

# THE RADIATION SAFETY AND NUCLEAR SECURITY ACT 2018

Act No. 16 of 2018

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**An Act**

**To provide for the establishment of a Radiation Safety and Nuclear Security Authority to regulate and control all radiation sources and practices for the adequate protection of people and the environment, both now and in the future, against the harmful effects of ionising radiation**

ENACTED by the Parliament of Mauritius, as follows —

**PART I - PRELIMINARY**

**1. Short title**

This Act may be cited as the Radiation Safety and Nuclear Security Act 2018.

**2. Interpretation**

In this Act —

“Additional Protocol” means the Protocol Additional to the Agreement between Mauritius and IAEA for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, which entered into force on 17 December 2007;

“Appeal Committee” means an ad hoc Appeal Committee set up under section 25;

“authorisation” means a licence issued, or any written permission granted, by the Authority to a person to perform a specified practice;

“Authority” means the Radiation Safety and Nuclear Security Authority established under section 4;

“Board” means the Radiation Safety and Nuclear Security Board referred to in section 8;

“Chairperson” means the Chairperson of the Board;

“clearance” means the removal of radioactive material or radioactive objects within authorised practices from any further regulatory control by the Authority;

“clearance level” means the value expressed in terms of activity concentration and total activity, at or below which a radiation source may be removed from regulatory control, as may be prescribed;

“controlled item” means an item which is imported into Mauritius, or exported out of Mauritius, and is subject to reporting under the Safeguards Agreement and the Additional Protocol;

“Director” means the Director of the Authority;

“disposal” means emplacement of radioactive waste in an appropriate facility without the intention of retrieval;

“disused sealed source” means a sealed source which is no longer used, or intended to be used, for the practice for which an authorisation was granted;

“dose limit” means the value of the radiation dose to individuals from controlled practices specified in the First Schedule that is not to be exceeded;

“effective dose” means the tissue-weighted sum of equivalent doses in all specified tissues and organs of the body;

“equivalent dose” means the radiation-weighted dose in a tissue or organ of the body;

“exemption” means a determination by the Authority that a radiation source or practice does not need to be subject to some or all aspects of regulatory control on the basis that the exposure, including potential exposure, due to the radiation source or practice is too low to

warrant the application of those aspects;

“exemption level” means a value established by the Authority and expressed in terms of activity concentration, total activity, dose rate or radiation energy, at or below which a radiation source may be granted exemption from regulatory control without further consideration;

“facility” means —

(a) a place where radioactive material is produced, processed, used, handled, stored or disposed of, or a place where a radiation generator is installed;

(b) for the purposes of the Safeguards Agreement and the Additional Protocol —

(i) a reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant or a separate storage installation; or

(ii) any location where nuclear material in amounts greater than one effective kilogramme is customarily used;

“IAEA” means the International Atomic Energy Agency;

“incident” means any unintended event, including operating errors, equipment failures, initiating events, accident precursors, near misses or other mishaps, or any unauthorised act, malicious or non-malicious, the consequences or potential consequences of which may pose a significant risk to people, property and the environment;

“inspector” means an officer designated as such under section 22(1)(b); “intervention” means any action intended to reduce or avert exposure or likelihood of exposure to radiation sources which are not part of a controlled practice or which are out of control as a consequence of an incident;

“licence” means a licence issued by the Authority under section 16; “licensee” means a holder of a licence;

“medical exposure” means the exposure incurred by —

(a) patients for the purposes of their own medical or dental diagnosis, or medical treatment;

(b) persons who willingly and voluntarily help, other than in their occupation, in the care,

support and comfort of patients undergoing radiological procedures for medical diagnosis or medical treatment; and

(c) volunteers subject to exposure as part of a programme of biomedical research;

“member” —

(a) means a member of the Board; and

(b) includes the Chairperson;

“members of the public” means any individual in the population, except an individual who is subject to occupational and medical exposure;

“Minister” means the Minister to whom responsibility for the peaceful application of ionising radiation is assigned;

“Ministry” means the Ministry responsible for the peaceful application of ionising radiation;

“MRA” means the Mauritius Revenue Authority established under section 3 of the Mauritius Revenue Authority Act;

“NDRRMC” means the National Disaster Risk Reduction and Management Centre established under section 9 of the National Disaster Risk Reduction and Management Act;

“nuclear explosive device” —

(a) means any nuclear weapon or other explosive device capable of releasing nuclear energy, irrespective of the purpose for which it may be used; and

(b) includes such weapon or device in unassembled and partly assembled forms; but

(c) does not include the means of transport or delivery of such weapon or device if separable from, and not an indivisible, part of it;

“nuclear material” means —

(a) (i) plutonium except that with isotopic concentration exceeding 80 per cent in plutonium-238, uranium-233, uranium enriched in the isotope 235 or 233, uranium containing the mixture of isotopes as occurring in nature other than in the form of ore or ore residue;

(ii) any material containing one or more of the foregoing; or

(b) for the purposes of the Safeguards Agreement and the Additional Protocol, any source material or special fissionable material as defined in Article XX of the Statute of IAEA;

“nuclear security” means the prevention and detection of, and response to theft, sabotage, unauthorised access, illegal transfer and other malicious acts involving nuclear material and other radioactive material, related equipment or associated facilities;

“occupational exposure” means the exposure to radiation of workers incurred in the course of their work;

“officer” —

- (a) means an officer appointed as such under section 11; and
- (b) includes the Director;

“orphan source” means a radioactive source which is not under regulatory control, either because it has never been under regulatory control or it has been abandoned, lost, misplaced, stolen or transferred without proper authorisation;

“physical protection” means measures for the protection of nuclear material and other radioactive material, related equipment or associated facilities;

“practice” —

- (a) means any human activity which introduces additional sources of exposure, or extends exposure to additional people from existing radiation sources, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed; and
- (b) includes the following activities —
  - (i) the possession and use of radiation sources;
  - (ii) the import and export of radiation sources;
  - (iii) the transport of radioactive material;

