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S T A T U T O R Y I N S T R U M E N T S

2026 No. 60

THE ATOMIC ENERGY (NON-IONISING RADIATION PROTECTION) REGULATIONS, 2026

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S T A T U T O R Y I N S T R U M E N T S

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The Atomic Energy (Non-Ionising Radiation Protection) Regulations, 2026

(Under sections 1(3) and 72(2) (n) of the Atomic Energy Act, Cap. 154)

IN EXERCISE of the powers conferred upon the Council by sections 1(3) and 72(2) (n) of the Atomic Energy Act, these Regulations are made this 2nd day of July, 2026.

Part I—Preliminary

1. Citation

These Regulations may be cited as the Atomic Energy (Non-Ionising Radiation Protection) Regulations, 2026.

2. Application of Regulations

(1) These Regulations apply—

(a) to occupational, public and medical exposure due to a practice or source of non-ionising radiation within a practice including—

(i) sources of electromagnetic radiation or non- ionising radiation;

(ii) a practice involving and including the production or emission of non-ionising radiation from an artificial source;

(iii) materials and devices emitting non- ionising radiation;

(iv) any practice which involves a risk of harm arising from a source of non-ionising radiation;

(v) a facility which serves the purpose of or performs functions in the course of which non- ionising radiation is created or is capable of being created; and

(vi) any situation involving exposure or the potential for exposure to non-ionising radiation, except those which are excluded under these Regulations; and

(b) to sources of non- ionising radiation specified in Schedule 2 to these Regulations including—

(i) devices, equipment and installations that produce non-ionising radiation, including industrial and consumer products;

(ii) installations and facilities containing devices and equipment that emit non-ionising radiation which are used for industrial, domestic, commercial, medical, agricultural, research and education purposes; and

(iii) source of non-ionising radiation specified under these Regulations.

(2) These Regulations do not apply to exposures from natural sources of non-ionising radiation, including sources of natural light, lightening discharge and radiation in human and other animal bodies.

3. Purpose of Regulations

The purpose of these Regulations is—

(a) to establish limits on exposure to non-ionising radiation in order to provide protection against known or potential

biological or health effects from any source producing or emitting such radiation; and

(b) to establish the minimum requirements for the protection of the public, workers and patients from risk to their health arising or likely to arise from exposure to non-ionising radiation.

4. Interpretation

In these Regulations, unless the context otherwise requires—

"Act" means the Atomic Energy Act, Cap. 154;

"antenna" means a specialised transducer that converts radio-frequency fields into alternating current (AC) or vice-versa, and includes receiving antennas, transmitting antennas and other multiple antennas;

"authorisation" means permission granted in writing by the Council to a person who has submitted an application to carry out a practice and may take the form of a certificate of compliance, licence or permit under these Regulations;

"authorised person" means a person authorised to engage in a practice or activity that emits non-ionising radiation, including an employer and owner;

"base station" means fixed equipment for radio transmission used in cellular communication or wireless installation for local area networks and includes all radio transmitters and associated antennas;

"basic restrictions" means the quantities of the limit on exposure to static and time-varying electric, magnetic, and electromagnetic fields that are based directly on established health effects;

"certificate of compliance" means a document issued to an authorised person of a source of non- ionising radiation on the basis of a safety assessment and accompanied by specific requirements and conditions to be complied with by the authorised person;

"Council" means the Atomic Energy Council established under section 3 of the Act;

"communication tower or tower" means any mast which holds or carries any equipment for receiving broadcasting or transmitting electromagnetic waves;

"consumer electronic device" means a device capable of producing or emitting non- ionising radiation that is purchased by an individual or household for final use;

"currency point" has the value assigned to it under Schedule 1to these Regulations;

"device" means a manufactured product that produces non-ionising radiation;

"dose" means a measure of the radiation received or absorbed by a target;

"electromagnetic field" means a property of space caused by the motion of electric charges including static electric, static magnetic and time-varying electric, magnetic and electromagnetic (radio wave) fields with frequencies up to 300 GHz;

"exposure" means the subjection to non-ionising radiation excluding non-ionising radiation originating from physiological processes in the body and other natural phenomena;

"exposure limit" means an upper limit placed on human exposure to non-ionising radiation to protect against adverse physiological responses to the radiation;

