

THE RADIATION PROTECTION BILL
(No. XLVIII of 2003)

Explanatory Memorandum

The object of this Bill is to repeal the Radiation Protection Act and to make better provisions for the protection against the risks associated with exposure to ionizing radiation and for the safety of radiation sources that may deliver such exposure, and to set up a Radiation Protection Authority with regulatory functions, including the formulation of policies, codes and standards in relation to radiation protection.

31 October 2003

A. GANOO
Minister of Public Utilities

THE RADIATION PROTECTION BILL
(No. XLVIII of 2003)

ARRANGEMENT OF CLAUSES

Clause

| | | | |
|-----|---|-----|---|
| | PART I - PRELIMINARY | 12. | Renewal of licence |
| 1. | Short title | 13. | Re-application for licence |
| 2. | Interpretation | 14. | Variation, suspension and revocation of licence |
| 3. | Application of Act | 15. | Appeals |
| | PART II – THE RADIATION PROTECTION AUTHORITY | 16. | Duties of licensees and their staff |
| 4. | The Radiation Protection Authority | 17. | Death of licensee |
| 5. | Functions of the Authority | 18. | Radioactive waste |
| 6. | The Radiation Protection Council | 19. | Transport of material |
| 7. | Meetings of the Council | 20. | Radiological work |
| 8. | Staff of the Authority | | PART IV – MISCELLANEOUS |
| 9. | Functions of the Chief Radiation Protection Officer | 21. | Powers of the Minister |
| 10. | Powers of entry and inspection | 22. | Protection of members and officers |
| | PART III – LICENSING AND RELATED PROVISIONS | 23. | Offences |
| | | 24. | Regulations |
| | | 25. | Repeal |
| | | 26. | Transitional provision |
| | | 27. | Commencement |
| 11. | Application for authorisation | | |

A BILL

To make better provisions for the protection against the risks associated with exposure to ionizing radiation and to set up a Radiation Protection Authority.

ENACTED by the Parliament of Mauritius, as follows -

PART I – PRELIMINARY

1. Short title

This Act may be cited as the Radiation Protection Act 2003.

2. Interpretation

In this Act –

“atomic energy” means any type of energy emitted from radio isotopes, nuclear reactions, X-ray equipment or other radiation generators emitting ionizing radiation;

“Authority” means the Radiation Protection Authority established under section 4;

“authorisation” means a licence or a permit granted by the Authority;

“authorised officer” means an officer designated as such by the Chief Radiation Protection Officer;

“Council” means the Radiation Protection Council established under section 6;

“Chairperson” means the Chairperson of the Council;

“Chief Radiation Protection Officer” means the person appointed as such under section 8;

“exclusive economic zone” has the same meaning as in section 6 of the Maritime Zones Act;

“exemption level” means -

(a) a quantity of radioactivity below 3.7 kilo Becquerel; or

(b) a specific radioactivity below 74 Becquerel per gram;

“ionizing radiation” means gamma rays, x-rays or corpuscular radiations which are capable of producing ions directly or indirectly;

“licence” means a licence issued under section 11;

“licensee” means the holder of a licence;

“member” means a member of the Council and the Chairperson appointed under Part II;

“Minister” means the Minister to whom responsibility for the subject of energy is assigned;

“officer” means a public officer appointed to the staff of the Authority under section 8;

“owner” means a person having statutory and administrative control over a source;

“practice” means an activity that introduces additional sources of exposure, or extends exposure to additional people, from an existing source, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed;

“radiation generator” means an apparatus capable of producing ionizing radiation;

“radiation protection” means the task of protecting radiation workers and the public from unnecessary exposure by the accurate measurement of radiation and the design and use of methods to reduce this radiation;

“Radiation Protection Officer” means a person appointed as such under section 8;

“radiation worker” means a person potentially exposed to ionizing radiation as a result of his occupation;

“radioactive material” means any material emitting ionizing radiation above the exemption level that may cause a risk of disability or disease as a result of exposure;

“radioactive substance” means a substance that contains one or more radionuclides of which the activity or the concentration cannot be disregarded as far as radiation protection is concerned;

“radiological work” means work involving the use of radioactive materials or other radiation generators or sources capable of emitting ionizing radiation;

“sealed source” means a radiation source consisting of a radioactive substance enclosed in enclosures or arranged in such other way that there is no risk of the substance being liberated or becoming accessible to direct contact during normal use;

“source” means anything that may cause radiation exposure such as by emitting ionizing radiation or releasing radioactive substances or materials.