- (iv) the decommissioning of facilities; and
- (v) radioactive waste management activities;

“protection and safety measures” means measures for the protection of people against exposure to radiation or exposure due to radioactive material and measures for the safety of sources, which includes measures for the prevention of radiological incidents;

“radiation” means ionising radiation, such as x-rays and gamma rays, capable of producing ions pairs in biological materials;

“radiation generator” means a device capable of generating radiation such as x-rays, neutrons, electrons or other charged particles;

“radiation protection officer” means a person appointed as such by a licensee under section 20(1)(c);

“radiation protection programme” means the systematic arrangements which are aimed at providing adequate consideration of radiation protection measures;

“radiation safety” means —

- (a) the protection of people and the environment against radiation risks; and
- (b) the safety of practices that give rise to radiation risks;

“radiation source” means anything which may cause radiation exposure such as by emitting radiation or releasing radioactive material;

“radiation worker” means a person who works, whether full-time, part-time or temporarily, and who has recognised rights and duties in relation to occupational radiation protection;

“radioactive material” means any material containing one or more radionuclides and which emits radiation above the exemption level;

“radioactive source” means any radiation source containing radioactive material;

“radioactive waste” means material, in whatever physical forms, remaining from practices or interventions and for which no further use is foreseen, and that contains or is contaminated with radioactive material and has an activity or activity concentration higher than the level set for clearance from regulatory requirements;

“radioactive waste management” means all administrative and operational activities involved in the handling, pre-treatment, treatment, conditioning, transport, storage and disposal of radioactive waste;

“radiological emergency” means any emergency situation which may have consequences of radiation exposure;

“registered medical practitioner” has the same meaning as in the Medical Council Act;

“safeguards” means a system of inspection and verification of the peaceful uses of nuclear materials as part of the Treaty on the Non-Proliferation of Nuclear Weapons, supervised by IAEA;

“Safeguards Agreement” means the Agreement between the Republic of Mauritius and IAEA for the application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons;

“safety assessment” means the process, and the result, of analysing systematically and evaluating the radiation hazards associated with a practice, and the associated protection and safety measures;

“safety assessment report” means a report referred to in section 19; “sealed source” means a radioactive source in which the radioactive material is —

- (a) permanently sealed in a capsule; or
- (b) closely bonded and is in a solid form;

“security plan” means a plan to effectively minimise all security risks relevant to the dealing with a radioactive source detailing out the security system and security management arrangement;

“service provider” means a person engaged as such by a licensee;

“supervising officer” means the supervising officer of the Ministry;

“workplace monitoring” means the continuous or periodic measurement of radiation dose or radioactive contamination for reasons related to the assessment or control of exposure to radiation in the working environment and the interpretation of the results.

### **3. Application of Act**

- (1) Subject to subsection (4), this Act shall apply to all radiation sources and practices.
- (2) This Act shall bind the State.
- (3) Notwithstanding any other enactment, the Conventions and Treaties specified in the Second Schedule shall have force of law in Mauritius.
- (4) This Act shall not apply to radiation exposures due to natural sources which are least amenable to control, such as exposures due to cosmic radiation at the Earth’s surface or potassium-40 in the human body.

## **PART II - THE RADIATION SAFETY AND NUCLEAR SECURITY AUTHORITY**

### **Sub-Part A — Radiation Safety and Nuclear Security Authority**

#### **4. Establishment of Authority**

There is established for the purposes of this Act the Radiation Safety and Nuclear Security Authority which shall be an effectively independent regulatory body.

#### **5. Objects of Authority**

The Authority shall —

- (a) regulate and control all radiation sources and practices for the adequate protection of people and the environment against the harmful effects of radiation, both now and in the future, and for the safety of practices and the security of radioactive sources;

- (b) create the conditions for the promotion of radiation safety and nuclear security culture;
- (c) promote education, training, research and development in radiation safety and nuclear security;
- (d) be the point of contact for providing any information or assistance regarding nuclear or radiological emergencies under the terms of relevant international instruments, including the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency; and
- (e) assist in fulfilling the obligations of Mauritius with regard to relevant international legal instruments ratified by it.

## **6. Functions of Authority**

The Authority shall have such functions as are necessary to further its objects most effectively and shall, in particular —

- (a) develop policies and measures for radiation safety, nuclear security and safeguards;
- (b) develop and issue rules, codes and guidelines, in accordance with international safety standards, for the regulatory control of radiation sources and practices and for the protection of people and the environment from potential adverse effects of radiation;
- (c) give authorisation to a person to perform a specified practice under this Act;
- (d) define exemptions from regulatory control;
- (e) define the obligations, including financial ones, of licensees;
- (f) establish and maintain a national register of radiation sources, licensees, radiation workers, radiation protection officers and service providers;
- (g) ensure preparedness for radiological emergencies and provide support and advice in case of emergencies;
- (h) provide training on radiation safety and nuclear security, as appropriate, for the effective implementation of this Act;

- (i) establish appropriate mechanisms and procedures for informing and consulting the public and other interested parties about the regulatory process and the safety, health and environmental aspects of regulated practices, including incidents and abnormal occurrences;
- j) publish and disseminate information on matters related to radiation safety, nuclear security and safeguards;
- (k) communicate with national authorities, regulatory bodies of other States and with other relevant international organisations, including IAEA, to promote cooperation and exchange regulatory related information and experience;
- (l) establish and implement a national programme for gaining and regaining control over orphan sources;
- (m) cooperate with IAEA in the application of safeguards in accordance with the Safeguards Agreement, and any protocols thereto, and establish a State system of accounting for, and control of, nuclear material;
- (n) establish and implement, in collaboration with MRA, a system of control for the import and export of nuclear material and other radioactive material, or any other controlled items;
- (o) assist any organisation responsible for national security in developing and maintaining a threat assessment for nuclear security;
- (p) engage experts, as may be necessary, to provide technical support in the discharge of its functions under this Act;
- (q) advise the Minister on matters related to the peaceful use of ionising radiation; and
- (r) discharge such other functions as may be necessary to protect people and the environment from the harmful effects of radiation.