"facility" means any assembly of devices, equipment, structures or natural features, whether simple or complex, which serves some purpose or performs some function, in the course of which ionising radiation is created, or is capable of being created;

"general public exposure" means all exposure to non-ionising radiation experienced by members of the general public, excluding occupational exposure and exposure during medical procedures;

"health" means a state of complete physical, mental and social well-being;

"installation" means a mounting or erection or assemblage that incorporates a source of non-ionising radiation;

"magnetic field" means the environment in which the magnetic effect from a source of non-ionising radiation are experienced;

"Minister" means the Minister responsible for atomic energy and radiation protection;

"Non-ionising radiation" means all radiations and fields of the electromagnetic spectrum that do not normally have sufficient energy to produce ionisation in matter; characterised by energy per photon less than about 12 milli-electron-Volt, which is equivalent to wavelength greater than 1mm, or frequencies lower than 3×10^{15} Hertz;

"notification" means a document submitted to the Council by a person, to notify the Council of an intention to carry out a practice;

"occupational exposure" means an exposure to non-ionising radiation experienced by individuals in the course of performing their work;

"practice" means any human activity that introduces additional sources of exposure or exposure pathways or extends exposure to additional people or modifies the network of exposure pathways from existing sources, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed;

"qualified expert" means an individual who by virtue of certification by appropriate boards or societies, professional licence or academic qualification and experience, is duly recognised by the Council as having expertise in a relevant field of specialisation including radiation protection, occupational health, quality assurance or any relevant engineering or safety specialty;

"radiation protection officer" means any person appointed under section 18 of the Act;

"radiation safety" means measures intended to minimize the likelihood of accidents with radiation sources and, where an accident occurs, to mitigate its consequences;

"radiation protection" means a system of technical and organisational measures to reduce or limit exposure of people and the environment from ionising radiation;

"radiation safety officer" means a person appointed under section 35 of the Act who is competent in radiation protection matters, to oversee the implementation of the requirements of these Regulations and is recognised by the Council;

"reference level" means non-ionising radiation exposure level provided for practical exposure assessment purposes to determine whether the basic restrictions are likely to be exceeded;

"source" means a device, equipment or installation that produces non-ionising radiation;

"Specific Absorption Rate (SAR)" means the rate at which energy is absorbed in body tissues, in Watts per kilogram (W/kg);

"surveillance" means monitoring of human exposure to non-ionising radiation or monitoring of a non- ionising radiation emitting source;

"telecommunication infrastructure" means any support structure installed or constructed for the purpose of communication network for transmission or reception of electromagnetic waves including towers, base transceiver stations (BTS) which can be shared by different service providers;

"trained worker" means an employee or self-employed individual subjected to exposure to non-ionising radiation at work, who receives any necessary information and training about non-ionising radiation protection measures;

"worker" means an employee or self-employed individual who is subjected to non- ionising radiation exposure at work, and can be either a trained worker or a worker in an area where non-ionising radiation limits will not be exceeded.

5. Compliance with other laws

Where any act is prohibited or otherwise regulated by any written law other than these Regulations, nothing in these Regulations shall be construed as authorising an authorised person of a non-ionising radiation source to do any such act, other than in accordance with that written law.

PART II—COMPLIANCE MONITORING AND ENFORCEMENT BY COUNCIL

6. Compliance monitoring

(1) The Council shall monitor, supervise and coordinate, all activities relating to radiation protection and safety for sources of non-ionising radiation for the purposes of ensuring compliance with the Act and these Regulations.

(2) The Council may, in carrying out compliance monitoring under subregulation (1), undertake radiation protection and safety for sources of non- ionising radiation.

(3) The Council may, upon undertaking radiation protection and safety for sources of non- ionising radiation under subregulation (2), issue the results in form of an onsite report to the authorised person or responsible person in charge of the facility, operations or activities.

(4) Subject to subregulation (1), the Council may require an authorised person of any installation or device to demonstrate compliance with the exposure limits specified in Schedule 3 to these Regulations by means of measurement, declaration of compliance or by a certificate of compliance from a body approved by the Council.

(5) The Council shall, in establishing compliance procedures, take into account any relevant agreements relating to the mutual recognition and acceptance of testing of products emitting non ionising radiation, where applicable.