3. Application of Act

This Act shall apply to every source of ionizing radiation above the exemption level other than –

- (a) radioactive substances found in nature; and

- (b) sealed sources or any apparatus or device containing a sealed source , where the dose rate at 10cm from the source does not exceed 1 micro sivert per hour and the source activity does not exceed the exemption level.

PART II – THE RADIATION PROTECTION AUTHORITY

4. The Radiation Protection Authority

- (1) There is established for the purposes of this Act, a Radiation Protection Authority.
- (2) The objects of the Authority shall be to –
 - (a) regulate, control and supervise radiological work and every activity relating to the acquisition, importation, use, transportation and disposal of radioactive material, radioactive substances, radioactive waste, x-ray equipment and other sources capable of emitting ionizing radiation;
 - (b) provide radiation protection services; and
 - (c) promote and encourage research and development in radiation protection.

5. Functions of the Authority

- (1) The Authority shall have such functions as, in its opinion, are necessary to further most effectively the objects of the Authority, and in particular to -
 - (a) formulate policies, codes and standards in relation to radiation protection;
 - (b) from time to time, to review national policies, codes and standards in relation to radiation protection to ensure that they continue to substantially reflect world best practice;
 - (c) promote measures for the prevention of radiological emergencies and initiate, recommend, or provide support on emergency response interventions;
 - (d) take appropriate measures and conduct inspections to assess radiation safety conditions and compliance with applicable regulations and other requirements specified in licences;
 - (e) carry out research and other investigations relating to radiation protection and, take measures with respect to, and advise on radiation protection;
 - (f) establish a system for coordinating public and private activities with a view to ensuring radiation safety;

- (g) co-operate with local, foreign and international organizations having similar objectives;
- (h) fulfill the obligations of the State with regard to Conventions ratified in the field of the nuclear energy; and
- (i) advise the Minister on matters related to atomic energy and radiation as well as the safe use and disposal of radiation generators and sources.

6. The Radiation Protection Council

(1) The Authority shall be administered and managed by a Radiation Protection Council which shall consist of -

- (a) a Chairperson;
- (b) a representative of the Ministry;
- (c) a representative of the Prime Minister's Office;
- (d) a representative of the Ministry responsible for the subject of health;
- (e) a representative of the Ministry responsible for the subject of environment;
- (f) a representative of the Ministry responsible for the subject of labour;
- (g) a representative of the Ministry responsible for the subject of commerce;
- (h) a representative of the Comptroller of Customs; and
- (i) a representative of the Institution of Occupational Safety and Health Managers.

(2) Every member shall be appointed by the Minister for a period of not more than 2 years and may be eligible for re-appointment.

(3) Where the Chairperson is temporarily absent from Mauritius or is otherwise unable to act, the Minister may appoint a member to act as Chairperson and such member shall exercise all the powers and perform all the duties of the Chairperson.

(4) No person shall be eligible to be a member if he -

- (a) is guilty of improper conduct;
- (b) is incapacitated by prolonged physical or mental illness;
- (c) is, for any other reason, unable or unfit to discharge his duties, or

- (d) acquires an interest in a body corporate or any other body which is a licensee.
- (5) The office of a member shall become vacant -
- (a) on his death;
 - (b) 7 days after the date on which he gives notice in writing to the Minister of his intention to resign his office;
 - (c) where, without the permission of the Council, he is absent from three consecutive meetings of the Council of which he has had notice; or
 - (d) on the termination of his appointment.
- (6) The name of every member shall be published in the *Gazette* as soon as possible after his appointment.
- (7) The Council may delegate to the Chief Radiation Protection Officer such of its powers as are necessary to effectively carry out the day to day business of the Authority in accordance with such instructions as may be given by the Council.
- (8) The Council may appoint such committees as it considers necessary to advise it in the performance of its duties under this Act.
- (9) Every member shall be paid such fee or allowance as the Minister may determine.