## **7. Powers of Authority**

The Authority shall have such powers as may be necessary to attain its objects and discharge

its functions most effectively and may, in particular —

- (a) vary, renew, suspend or revoke any authorisation granted by it;
- (b) set up such committee as may be necessary;
- (c) obtain information, documents and opinions from any person;
- (d) inspect, monitor and assess radiation sources and practices for the purpose of verifying compliance with this Act;
- (e) take appropriate enforcement measures in the event of non-compliance with this Act;
- (f) collect or receive any fee or any other sum which may lawfully accrue to it; and
- (g) do such other acts and things as may be necessary for the purposes of this Act.

#### **Sub-Part B — Radiation Safety and Nuclear Security Board**

#### **8. The Board**

- (1) The Authority shall be administered by the Radiation Safety and Nuclear Security Board.
- (2) The Board shall —
  - (a) establish the policy of the Authority;
  - (b) approve the work plan of the Authority;
  - (c) manage the budget of the Authority;
  - (d) ensure that adequate human and financial resources are provided to the Authority for the proper discharge of its functions; and
  - (e) take necessary measures and decisions for the implementation of this Act.
- (3) The Board shall consist of—
  - (a) a Chairperson, with relevant scientific background and experience, to be appointed by the Minister;

- (b) a representative of the Prime Minister's Office;
  - (c) a representative of the Ministry;
  - (d) a representative of the Attorney-General's Office;
  - (e) a representative of the Ministry responsible for the subject of environment;
  - (f) a representative of the Ministry responsible for the subject of finance;
  - (g) a representative of the Ministry responsible for the subject of occupational safety and health;
  - (h) a representative of NDRRMC; and
  - (i) a representative of MRA.
- (4) A member, other than a member referred to in subsection (3) (b) to (i), shall —
- (a) hold office for a period of 3 years;
  - (b) be eligible for reappointment; and
  - (c) cease to hold office —
    - (i) on the completion of his term of office;
    - (ii) on his resignation; or
    - (iii) where he fails to attend 3 consecutive meetings of the Board without good reasons.
- (5) Every member shall be paid such fees and allowances as the Minister may determine.
- (6) (a) The Board may set up such committees as may be necessary to assist it in the discharge of its functions under this Act.
- (b) A committee set up under paragraph (a) shall consist of not less than 3 members and such other persons as the Board may co-opt.

- (7) The Minister shall cause the composition of the Board to be published in the Gazette.
- (8) No member shall engage in any activity which may undermine the reputation or integrity of the Authority.

## **9. Meetings of Board**

- (1) The Board shall meet as often as may be necessary but at least once every 2 months at such time and place as the Chairperson may determine.
- (2) At any meeting of the Board, 5 members shall constitute a quorum.
- (3) Where the Chairperson is absent from a meeting of the Board, the members present shall elect a member to chair the meeting.
- (4) At any meeting of the Board, every member shall have one vote on a matter in issue and, in the event of an equality of votes, the Chairperson shall have a casting vote.
- (5) The decisions of the Board shall be taken by a simple majority of the members present at the voting in the meeting.
- (6)
  - (a) The Director shall designate an officer to act as Secretary to the Board.
  - (b) The Secretary shall —
    - (i) give notice of every meeting of the Board to the members;
    - (ii) prepare and attend every meeting of the Board;
    - (iii) keep minutes of proceedings of any meeting of the Board;
    - (iv) have no right to vote on any matter before the Board; and
    - (v) perform such other duties as may be conferred upon him by the Board.
- (7) A special meeting of the Board shall be convened by the Secretary within 7 days of the

receipt by him of a request in writing signed by not less than 4 members and specifying the purpose for which the meeting is to be convened.

(8) (a) The Board may co-opt such other person as may be of assistance in relation to any matter before it.

(b) Any person co-opted under paragraph (a) shall —

(i) have no right to vote on any matter before the Board; and

(ii) be paid such fees and allowances as the Minister may determine.

(9) A member who has an interest, direct or indirect, in a matter being considered or about to be considered by the Board shall, as soon as practicable, disclose to the Board the nature of his interest, and shall not be present during any deliberation of the Board or take part in any decision of the Board with respect to that matter.

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

(11) Subject to this section, the Board shall regulate its meetings and proceedings in such manner as it may determine.

### **Sub-Part C — Administration of Authority**

#### **10. Director**

(1) There shall be a Director of the Authority who shall be appointed by the Public Service Commission.

(2) The Director shall —

(a) be the head of the Authority and shall be responsible for the execution of the policy of the Board and its decisions, and for the control and management of its day to

day business;

- (b) act in accordance with such directions as he may receive from the Board; and
  - (c) submit reports, work plans and budgets of the Authority, as the Board may determine.
- (3) The Director shall, unless otherwise directed by the Board, attend every meeting of the Board and may take part in its deliberations but shall have no right to vote.
- (4) The Director may, with the approval of the Board, delegate any of his functions to such officer as he may determine.

**11. Staff of Authority**

- (1) There shall be appointed such officers as may be necessary to assist the Authority in the discharge of its functions under this Act.
- (2) The officers shall be public officers and shall be under the administrative control of the Director.

**12. Delegation of powers**

The Board may, subject to such conditions as it may impose, delegate to the Director, such of its powers under this Act as may be necessary to assist in the effective management of the Authority.

**PART III - FUNDAMENTAL REQUIREMENTS**

**13. Safety of practices**

Every person who conducts a practice shall ensure that —

- (a) as a result of the practice, the expected benefits to people and society outweigh the risk of harm to people and the environment;
- (b) the magnitude of individual doses of radiation to which a person may be exposed, the number of people subject to exposure and the likelihood of exposures to radiation from

the practice are as low as is reasonably achievable, taking into account economic, social and environmental factors; and

- (b) any radiation exposure that results from the practice does not exceed the applicable dose limits.

