type and model	Maximum peak kilovolt	Maximum milliampere	Maximum power level kilowatt	Serial number of control panel	Serial number of tube head	Manufacturer
A	B	C	D	E	F	G

11. Additional information required for the import or export of prescribed substance

12. DECLARATION

I.....
 (full name)

identity card/passport number..... hereby declare-

- (a) that this application is made on my own behalf/on behalf of.....
- (b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature
 Name (capital letters)
 Designation
 Official stamp
 Date

FIFTH SCHEDULE

LICENCE FEES

(Regulation 15)

1. Licence fee for all classes of licence, except:

- (a) Class A or Class B in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility;
- (b) Class A, Class B or Class C in respect of the sale of, trading in or transfer of radioactive materials, nuclear materials or irradiating apparatus;
- (c) Class F; and
- (d) Class H,

shall be set out in Table I for radioactive materials sealed source), Table II for radioactive materials (unsealed source), Table III for irradiating apparatus, and Table IV for transportation, for storage prior to disposal or disposal, and for import or export.

2. Licence fee for:

- (a) Class A or Class B in respect of the milling of materials containing or associated with radioactive materials or nuclear materials or in respect of a waste treatment facility;
- (b) Class F; and
- (c) Class H,

shall be twenty ringgit for each man-hour spent by the appropriate authority prior to the issuance of the licence.

3. Licence fee for Class A, Class B or Class C in respect of the sale of, trading in or transfer of radioactive materials, nuclear materials or irradiating apparatus shall be two hundred ringgit per year for each licence irrespective of the number or category of materials or apparatus to be sold, traded in or transferred.

TABLE I: Licence fee per year for radioactive material (sealed source) according to the categories listed in the First Schedule.

Category A	Licence fee per year in ringgit B
1	\$100 for the first source. \$20 for every additional source.
2	\$200 for the first source or gauge. \$40 for every additional source or gauge.
3	\$300 for the first source. \$60 for every additional source.
4	\$1,000 for the first source or cell. \$200 for every additional source or cell.

If the sealed sources fall under several categories, the licence fee shall be the sum of the fees for all the categories.

TABLE II: Licence fee per year for radioactive material (unsealed source) according to the categories listed in the Second Schedule.

Category A	Licence fee per year in ringgit B
1	\$100
2	\$200
3	\$300
4	\$1,000

If the unsealed sources fall under several categories, the fee for the category which carries the highest fee shall be the licence fee.

TABLE III: Licence fee per year for irradiating apparatus according to the categories listed in the Third Schedule.

Category A	Licence fee per year in ringgit B
1	\$100 for the first apparatus. \$20 for every additional apparatus.
2	\$300 for the first apparatus. \$60 for every additional apparatus.
3	\$1,000 for the first apparatus. \$200 for every additional apparatus.

If the apparatus fall under several categories, the licence fee shall be the sum of the fees for all the categories.

TABLE IV: Licence fee per year for transportation, storage prior to disposal/disposal and import/export.

Purpose A	Licence fee per year in ringgit B
Transportation	\$100
Storage prior to disposal/ disposal	\$100
Import/export	\$100

SIXTH SCHEDULE
ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986
FORM OF LICENCE
(Regulation 18)

FORM LPTA/BL/1

(CLASS OF LICENCE)

Pursuant to the Atomic Energy Licensing Act 1984 and the regulations made thereunder, the Atomic Energy Licensing Board/Director General of Health hereby issues a licence as follows:

Licence Number

Effective Date

File Number

Expiry Date

Name of Licensee

Mailing Address

Telephone Number

Address of Facility/Premises

Name of Supervisor

Identity Card/Passport Number

Name of Radiation Protection Officer

Identity Card/Passport Number

Purpose

Details of Apparatus/Material/Installation

This licence is subject to the Atomic Energy Licensing Act 1984 and the regulations made thereunder and the conditions as attached.

(Signature)

(SEAL)

Executive Secretary/
Director General of Health

SEVENTH SCHEDULE
ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986
FORM FOR NOTIFICATION BY APPROVED REGISTERED MEDICAL PRACTITIONER
(Regulation 27)

FORM LPTA/BM/1	WORKER
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This form shall be completed in duplicate and submitted to:

Executive Secretary,
Atomic Energy Licensing Board,
12th and 13th Floor,
Plaza Pekeliling,
No. 2 Jalan Tun Razak,
50400 Kuala Lumpur.

or (in respect of an activity for medical purpose):

Ketua Pengarah Kesihatan,
Kementerian Kesihatan,
Jalan Cenderasari,
50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

In accordance with section 25 (4) of the Atomic Energy Licensing Act 1984, I/we hereby report the following:

A. PARTICULARS OF THE PERSON WHOSE HEALTH IS OR IS REASONABLY SUSPECTED TO BE AFFECTED BY IONIZING RADIATION

1. Name

2. Address

3. Identity card number

4. Date of birth

5. Sex

6. Normal work

7. Circumstances of exposure

8. Estimate of does received

9. Type of injury

10. Treatment given (if any)

11. Observation following treatment

12. Name, address and telephone number of the employer

B. DECLARATION BY APPROVED REGISTERED MEDICAL PRACTITIONER

I/We declare that all the information given in this report is true and correct

Signature

Name of approved registered medical practitioner (capital letters)

Designation

Identity card number

Address

Official stamp

Date

EIGHTH SCHEDULE
 ATOMIC ENERGY LICENSING ACT 1984
 RADIATION PROTECTION (LICENSING) REGULATIONS 1986
 FORM OF RETURN OF SALE OF RADIOACTIVE MATERIAL, NUCLEAR
 MATERIAL, PRESCRIBED SUBSTANCE OR IRRADIATING APPARATUS
 (Regulation 28)