7. Meetings of the Council

- (1) The Council shall meet at least once a month and at such other times and places as may be decided by the Chairperson.
- (2) Five members shall constitute a quorum at any meeting of the Council.
- (3) The Council may co-opt such person as may be of assistance in relation to any matter before the Council.
- (4) Any person co-opted under subsection (3) shall have no right to vote on any matter before the Council.
- (5) Where the Chairperson is absent from a meeting, the members present shall elect one of the members present to chair the meeting.
- (6) The decisions of the Council shall be taken by a simple majority of the members present at the voting in the meeting.
- (7) Where at any meeting there is an equality of votes, the Chairperson shall have a casting vote.

(8) Where a member has an interest, direct or indirect, in a matter before the Council, he shall as soon as reasonably practicable, disclose to the Council the nature of his interest, and shall not take part in the deliberations of the Council relating to the matter.

(9) Subject to this section, the Council shall regulate its meetings and proceedings in such manner as it thinks fit.

(10) The Council shall cause accurate minutes of proceedings at each meeting of the Council to be recorded and preserved.

8. Staff of the Authority

(1) There shall be appointed a Chief Radiation Protection Officer, Radiation Protection Officers and such other officers as may be necessary for the proper discharge of the functions of the Authority under this Act.

(2) Every person referred to in subsection (1) shall be a public officer.

(3) A person shall not be eligible for appointment under subsection (1) where -

(a) he is a licensee;

(b) his spouse or any of his children is a licensee; or

(c) he, his spouse or any of his children, has a financial interest in a body corporate or any other body which is a licensee.

9. Functions of the Chief Radiation Protection Officer

(1) The Chief Radiation Protection Officer shall be the chief executive officer of the Authority and shall be responsible for the execution of the policy of the Authority and for the control and management of its day-to-day business.

(2) In the exercise of his functions the Chief Radiation Protection Officer shall act in accordance with such directives as he may receive from the Council.

(3) The Chief Radiation Protection Officer shall -

(a) attend every meeting of the Council and may take part in its deliberations but shall have no right to vote on any matter before the Council;

(b) maintain -

(i) a national inventory list of all sources and radiation generators;
and

(ii) a register of all exporters, importers, licensees and radiation workers;

- (c) submit reports, work plans, work programmes, budgets and internal rules of the Authority to the Council for approval;
- (d) notify the Council forthwith of all cases of radiation accidents and emergencies.

10. Powers of entry and inspection

(1) The Chief Radiation Protection Officer or an authorised officer may, at any reasonable hour, with the assistance of the Commissioner of Police or such other person or authority, as he thinks necessary, for the purposes of this Act -

- (a) enter, inspect and examine any premises, vehicle, vessel, aircraft or any carriage where he has reasonable grounds to believe that radioactive material or any source of ionizing radiation is stored, used, transported or disposed of, in such premises or mode of transport;
- (b) require the production of any licence or permit authorising the use or import as the case may be, of any radioactive material, radioactive substance or sources of ionizing radiation;
- (c) by written notice, require a licensee to have his employees, who are or may be exposed to ionizing radiation, to be monitored and medically examined; and
- (d) by written notice, require any person to be medically examined and monitored by the Ministry responsible for the subject of health, where such examination appears to be reasonable and necessary.

(2) Every person who is in possession of any radioactive material or any source of ionizing radiation shall allow the Chief Radiation Protection Officer or an authorised officer to enter his premises, inspect, examine, and take samples or do any other act in the discharge of his duties under this Act.

PART III – LICENSING AND RELATED PROVISIONS

11. Application for authorisation

(1) No person shall engage in a practice, own a radiation source, or manage and dispose of any radioactive waste, unless he holds a licence from the Authority.