#### **14. Security of radioactive sources**

Every person who conducts a practice involving the use of a radioactive source shall ensure that there are appropriate security measures in place to prevent —

- (a) unauthorised access to the radioactive source or to the place where the radiation source is stored or used;
- (b) the loss or theft of the radioactive source;
- (c) sabotage of the radioactive source;
- (d) the unauthorised transfer or unauthorised removal of the radioactive source; and
- (e) any unauthorised act through the use of the radioactive source.

### **PART IV - NOTIFICATION, LICENSING AND RADIATION SAFETY ASSESSMENT**

#### **Sub-Part A — Notification**

#### **15. Notification**

Any person who intends to engage in a practice shall submit a notification to the Authority in such manner as it may determine.

#### **Sub-Part B — Application, Issue, Variation, Renewal and Surrender of Licence**

#### **16. Application and issue of licence**

- (1) No person shall conduct a practice, other than an exempted practice, unless he holds a

licence from the Authority.

- (2) Any person who requires a licence under subsection (1) shall make a written application to the Authority in such form and manner as the Authority may determine.
- (3) Any person applying for a licence shall submit a safety assessment report and such other information and documents as the Authority may determine.
- (4) No licence shall be issued unless the Authority is satisfied that the practice shall be conducted in a manner that adequately ensures the protection of people and the environment.
- (5) A licence issued by the Authority shall —
  - (a) be for such duration as it may determine;
  - (b) be subject to such terms and conditions as it may determine;
  - (c) be subject to the payment of such fee as may be prescribed; and
  - (d) not be transferable.

#### **17. Variation of licence**

- (1) Any licensee who wishes to vary his licence shall make a written application to the Authority in such form and manner as the Authority may determine.
- (2) The Authority may, subject to this Act and on such terms and conditions as it may determine, vary a licence.

#### **18. Renewal and surrender of licence**

- (1) Any licensee who wishes to renew or surrender his licence shall make a written application to the Authority in such form and manner as the Authority may determine.

- (2) (a) Any licensee applying for the renewal of his licence under subsection (1) shall submit a safety assessment report and such other information and documents as the Authority may determine.
- (b) The Authority may, subject to this Act and on such terms and conditions as it may determine, renew a licence.
- (3) No licensee shall surrender his licence unless the Authority determines that the relinquishment of the licence shall not jeopardise the protection of people and the environment.

### **Sub-Part C — Radiation Safety Assessment**

#### **19. Safety assessment report**

- (1) The safety assessment report referred to in sections 16(3) and 18(2) (a) shall demonstrate how the person applying for a licence or the licensee applying for the renewal of his licence intends to comply with —
  - (a) the fundamental requirements specified in Part III; and
  - (b) any other requirements of this Act.
- (2) The safety assessment report shall —
  - (a) identify any risks of adverse effects on people and the environment that may be caused by the conduct of the practice;
  - (b) identify mechanisms to eliminate or mitigate any identified risks which may arise from the practice;
  - (c) establish protection and safety measures and the radiation protection programme that shall reduce the likelihood of an incident which may result from the conduct of the practice;

- (d) address any other matter that the Authority considers pertinent for the safe and secure conduct of the practice; and
- (e) be submitted in such form and manner as the Authority may determine.

## **PART V - DUTIES AND RESPONSIBILITIES**

### **20. Duties and responsibilities of licensees**

- (1) Every licensee shall —
  - (a) have prime responsibility for the safe and secure conduct of the practice and for ensuring compliance with this Act;
  - (b) have the necessary human and financial resources for the safe and secure conduct of the practice;
  - (c) appoint, as required by the Authority, an appropriate person as radiation protection officer in accordance with such criteria as may be prescribed;
  - (d) take all reasonable steps to ensure that every person under his supervision or control complies with this Act;
  - (e) be responsible for ensuring that exposure to radiation resulting directly or indirectly from his practice is kept as low as reasonably practicable;
  - (f) maintain all records, reports, registers and particulars, as the Authority may determine, and any other information and document to demonstrate his compliance with this Act;
  - (g) notify the Authority of any radiological incident, as soon as practicable, but not later than 24 hours after such an occurrence comes to his knowledge;
  - (h) provide the radiation protection officer sufficient time, adequate resources and access to all relevant information to enable him to perform his duties under this Act;

- (i) provide any assistance that an officer may require for any inspection, examination and investigation conducted by him under this Act;
  - (j) make available any relevant information or document as and when the Authority may require;
  - (k) ensure that corrective actions shall be taken if unsafe or potentially unsafe conditions are detected at any location where an authorised practice is being conducted;
  - (l) maintain such safety assessment report as the Authority may require to demonstrate that the practice being carried out complies with this Act;
  - (m) engage a service provider, who is approved by the Authority for having the required competence and experience to provide services in the field of radiation safety and nuclear security for advice and technical support; and
  - (n) ensure that every radiation source is duly registered with the Authority prior to its use.
- (2) Every licensee who is licensed to conduct a practice involving the use of radioactive material shall, in addition to his duties and responsibilities under subsection (1), develop and maintain such decommissioning plan as the Authority may determine.

## **21. Duties of radiation protection officers**

A radiation protection officer shall —

- (a) carry out a safety assessment of the practice conducted by the licensee;
- (b) prepare, review and update the safety assessment report as and when necessary;
- (c) advise the licensee, in writing, of the protection and safety measures to be implemented to minimise any risk associated with the conduct of the practice;
- (d) assist the licensee in the effective implementation of the protection and safety measures and the radiation protection programme for the safe and secure conduct of the practice;

- (e) provide training on radiation safety to radiation workers and other relevant workers; and
- (f) advise the licensee on matters related to radiation safety and nuclear security.

## **PART VI- INSPECTION AND ENFORCEMENT**

### **22. Inspection, examination and investigation**

- (1) The Authority shall —
  - (a) establish an inspection programme and carry out both announced and unannounced inspections to monitor and ensure compliance with this Act; and
  - (b) designate any officer possessing required qualifications and trainings as an inspector and shall issue him with appropriate credentials.