(6) Notwithstanding subregulation (1), the following persons are responsible for ensuring compliance these Regulations in relation to a device, equipment or installation that produces non-ionising radiation, as applicable—

(a) manufacturers, importers or suppliers;

(b) owners;

(c) workers;

(d) radiation safety officers;

(e) law enforcers and other relevant regulatory authorities;

(f) medical practitioners;

(g) health professionals with medical specialist knowledge in medical effects of radiation exposures;

(h) qualified experts; and

(i) ethical review committees.

7. Enforcement by Council in relation to radiation protection and safety for sources of non- ionising radiation

(1) The Council may, after undertaking compliance monitoring under regulation 6 issue a notice to the responsible developer, operator or person in charge of the facility, operations or activities to implement mitigation measures or stop operations or activities as applicable.

(2) Notwithstanding subregulation (1), the Council or an authorised officer may after inspecting a sources of non- ionising radiation or investigating an incident or accident under regulation 25, issue an improvement notice under regulation 8, a stop order under regulation 9 or take any other actions in accordance with these Regulations.

8. Radiation protection and safety improvement notice

(1) The Council or an authorised officer may, where there is reasonable cause to believe that any person is in contravention of the Act or these Regulations, serve an improvement notice directing that person to do any of the following—

(a) ensure surveillance mechanisms are in place to measure or calculate, and monitor the exposure of the public and workers;

(b) prescribe mitigating actions where sources are not in compliance with non-ionising radiation exposure limits specified in Schedule 3 to these Regulations;

(c) require the measurement and monitoring of sources of non-ionising radiation; and

(d) include any other measure necessary to ensure compliance with the exposure limits.

(2) An improvement notice issued under subregulation (1) shall specify the period within which the requirements of the notice are to be complied with.

9. Stop order

Where there is continuous emission of excessive non- ionising radiation, the Council may issue a stop order.

General prohibition and notification

10. Prohibited practices

(1) A person shall not use or operate any device or installation of a non-ionising radiation source which leads to emission or exposure unless the device or installation is excluded under these Regulations or has an authorisation issued in accordance with these Regulations.

(2) Subject to subregulation (1), the Council may, in the interest of public safety or environmental protection, prohibit operations involving emission of non-ionising radiation.

(3) A person who contravenes subregulation (1) commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or imprisonment not exceeding four years, or both.

11. Notification

(1) A person who intends to undertake a practice involving a source of non-ionising radiation shall notify the Council using Form 1 set out in Schedule 4 to these Regulations.

(2) The Council shall, after satisfactory evaluation of a notification made under subregulation (1), issue a certificate of compliance.

(3) A person who contravenes subregulation (1) commits an offence and is liable, on conviction, to a fine not exceeding one hundred currency points or imprisonment for a term not exceeding two years or both.

Authorisation for practices involving medical sources of non- ionizing radiation

12. Application for authorisation

(1) A person involved in a practice where a medical source of non–ionising radiation is applied shall after complying with the requirement of notification under regulation 11, apply to the Council for authorisation.

(2) An application under subregulation (1) shall be in Form 2 set out in Schedule 4 to these Regulations.

(3) An application for an authorisation shall be submitted to the Council and shall contain—

(a) the legal status and technical competence of the applicant;

(b) a technical description of the practice to be carried out;

(c) the planned time of commencement and completion of the construction of installations relating to the practice;

(d) the name and qualifications of at least one person designated as a radiation safety officer for purposes of the practice;

(e) an evaluation of the nature, magnitude and likelihood of the exposures attributed to the practice and source within the practice;

(f) reports and studies undertaken, including an environmental and social impact assessment and a safety assessment of the proposed practice;

(g) a determination of the characteristics and activities of any non- ionising radioactive material to be discharged to the environment with an assessment of the resulting doses to the relevant critical group;

(h) in case of a source meant for medical exposure, the qualifications in radiation protection of the medical practitioners who are to be designated by name or by qualification credentials in the authorisation as the only individuals permitted to administer medical exposure by means of the authorised source;

(i) necessary steps to be taken for the protection and safety of workers, members of the public and where applicable, patients;

(j) the impact of the proposed practice on public and private interests, including the interests of affected landowners;

(k) holders of other rights and possible mitigation measures;

(l) an emergency response plan for the proposed practice;

(m) consents and permits required under any other law;

(n) a decommissioning plan for the proposed practice;

(o) the fees prescribed in Schedule 5 to these Regulations; and

(p) any other information that the Council may require.