(2) No person shall –

- (a) import any radioactive material, radioactive substance or source;
- (b) administer any radioactive substance to any person for purposes of diagnosis, treatment or research; or

- (c) add radioactive substances in the production and manufacture of foodstuffs, medicinal products, cosmetics and products for household use,

unless he holds a permit delivered by the Authority.

(3) Any person who requires a licence specify under subsection (1) or a permit specified under subsection (2) shall make a written application to the Authority in such form as may be approved by the Authority.

(4) Any person applying for a licence shall -

- (a) prior to submitting the application, make an assessment of the nature, magnitude and likelihood of the exposure attributed to the sources and all necessary steps to be taken for the protection and safety of workers and the public;
- (b) submit to the Authority all relevant information to support the application and to demonstrate compliance with this Act; and
- (c) have a safety assessment made and submitted to the Authority as part of the application, where the potential for exposure is greater than any level specified by the Authority.

(5) On receipt of an application under subsection (4), the Authority may –

- (a) make such inquiry and consult such persons or authorities as it may deem necessary to ascertain whether the applicant is a fit and proper person to be granted a licence or a permit, as the case may be, and
- (b) cause a notice of any application for a licence to be published in -
 - (i) the *Gazette*; or
 - (ii) as may be prescribed,not less than 7 and not more than 14 days before the meeting of the Council at which the application is to be heard;
- (c) consider any written notice of objection or other representation made in accordance with such procedure as may be prescribed.

(6) Any licence or permit granted under this section –

- (a) shall be subject to such terms and conditions as the Authority thinks fit;
- (b) may be issued on payment of such fee as may be prescribed; and

- (c) may in the case of a licence, be renewed on payment of a renewal fee as may be prescribed.

12. Renewal of licence

(1) Any person who wishes to renew his licence shall make a written application to the Authority in such form and within such period, as may be determined by the Authority.

(2) Upon receipt of an application under subsection (1), the Authority may require the applicant –

- (i) to furnish any additional information that it considers relevant;
- (ii) to comply with the requirements under section 11(3).

(3) Where the Authority agrees to renew a licence, it may do so by imposing any term or condition that it thinks fit.

(4) No licence shall be renewed under this section unless the applicant pays such fee as may be prescribed.

13. Re-application for licence

A fresh application for a licence shall be required in the case of –

- (a) the proposed use of different or significantly modified premises or sources;
- (b) the proposed use of different radioactive substances, radioactive materials or larger quantities of such substances or materials;
- (c) a change taking place at the site of the premises or their surroundings which is likely to affect radiation protection requirements; or
- (d) the death of a licensee.

14. Variation, suspension and revocation of licence

(1) A licensee may make a written application to the Authority to vary the terms and conditions of his licence and the Authority may accede to the request subject to such terms and conditions as it thinks fit.

(2) Subject to subsection (4), (6) and (7), the Authority may suspend or revoke a licence where it is satisfied that -

- (a) the licensee has contravened this Act or any regulations made thereunder or a term or condition of his licence;
- (b) the licensee has ceased to operate under his licence;

- (c) the licensee has given information to the Authority which is false or misleading in a material particular; or
- (d) it is in the public interest to do so.

(3) Subject to subsection (4), (6) and (7), the Authority may, of its own motion, vary the terms and conditions of a licence for the reasons specified in the subsection (2).

(4) Where the Authority proposes to vary the terms of or revoke, a licence pursuant to subsections (2) and (3), it shall give written notice of its intention to the licensee together with the reasons therefor.

(5) The Authority shall, in a notice under subsection (4), require the licensee to show cause in writing, within such time as may be specified in the notice, why the licence should not be revoked or varied.

(6) The Authority shall, after considering the explanations of the licensee, inform him in writing of its decisions and the reasons therefor.

(7) Where the urgency of the matter so requires the Authority may forthwith suspend a licence on any ground specified in subsection (2).