(2) Where an inspector has grounds to believe that any nuclear material, other radioactive material or other radiation source is stored, used or transported in any premises, facility, vehicle, vessel, aircraft or other carriage, as the case may be, he may, at any time without prior notice, enter in such premises or mode of transport in order to make such inspection, examination and investigation as may be necessary.

(3) Where a practice is being conducted in any premises, an inspector shall; with a view to verify compliance with this Act, have unrestricted access, at any time, to those premises in order to make such inspection, examination and investigation as may be necessary.

(4) An inspector may, in the discharge of his functions and exercise of his powers under this Act —

- (a) be accompanied by a police officer or any other person designated by the Authority;
- (b) take with him any equipment or material required for any purpose for which the power of entry is being exercised;
- (c) seek and secure from any person any information, including information pertaining

to radiation safety and nuclear security, and documents which are required for the purpose of inspection, examination and investigation; and

(d) question any person and take a written statement from that person which, in his view, may be pertinent to the inspection, examination and investigation being carried out.

(5) Every person who is in possession of a radiation source shall allow an inspector to enter his premises for inspection, examination and investigation.

(6) The Authority shall keep records of all findings and results of any inspection, examination and investigation.

### **23. Enforcement**

(1) The Authority shall establish an enforcement policy to ensure that appropriate and consistent action is taken in case of non-compliance with this Act and that the enforcement action is commensurate with the seriousness of the non-compliance.

(2) When a person is found to be in non-compliance with this Act, the Authority shall take the appropriate enforcement action in accordance with the enforcement policy referred to in subsection (1).

(3) Where the Authority determines that a practice is being conducted in contravention of this Act, it may, by written notice served on the person conducting the practice, give such directions to the person, as it may determine to take corrective action.

(4) Notwithstanding subsections (2) and (3), where the practice being conducted, or a radiation source within the practice, poses a significant risk to people and the environment, the Authority may —

(a) issue a prohibition order to forthwith order the suspension of the practice or the closing of a facility;

- (b) order the licensee to prohibit workers who do not meet the applicable regulatory requirements from engaging in the practice;
- (c) order that the radiation source used in the practice be safely and securely stored;
- (d) cause seals to be affixed to the radiation source or the facility; and
- (e) seize the radiation source for so long as may be necessary.

(5) The Authority may suspend or revoke a licence where the licensee contravenes this Act or where the practice being conducted by the licensee constitutes an unacceptable risk to people and the environment.

(6) Any licensee whose licence has been suspended or revoked under subsection (5) shall follow all the instructions of the Authority to ensure that the protection of people and the environment are not being jeopardised.

(7) Any decision of the Authority under subsections (4) and (5) shall continue to be in force unless and until withdrawn by the Authority.

(8) Any person who is subject to an enforcement action shall take necessary measures to remedy the non-compliance as soon as practicable and shall take necessary measures to prevent its recurrence.

#### **24. Power to summon**

(1) The Director may, by written notice, summon any person to appear before him so as to give information or produce any document relevant to any inspection, examination and investigation.

(2) (a) The written notice specified in subsection (1) shall be issued to the person concerned by causing it to be —

- (i) handed over to him in person; or
- (ii) left at, or sent by registered post to, his registered address or his usual or last known place of business or residence.

(b) Any person to whom a written notice is issued in accordance with paragraph (a) who —

- (i) refuses to accept delivery of the written notice; or
- (ii) fails to take delivery of the written notice after being informed that it is at the post office,

shall be deemed to have been duly served with the written notice on the day on which he refuses to accept delivery.

## **PART VII- APPEAL**

### **25. Appeal**

- (1) Any person aggrieved by any decision of the Authority under this Act may, within 14 days of the date of the decision, appeal to the Minister by lodging with the Director a written notice of appeal together with the grounds of appeal.
- (2) The person aggrieved shall, for the hearing of the appeal, pay such non-refundable fee as may be prescribed.
- (3) The Minister may, on receipt of a notice under subsection (1), set up an ad hoc Appeal Committee to advise him on the subject matter of the appeal.
- (4) (a) The Appeal Committee shall consist of—
  - (i) a chairperson, who shall be a barrister with at least 5 years' experience, to be appointed by the Minister; and
  - (ii) 2 other persons, with at least 5 years' experience in the field of radiation safety and nuclear security, to be appointed by the Minister.
- (b) No person shall be eligible to be appointed on the Appeal Committee where he —

- (i) is a licensee; or
    - (ii) has a direct or an indirect pecuniary or other interest in a matter being considered or about to be considered by the Appeal Committee.
  - (c) There shall be a secretary to the Appeal Committee who shall be a public officer designated by the supervising officer.
- (5) The Appeal Committee shall —
- (a) regulate its own procedure;
  - (b) determine any appeal; and
  - (c) advise the Minister whether to affirm, vary or reverse the decision of the Authority and shall state its reasons for doing so.
- (6) A member of the Appeal Committee who has an interest, direct or indirect, in a matter being considered or about to be considered by the Appeal Committee shall, as soon as practicable, disclose to the Appeal Committee the nature of his interest, and shall not be present during any deliberation of the Appeal Committee or take part in any decision of the Appeal Committee with respect to that matter.
- (7) A disclosure under subsection (6) shall be recorded in the minutes of the meeting of the Appeal Committee.
- (8) The members of the Appeal Committee and its secretary shall be paid such fees and allowances as the Minister may determine.
- (9) Any appeal made under subsection (1) shall not have the effect of suspending the decision made by the Authority.