FORM LPTA/BM/2	RETURN OF SALE
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This return shall be completed in duplicate and submitted to:

Executive Secretary,
 Atomic Energy Licensing Board,
 12th and 13th Floor,
 Plaza Pekeliling,
 No. 2 Jalan Tun Razak,
 50400 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

1. RETURN OF SALE FOR (tick where appropriate)

- | | |
|--|---|
| <input type="checkbox"/> Radioactive material | <input type="checkbox"/> Nuclear material |
| <input type="checkbox"/> Irradiating apparatus | <input type="checkbox"/> Prescribed substance |
| <input type="checkbox"/> Others (specify) | |

2. PARTICULARS OF SELLER

- (a) Name, address and licence number of seller
- (b) Mailing address
- (c) Name, designation, identity card number, telephone number of person responsible to the seller.

3. PARTICULARS OF BUYER

- (a) Name, address and licence number of buyer

- (b) Mailing address

- (c) Name, designation, identity card number, telephone number of person responsible to the seller

4. DESCRIPTION OF MATERIAL OR APPARATUS SOLD

(Fill in where necessary only)

- (a) Radioactive material

Element and mass number A	Chemical and/or physical form B	Name of manufacturer and model number (if sealed source C	Activity		Date of Sale F
			Sealed source (per source) D	Unsealed source E	

(b) Nuclear material

Element and mass number A	Chemical and/or physical form B	Maximum quantity C	Date of sale D

(c) Irradiating apparatus

Type and model A	Maximum peak kilovolt B	Maximum milli-ampere C	Maximum power level kilowatt D	Serial number of control panel E	Serial number of tube head F	Manufacturer G	Date of sale H

(d) Prescribed substance

(e) Others (specify)

5. DECLARATION

I.....
(full name)

identity card/passport number.....
hereby declare-

- (a) that this returns is made on my own behalf/on behalf of.....
- (b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature
Name (capital letters)
Designation
Official stamp
Date

ATOMIC ENERGY LICENSING ACT 1984
RADIATION PROTECTION (LICENSING) REGULATIONS 1986
FORM OF RETURN OF POSSESSION OF RADIOACTIVE MATERIAL, NUCLEAR
MATERIAL, PRESCRIBED SUBSTANCE OR IRRADIATING APPARATUS
(Regulation 28)

FORM LPTA/BM/3	RETURN OF POSSESSION
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This return shall be completed in duplicate and submitted to:

Executive Secretary,
Atomic Energy Licensing Board,
12th and 13th Floor,
Plaza Pekeliling,
No. 2 Jalan Tun Razak,
50400 Kuala Lumpur.

Or (in respect of possession for a medical purpose):

Ketua Pengarah Kesihatan,
Kementerian Kesihatan,
Jalan Cenderasari,
50480 Kuala Lumpur.

Note: If more space is needed, use additional pages

FOR OFFICIAL USE ONLY

1. RETURN OF POSSESSION OF (tick where appropriate)

- | | |
|--|---|
| <input type="checkbox"/> Radioactive material | <input type="checkbox"/> Nuclear material |
| <input type="checkbox"/> Irradiating apparatus | <input type="checkbox"/> Others (specify) |
| <input type="checkbox"/> Prescribed substance | |
-

2. NAME, ADDRESS, LICENCE NUMBER, CLASS OF LICENCE

3. MAILING ADDRESS

4. NAME, DESIGNATION, IDENTITY CARD NUMBER, TELEPHONE NUMBER OF PERSON RESPONSIBLE

5. PARTICULARS OF MATERIAL, APPARATUS AND SUBSTANCE POSSESSED (fill in where applicable)

(a) Radioactive material

Element and mass number A	Chemical and/or physical form B	Name of manufacturer and model number (if sealed source) C	Activity		Date of possession F
			Sealed source (per source) D	Unsealed source E	

(b) Nuclear material

Element and mass number A	Chemical and/or physical form B	Maximum quantity C	Date of possession D

(c) Irradiating apparatus

Type and model	Maximum peak kilovolt	Maximum milli-ampere	Maximum power level kilowatt	Serial number of control panel	Serial number of tube head	Manu facturer	Date of possession
A	B	C	D	E	F	G	H

(d) Prescribed substance

(e) Others (specify)

6. DECLARATION

I.....
(Full name)

identity card/passport number.....

hereby declare-

(a) that this returns is made on my own behalf/on behalf of.....

(b) that the particulars given in this form, including all supplements attached hereto, are true and correct.

Signature

Name (capital letters)

Designation

Official stamp

Date

NINTH SCHEDULE
 ATOMIC ENERGY LICENSING ACT 1984
 RADIATION PROTECTION (LICENSING) REGULATIONS 1986
 FORM OF REGISTER
 (Regulation 29)

LPTA/BM/4	REGISTRATION
Licence Number	REGISTER FOR
File Number	REGISTRATION NUMBER
Effective date	
Expiry date	
Name of Licensee	
Mailing Address	
Telephone Number	
Address of Facility/Premises	
Name of Supervisor	
Identity Card/Passport Number	
Name of Radiation Protection Officer	
Identity Card/Passport Number	
Purpose	
Details of Apparatus/Material/Installation	
Remarks (if any)	Registered by
	Signature
	Date
	Seal of registrar

Made the 8th April 1986

[LPTA (S): TAD/016/1; P.N. (PU²) 425/II.]

On behalf and in the name of the Prime Minister,

DATUK DR JAMES P. ONGKILI,
Minister the Primer Minister's
Department