(4) A person who contravenes subregulation (1) commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or imprisonment for a term not exceeding four years, or both.

13. Review of application

(1) The Council shall, upon receipt of an application made under regulation 12, review the application and may request additional information from the applicant, specifying the time frame for response by the applicant.

(2) The Council shall process every application for an authorisation expeditiously, and in any case, not later than ninety days after receipt of the complete application.

(3) The Council may, in reviewing an application under regulation 12, carry out an inspection at the cost of the applicant.

14. Authorisation

(1) The Council shall, where it is satisfied with the application for authorisation submitted in accordance with regulation 12, grant authorisation to the applicant to engage in a practice involving a medical source of non- ionising radiation.

(2) The Council may attach terms, conditions and limitations to the authorisation.

(3) The Council shall, where it refuses to grant an authorisation, give the applicant a statement of the reasons for the refusal within thirty days after the decision.

(4) A person aggrieved by the decision of the Council under sub regulation (3) may appeal to the High Court within thirty days after receipt of the decision of the Council.

15. Duration of authorisation

An authorisation issued by the Council under these Regulations shall remain in force for the period specified in the authorisation.

16. Renewal of authorisation

(1) An authorised person may, within ninety days before the expiry of an authorisation, apply for renewal of the authorisation in Form 2 set out in Schedule 4 of these Regulations.

(2) An application for renewal of an authorisation shall be accompanied with fees prescribed in Schedule 5 of these Regulations.

(3) The Council may renew an authorisation on such terms and conditions as it may determine.

17. Radiation safety officer

(1) An authorised person engaged in a practice involving a medical source of non- ionising radiation shall, in consultation with the Council, appoint and employ a radiation safety officer.

(2) The qualifications of the radiation safety officer appointed under subregulation (1) shall include a level of academic knowledge and professional experience compatible with the levels of risk associated with the authorised practice or source within the practice.

(3) The authorised person may employ such a number of radiation safety officers that is commensurate with the size of the facility, the complexity of the practice and the risk involved.

(4) The radiation safety officer shall, in relation to the medical source of non-ionising radiation—

(a) oversee the application of the radiation protection and safety requirements;

(b) have authority to stop unsafe practices where necessary to protect people and the environment;

(c) liaise with the Council in the enforcement of these Regulations in relation to the undertakings for which he or she is appointed;

(d) advise his or her employer in all matters pertaining to the protection of workers, patients, the public and the environment from the harmful effects of non-ionising radiation, and the security of radiation sources;

(e) advise the user regarding the formulation, observance and enforcement of work place rules for the protection of workers, patients, the public and the environment from the harmful effects of non- ionising radiation;

(f) advise and liaise with the Council regarding the implementation of radiation protection measures at his or her work place;

(g) monitor the purchase and stock levels, the safe use, handling, transport and storage of radioactive materials;

(h) inspect and monitor the facility for radiation safety;

(i) assist in the training of all relevant aspects of radiation protection; and

(j) ensure that all reports of the work under the officer are made available to the Council.

(5) A person who contravenes subregulation (1) commits an offence and is liable, on conviction, to a fine not exceeding fifty currency points or imprisonment for a term not exceeding two years, or both.

Authorisation for practices involving non-medical sources of non-ionising radiation

18. Certificate of compliance

(1) A person practicing or who intends to engage in non-medical practice involving non-ionising radiation shall obtain a certificate of compliance from the Council, to ensure that the public, workers and the environment are protected from any harmful effects of non- ionising radiation.

(2) An application for a certificate of compliance shall be made to the Council in Form 3 set out in Schedule 4 to these Regulations, upon payment of fees set out in Schedule 5 to these Regulations.

(3) An application made under subregulation (2) shall be accompanied with proof of the following information—

(a) the strategy for operating sources including—

(i) the number of the sources; and

(ii) management of the sources.