## **PART VIII— SPECIFIC PROVISIONS**

## 26. Nuclear security

- (1) The Authority shall —
  - (a) establish measures for the protection of nuclear material and other radioactive material and their associated facilities, including measures for the detection, prevention and response to unauthorised or malicious acts involving such material or facilities;
  - (b) establish formal cooperation with relevant organisations, as may be necessary, to respond to any incident related to nuclear security;
  - (c) be the point of contact in relation to matters within the scope of the Convention on the Physical Protection of Nuclear Material and the Amendment to the Convention on the Physical Protection of Nuclear Material; and
  - (d) provide information and assistance on any nuclear security incident to other States and other relevant international organisations, including IAEA.
- (2) Any licensee authorised to conduct a practice involving the use of nuclear material and other radioactive material shall —
  - (a) provide for the physical protection of such material and its associated facility and maintain such security plan as the Authority may determine; and
  - (b) notify the Authority, without delay, of the theft, threat of theft, or loss of any nuclear material and other radioactive material and the circumstances thereof, and provide a written report to the Authority as soon as practicable after notification.
- (3) No person shall disclose confidential information in relation to nuclear security, including any information which is required under the Convention on the Physical Protection of Nuclear Material and its Amendment and any other relevant international instruments.

## **27. Prohibited activities**

- (1) The direct or indirect control over nuclear weapons or other nuclear explosive devices, the manufacture or other acquisition of such weapons or devices, or seeking or receiving of any assistance in the manufacture of such weapons or devices, shall be prohibited.
- (2) The addition of radioactive material in the production or manufacture of any foodstuff, cosmetic and any other product for household use shall be prohibited.
- (3) The importation of any radioactive waste generated outside Mauritius shall be prohibited.

## **28. Safeguards**

- (1) Any person performing activities subject to the Safeguards Agreement and the Additional Protocol shall —
  - (a) allow IAEA and duly designated inspectors of IAEA to carry out in Mauritius any verification activities which IAEA considers necessary or appropriate and to ensure the compliance by Mauritius with its obligations under the Safeguards Agreement and the Additional Protocol; and
  - (b) submit to the Authority such information as may be necessary for compliance by Mauritius with its obligations under the Safeguards Agreement and the Additional Protocol.
- (2) The Authority shall maintain a State system of accounting and control of nuclear material as provided in the Safeguards Agreement and the Additional Protocol.

## **29. Occupational exposure**

- (1) Every licensee authorised to conduct a practice shall —
  - (a) provide and maintain, as far as is practicable, a safe working environment for all his workers who are exposed or likely to be exposed to radiation;

- (b) ensure that the number of person exposed and the likelihood of incurring exposure are, at all times, kept as low as reasonably achievable, taking into account social and economic factors;
  - (c) ensure that no person receives radiation dose from the practice above the applicable dose limits;
  - (d) ensure that every worker who is exposed or likely to be exposed to radiation from the practice is 18 years of age or above and has agreed to undergo a medical examination at such time as the Authority may determine;
  - (e) provide for the individual such monitoring and health surveillance of his radiation workers, and implement such programme for workplace monitoring, as the Authority may determine;
  - (f) provide his radiation workers with adequate information on the health risks due to their occupational exposure and give proper instructions and training to them on radiation safety; and
  - (g) ensure that his radiation workers are duly registered with the Authority.
- (2) A licensee, after being notified that a female radiation worker is pregnant, suspected to be pregnant or is breast feeding, shall —
- (a) notwithstanding any other enactment, not exclude the worker from work; and
  - (b) adapt the working conditions of the worker in respect of occupational exposure so as to ensure that the embryo or foetus or the breastfed infant is afforded the same broad level of protection as is required for members of the public.

### **30. Medical exposure**

Every licensee authorised to conduct a practice involving patients shall ensure that —

- (a) adequate measures are in place for the protection of the patient and that protection and safety are optimised for each medical exposure; and
- (b) no patient undergoes a medical exposure unless it is a radiological procedure requested by a registered medical practitioner and that such medical exposure is justified.

### **31. Emergency preparedness and response**

- (1) (a) Every licensee shall develop and maintain such emergency response plan, as the Authority may require, to be implemented in the event of a radiological emergency.
  - (b) The emergency response plan shall assign responsibilities for a systematic, coordinated and effective response to a radiological emergency.
- (2) The Authority shall, in coordination with NDRRMC and other relevant national agencies, develop and maintain a national emergency preparedness and response plan.
- (3) The Authority shall provide the necessary advice to NDRRMC for effective response to any emergency situation, which may have consequences of radiation exposure.
- (4) In the event of a nuclear or radiological emergency constituting a risk that radioactive contamination may spread beyond the boundaries of Mauritius, the Authority shall forthwith notify IAEA and the relevant authorities of any State, which is or may be physically affected by the release of radioactive material that may be of radiological significance for that State.

### **32. Management of radioactive waste and disused sealed sources**

- (1) The Authority shall ensure that the following principles shall be applied by every licensee in the management of radioactive waste and disused sealed sources —
  - (a) the generation of radioactive waste is kept to the minimum practicable;

- (b) the interdependence among the different steps in the management of radioactive waste is taken into account;
  - (c) actions imposing reasonably predictable impacts on future generations greater than those permitted for the current generation are avoided;
  - (d) undue burdens on the current and future generations are avoided; and
  - (e) appropriate financial arrangements are in place for the safe management of radioactive waste and disused sealed sources.
- (2) Any licensee authorised to manage radioactive waste or disused sealed sources shall be responsible for the safety and security of such radioactive waste or disused sealed sources.
- (3) No person shall dispose of any radioactive waste or disused sealed source unless he holds an authorisation from the Authority.

### **33. Import and export of radiation sources**

- (1) No person shall import in, or export from, Mauritius any radiation source, including nuclear material and other radioactive material or radioactive waste, or any controlled item, unless he holds a licence, from the Authority, which specifically authorises the importation or exportation of the radiation source or controlled items.
- (2) Any person shall, prior to the importation of any sealed source, make such necessary contractual and financial arrangements as the Authority may determine for the return of the sealed source to its supplier when it shall no longer be used for its intended purpose.

### **34. Transport of nuclear or any other radioactive material**

- (1) No person shall transport, transit or tranship any nuclear or other radioactive material without an authorisation from the Authority.
- (2) Any person authorised to transport nuclear and other radioactive material shall ensure the safety and security thereof during its transportation.