(8) A suspension effected pursuant to subsections (2) and (7) shall, unless sooner revoked, lapse after 30 days.

(9) Where the licence is suspended or revoked –

- (a) the licensee shall take such steps as may be directed by the Authority; and
- (b) the Chief Radiation Protection Officer may cause seals to be affixed, at the licensee's premises or site, to any plant, installations or apparatus using ionizing radiation and radioactive material for which the licence was issued, in such a way that the plant, installations or apparatus are incapable of being used without seals affixed to them being broken.

15. Appeals

(1) Any person who is aggrieved by the decision of the Authority under section 11, 12, 13 or 14 may appeal to the Minister by lodging with the Chief Radiation Protection Officer a written notice of appeal together with grounds of appeal, within 14 days of the date of the decision.

(2) The Minister may on receipt of a notice under subsection(1), appoint an Appeal Committee to advise him on the subject matter of the appeal.

(3) An Appeal Committee shall consist of -

- (a) a Chairman who shall be a barrister with at least 5 years experience; and

- (b) 2 other persons with at least 5 years' experience in the field of radiation protection.
- (4) The members of the Appeal Committee shall be appointed by the Minister.
- (5) No person shall be eligible to be appointed on an Appeal Committee if he –
 - (a) is a licensee; or
 - (b) has a direct or indirect pecuniary or other interest in a matter being considered or about to be considered by the Committee.
- (6) Any member of the Appeal Committee who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the Appeal Committee shall, as soon as possible after the relevant facts have come to his knowledge, disclose the nature of his interest at a meeting of the Appeal Committee.
- (7) A disclosure under subsection (6) shall be recorded in the minutes of the meeting of the Appeal Committee and the member shall not, unless the Minister otherwise determines -
 - (a) be present during any deliberation of the Appeal Committee with respect to that matter; or
 - (b) take part in any decision of the Appeal Committee with respect to that matter.
- (8) Where a person appeals to the Minister, under subsection(1), his licence shall be deemed to continue to be in force unless the Authority decides otherwise on the grounds of public safety.
- (9) The members of the Appeal Committee shall be paid such fees as the Minister may determine.

16. Duties of licensees and their staff

- (1) Every licensee shall -
 - (a) be responsible for ensuring that exposure to ionizing radiation resulting directly from his activity shall be kept as low as reasonably achievable;
 - (b) appoint a person experienced in radiation health and safety measures as Radiation Safety Officer; and
 - (c) take all reasonable steps to ensure that every person under his supervision or control complies with the requirements of this Act and any regulations made thereunder.
- (2) The licensee and the Radiation Safety Officer shall ensure that -

- (a) all employees of the practice dealing with radioactive substance or material shall be supplied with at least one monitoring device and any other protective accessories, necessary to carry out radiological work with the lowest reasonably achievable risk;
- (b) radiation workers employed within the facility are given proper instructions on radiation safety measures and receive medical check up at least every 6 months.
- (c) any other person who is found within the facility is provided with at least one monitoring device and such other protective accessories as may be necessary.

(3) The licensee, the Radiation Safety Officer, or any other person involved in radiological work shall -

- (a) report to the Authority any case of overexposure to ionizing radiation not later than 24 hours after such an occurrence has taken place, and fully comply with any emergency measures ordered by the Authority; and
- (b) report to the Authority any loss, theft, or diversion for unauthorised purposes of any radioactive material, radioactive substance, radioactive waste or a radiation emitting equipment not later than 24 hours after such an occurrence has come to his knowledge.

(4) Every licensee shall establish and submit an intervention plan to the Authority for approval when applying for an authorisation in respect of any authorised practice or other activity which may result in an emergency exposure of workers and members of the public.

(5) The owner of any radioactive material or any ionizing radiation emitting equipment, his agent or employee shall provide any assistance required by the Chief Radiation Protection Officer or an authorised officer for entry, inspection, examination, enquiry, the taking of samples or otherwise for the discharge of his functions under this Act.