## **PART IX - LIABILITY FOR NUCLEAR DAMAGE AND JURISDICTION**

### **35. Exclusive liability**

Except as otherwise provided in this Act, no person, other than an operator of a nuclear installation, shall be liable for nuclear damage.

### **36. Liability for nuclear damage**

(1) The operator of a nuclear installation shall be liable for nuclear damage upon proof that such damage has been caused by a nuclear incident at the operator's nuclear installation.

(2) Liability for nuclear damage caused by nuclear material which was stolen, lost, jettisoned or abandoned lies with the operator who was last authorised to possess such material.

### **37. Jurisdiction**

A Court in Mauritius shall, notwithstanding any other enactment, have jurisdiction to hear claims for compensation under this Act in case of nuclear damage caused by a nuclear incident —

- (a) in Mauritius; or
- (b) on board a vessel or aircraft registered in Mauritius.

## **PART X - MISCELLANEOUS**

### **38. Protection from liability**

(1) No liability, civil or criminal, shall be incurred by the Authority or any member in respect of any act done or omitted in good faith by it or him in the discharge of its or his functions or exercise of its or his powers under this Act.

(2) This section shall be in addition to, and not in derogation from, the Public Officers' Protection Act, and for the purposes of that Act, every member shall be deemed to be a public officer or a person lawfully engaged, authorised or employed in the performance of a public duty.

### **39. Confidentiality**

No member of the Board or of any committee set up under this Act, or officer shall, during or after his relationship with the Authority, use or disclose any matter which comes to his knowledge in the performance of his duties, or use any material of the Authority, except —

(a) for the purpose of administering this Act; or

(b) where he is so required by law.

### **40. Powers of Minister**

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

(2) The Minister may require, in writing, the Authority to furnish such information in such manner and at such time as he may determine in respect of its activities and the Authority shall supply that information.

### **41. Legal proceedings**

(1) The Authority shall act, sue and be sued in its name.

(2) Service of process by or on the Authority shall be sufficient if made on behalf of or on the Director.

### **42. Offences and penalties**

(1) Any person who —

(a) provides any information required under this Act which is false and misleading in a material particular;

(b) unlawfully receives, possesses, transfers, alters, or disposes of, any nuclear material and other radioactive material or device containing any such material —

(i) with intent to cause death or serious bodily injury to any person, or with intent to cause substantial damage to property or to the environment; or

- (ii) which causes or is likely to cause death or serious bodily injury to any person, or which causes or is likely to cause substantial damage to property or to the environment;
- (c) commits larceny of nuclear material or any other radioactive material;
- (d) embezzles or fraudulently obtains nuclear material or any other radioactive material;
- (e) carries, sends or moves nuclear material or any other radioactive material into or out of Mauritius without lawful authority;
- (f) threatens to commit an offence specified in paragraph (c) in order to compel a person, an international organization or a State to do or to refrain from doing any act;
- (g) demands nuclear material or any other radioactive material or a device containing any such material by threat, or by use of force, or by any other form of intimidation, under circumstances which indicate the credibility of the threat;
- (h) unlawfully uses or disperses in any way nuclear material or any other radioactive material, or uses or makes a device —
  - (i) with intent to cause death or serious bodily injury to any person, or with intent to cause substantial damage to property or to the environment;
  - (ii) to compel a person, an international organisation or a State to do or refrain from doing an act; or
  - (iii) which causes or is likely to cause death or serious bodily injury to any person, or which causes or is likely to cause substantial damage to property or to the environment;
- (i) threatens to commit an offence specified in paragraph (h);
- (j) uses or damages a facility, interferes with its operation, or commits any other act directed against a facility in a manner which releases or risks the release of

radioactive material —

- (i) with intent to cause death or serious bodily injury, or with intent to cause substantial damage to property or to the environment;
  - (ii) with knowledge that the act is likely to cause death or serious bodily injury to any person or with knowledge that the act is likely to cause substantial damage to property or to the environment by exposure to radiation or release of radioactive substances, unless the act is undertaken in conformity with Mauritius laws; or
  - (iii) to compel a person, an international organisation or a State to do or refrain from doing an act,
- (k) threatens to commit an offence specified in paragraph (j);
- (l) demands a facility by threat or by use of force or by any other form of intimidation, under circumstances which indicate the credibility of the threat;
- (m) attempts to commit an offence specified in paragraph (b), (c), (d), (e), (h) or (j);
- (n) participates in an offence specified in paragraphs (b) to (m);
- (o) organises or directs others to commit an offence specified in paragraphs (b) to (m);
- (p) contributes to the commission of an offence specified in paragraphs (b) to (m) by a group of persons acting with a common purpose, when this act is intentional and is either —
- (i) made with the aim of furthering the criminal activity or criminal purpose of the group, where such activity or purpose involves the commission of an offence described in paragraphs (b) to (m); or
  - (ii) made in the knowledge of the intention of the group to commit an offence described in paragraphs (b) to (l);
- (q) is summoned by the Director under section 24 and who —
- (i) fails to attend at the time and place specified in the summons;
  - (ii) gives any false or misleading information; or

- (iii) refuses to produce a document required by the Director;
- (r) communicates information to an unauthorised person knowing that this communication could prejudice the physical security of nuclear material and any other radioactive material;
- (s) obstructs, hinders, opposes or molests, or fails, without reasonable excuse, to comply with a requirement or direction of an officer in the performance of his duties under this Act; or
- (t) in any other manner contravenes this Act, shall commit an offence.

(2) Any person who commits an offence under this Act, except for an offence specified in subsection (1)(b) to (p), shall, on conviction, be liable to a fine not exceeding 300,000 rupees and to imprisonment for a term not exceeding 10 years.

(3) Any person who commits an offence specified in subsection (1)(b) to (p) shall, on conviction, be liable to a fine not exceeding 500,000 rupees and to imprisonment for a term not exceeding 25 years.

(4) No prosecution for an offence under this Act shall be instituted except by, or with the consent of, the Director of Public Prosecutions.

(5) Notwithstanding section 72 of the District and Intermediate Courts (Criminal Jurisdiction) Act, the Intermediate Court shall have jurisdiction to try any offence, and inflict any penalty, under this Act.

(6) The Court before which a person is convicted of an offence under this Act shall, in addition to any penalty imposed in respect of that offence, order that any object in respect of which the offence was committed or which was used for, in connection with the commission of the offence, be forfeited to the State.

### **43. Regulations**

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

- (2) Any regulations made under subsection (1) may provide —
- (a) for the amendment of the Schedules;
  - (b) for the payment of fees and the levying of charges;
  - (c) for notification and the licensing of practices;
  - (d) for the registration of radiation sources, radiation workers and service providers; -
  - (e) for the control of import and export of radiation sources and other controlled items;
  - (f) for the safe transport of nuclear and other radioactive material;
  - (g) for defining the obligations of licensees for the safe and secure conduct of practices;
  - (h) for the control of radiation exposure to radiation workers, patients and the public;
  - (i) for the safe management of radioactive waste and disused sealed sources;
  - (l) for preparedness and response to radiological emergencies;
  - (k) for the exemption of radiation sources and practices;
  - (l) for establishing exemption and clearance levels;
  - (m) for nuclear security and safeguards;
  - (n) for any matter pertaining to the obligations of Mauritius arising from relevant international legal instruments ratified by it;
  - (o) that any person who contravenes the regulations shall commit an offence and shall, on conviction, be liable to a fine not exceeding 100,000 rupees and to imprisonment for a term not exceeding 5 years; and
  - (p) for any other matter for the purpose of this Act.

#### **44. Repeal**

The Radiation Protection Act is repealed.

#### **45. Consequential amendments**

(1) The Dangerous Chemicals Control Act is amended, in section 3(1), by repealing

subparagraph (f) and replacing it by the following subparagraph —

(f) radioactive material as defined in the Radiation Safety and Nuclear Security Act 2018;

(2) The Occupational Safety and Health Act is amended —

(a) in section 2, in the definition of “radiation”, by deleting the words “Radiation Protection Act” and replacing them by the words “Radiation Safety and Nuclear Security Act 2018”; and

(b) in section 80(3), by deleting the words “Radiation Protection Act” and replacing them by the words “Radiation Safety and Nuclear Security Act 2018”.

#### **46. Transitional and saving provisions**

(1) All rights, obligations and liabilities subsisting in favour of or against the Radiation Protection Authority shall, at the commencement of this Act, continue to exist under the same terms and conditions in favour of or against the Authority.

(2) Any act done by the Radiation Protection Authority established under the repealed Radiation Protection Act shall, on the commencement of this Act, be deemed to have been done by the Authority under this Act.

(3) (a) Subject to this subsection, an authorisation granted under the repealed Radiation Protection Act shall, on the commencement of this Act, be deemed to have been granted under this Act.

(b) A person who is deemed to have been granted an authorisation under this Act shall, on the commencement of this Act, have a period of one year to fully comply with all the requirements of this Act.

(c) Where a person referred to in paragraph (b) fails, within the specified period, to fully comply with all the requirements of this Act, the authorisation granted to him shall lapse.

(4) Every officer appointed under section 8 of the repealed Radiation Protection Act, in employment before the commencement of this Act, shall, on the commencement of this Act, be transferred to the Authority on terms and conditions which shall not be less favourable than those of his previous appointment.

(5) Notwithstanding section 100), the Chief Radiation Protection Officer appointed under section 8 of the repealed Radiation Protection Act, in employment before the commencement of this Act, shall, on the commencement of this Act, be deemed to have been appointed as the Director of the Authority on terms and conditions which shall not be less favourable than those of his previous appointment.

(6) Where this Act does not make provision for any transition or saving, the Minister may make such regulations as may be necessary for such transition or saving.

#### **47. Commencement**

(1) Subject to subsection (2), this Act shall come into operation on a date to be fixed by Proclamation.

(2) Different dates may be fixed for the coming into operation of different sections of this Act.

Passed by the National Assembly on the ninth day of November two thousand and eighteen.

**Bibi Safeena Lotun (Mrs)**  
*Clerk of the National Assembly*

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## **FIRST SCHEDULE**

[Section 2]

### **DOSE LIMITS**

#### **1. Occupational exposure**

For occupational exposure of workers over 18 years of age, the dose limits for radiation shall be —

- (a) an effective dose of 20 millisieverts (mSv) per year averaged over 5 consecutive years (100 mSv in 5 years) and of 50 mSv in any single year;
- (b) an equivalent dose to the lens of the eye of 20 mSv per year averaged over 5 consecutive years (100 mSv in 5 years) and of 50 mSv in any single year; and
- (c) an equivalent dose to the extremities (hands and feet) or to the skin of 500 mSv in a year.

#### **2. Public exposure**

(1) For public exposure, including exposure of an embryo or a foetus in a female worker, the dose limits for radiation shall be —

- (a) an effective dose of one mSv in a year;
- (b) an equivalent dose to the lens of the eye of 15 mSv in a year; and
- (c) an equivalent dose to the skin of 50 mSv in a year.

(2) For public exposure, the effective dose may, in special circumstances as may be prescribed, be higher than one mSv in a year, provided that the average dose over 5

consecutive years does not exceed one mSv per year.

## **SECOND SCHEDULE**

[Section 3 (2)]

### **CONVENTIONS AND TREATIES**

1. Vienna Convention on Civil Liability for Nuclear Damage
  2. Convention on Supplementary Compensation for Nuclear Damage
  3. Convention on the Physical Protection of Nuclear Material
  4. Amendment to the Convention on the Physical Protection of Nuclear Material
  5. Convention on Early Notification of a Nuclear Accident
  6. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
  7. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
  8. African Nuclear-Weapon-Free Zone Treaty
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