17. Death of licensee

(1) Subject to subsection (2), where a licensee dies, the licence shall forthwith terminate and any practice or authorised activity governed by the licence shall cease.

(2) Where, on notification of the death of a licensee, a person acceptable to the Authority agrees to take over the licence and continue the practice or other activity, the licence shall remain valid for a period of 3 months after the death of the licensee and the person shall assume all the duties and objectives of a licensee under this Act.

18. Radioactive waste

(1) Every person who is licensed to generate, keep or manage radioactive waste shall -

- (a) be responsible for the safe management of radioactive waste generated by the practice or source for which he is authorised;
- (b) when purchasing a sealed source, make contractual arrangements for the return of the spent sealed source to the manufacturer; and
- (c) appoint a technically competent person to be a Radioactive Waste Management Officer in order to assist the licensee in the safe and efficient on-site management of radioactive waste.

(2) Subject to the approval of the Authority, the Radioactive Waste Management Officer and the Radioactive Safety Officer referred to in section 16 may be the same person depending on the size and complexity of the waste management activities.

19. Transport of material

No person shall transport any radioactive material, radioactive substance or radiation generator on –

- (a) any vessel or boat within the territorial waters or the exclusive economic zone of Mauritius;
- (b) any aircraft within the airspace of Mauritius; or
- (c) any means of land transport,

without authorisation from the Authority.

20. Radiological work

(1) No person shall be engaged in radiological work unless –

- (a) he is over 18 years of age;
- (b) he is found after medical examination, to be free from any disease or weakness which could be considered to make him particularly vulnerable to the health hazards involved in the work; and
- (c) he agrees to undergo a medical examination at such time as may be required by the Authority.

(2) When a person is engaged in radiological work, or any person who, because of his work may have otherwise been exposed to ionizing radiation, shows signs of disease or injury which may be suspected of having been caused by such radiation, the person employing him shall immediately make arrangements for the medical examination of the person concerned.

PART IV - MISCELLANEOUS

21. Powers of the Minister

The Minister may give such directions of a general character to the Council, not inconsistent with this Act, which he considers to be necessary in the public interest, and the Council shall comply with those directions.

22. Protection of members and officers.

No liability, civil or criminal, shall attach to any member or officer of the Authority, in respect of any loss arising from the exercise in good faith by a member or an officer or the Authority of his or its functions under this Act.

23. Offences

Any person who –

- (a) willfully delays or hinders an officer in the exercise of his duties under this Act;
- (b) provides any information required under this Act which is false or misleading in a material particular; or
- (c) otherwise contravenes this Act,

shall commit an offence and shall, on conviction, be liable to a fine not exceeding 50,000 rupees and to imprisonment for a term not exceeding 1 year.

24. Regulations

(1) The Minister may make such regulations as he thinks fit for the purpose of this Act.

(2) Any regulations made under subsection (1) may provide –

- (a) for the prescription of any radioactive material, radioactive substance and radiation generators for which an authorisation is not required;
- (b) for the regulation of the importation, transportation, handling, storage and use of radioactive materials, radioactive substances and radiation generators;
- (c) for the prescription of the form and content of licences and the procedures for their issue, renewal, suspension and revocation;
- (d) for the regulation of radioactive waste management and for the prescription of measures for the protection of the environment from the disposal of radioactive waste;

- (e) for the levying of fees and charges;
- (f) for the safety and security measures to be taken;
- (g) for the prescription of measures for the registration of workers exposed to radiation in the normal course of their work; and
- (h) for the prescription of any other matter for the purposes of the Act.
- (i) that any person who contravenes them shall commit an offence and shall, on conviction, be liable to a fine not exceeding 10,000 rupees and to imprisonment for a term not exceeding 6 months.

25. Repeal

The Radiation Protection Act is repealed.

26. Transitional provision

Any person who at the commencement of this Act, has in his possession, custody or under his control any radioactive material, radioactive substance or radiation generator, shall submit to the Authority an application for an authorization under section 11, not later than 3 months after its commencement.

27. Commencement

This Act shall come into operation on a day to be fixed by Proclamation.