(b) the compliance standards due diligence policy and procedures;

(c) the policies and procedures applicable to the provision of occupational safety;

(d) the Environmental Social Impact Assessment (ESIA) approval; and

(e) a risk management framework.

(4) Notwithstanding subregulation (3), the Council may request for additional information as it may consider necessary.

19. Issuance of certificate of compliance

(1) Where the Council, in collaboration with the relevant Ministry, department or agency of Government is satisfied, with an application made under regulation 18 (2), the Council shall issue a certificate of compliance, where the applicant—

(a) has its principal place of business and it is registered in Uganda;

(b) meets the applicable regulations and standards for the holder of a certificate of compliance;

(c) has an adequate number of qualified staff who are trained and equipped to conduct safe operations of non-ionising radiation sources or practices;

(d) has an approved security and safety programme in accordance with these Regulations; and

(e) meets any other requirements as specified by the Council.

(2) Subject to subregulation (1), the Council shall, before issuing a certificate of compliance, be satisfied that the applicant has in place—

(a) methods of control and supervision of operations involving emission of non- ionising radiation;

(b) safety management systems;

(c) training programs; and

(d) maintenance arrangements consistent with the nature and extent of the operations specified and commensurate with the size, structure and complexity of the practice.

(3) A certificate of compliance issued under subregulation (1), shall contain the following—

(a) the issuing authority;

(b) the certificate of compliance number and its expiration date;

(c) the intended authorised person's name, trading name and address of the principal place of business;

(d) the date of issue and the name, signature and title of the Council representative;

(e) the location where the contact details of operational management can be found;

(f) the description of the types of operations authorised;

(g) the type or model of the source authorised for use; and

(h) the authorised areas of operation.

20. Validity and renewal of certificate of compliance

(1) A certificate of compliance issued by the Council shall be valid for 2 years from the date of issue or renewal unless—

(a) a shorter period is specified by the Council;

(b) the Council amends, suspends, revokes or otherwise terminates the certificate;

(c) a holder of a certificate of compliance surrenders it to the Council; or

(d) a holder of a certificate of compliance notifies the Council of the suspension of operations.

(2) Notwithstanding subregulation (1), a certificate of compliance may be revoked by the Council, where an authorised person defaults on requirements under regulation 19.

(3) A certificate of compliance which is suspended or revoked shall be returned to the Council.

(4) A holder of a certificate of compliance may, within 90 days before the date of expiry of the certificate of compliance, apply to the Council for renewal in Form 3 set out in Schedule 4 to these Regulations.

21. Amendment of certificate of compliance

(1) The Council may, amend a certificate of compliance, where—

(a) the Council determines that the amendment is necessary for safety of a practice; or

(b) a holder of a certificate of compliance applies for an amendment and the Council determines that the amendment is necessary.

(2) Subject to subregulation (1), a holder of a certificate of compliance shall operate in accordance with the amendment unless it is subsequently withdrawn.

General requirements for authorised persons

22. Obligations of authorised persons

(1) An authorised person involved in a practice that emits non-ionising radiation shall establish and implement a safety management system in accordance with conditions of the authorisation issued under these Regulations.

(2) An authorised person shall—

(a) be responsible for the control and safe conduct of the authorised practice;

(b) comply with all requirements, terms and conditions established by the Council regarding the authorised practice;

(c) ensure secure storage of the non-ionising radiation source or its components at all times;

(d) develop, implement and document a non-ionising radiation safety programme commensurate with the nature

and extent of the risks associated with the practice and interventions under their responsibility sufficient to ensure compliance with the requirements of these Regulations;

(e) establish and implement the technical and organisational measures that are needed for ensuring safety of a practice or source emitting non- ionising radiation for which they are authorised, and for compliance with all applicable requirements of these Regulations;

(f) notify the Council of the intention to introduce modifications to any practice, source or facility for which they are authorised;

(g) ensure that no harm or injury is caused to a person or damage to any property which is on the facility on which the practice is carried out;

(h) provide sufficient security measures against the misuse or theft of a source;

(i) ensure that the workers are informed about the known biological effects of electromagnetic fields as documented by the International Commission on Non-Ionising Radiation Protection and the World Health Organization, where applicable, with a written explanation;

(j) ensure that the workers are informed of the procedure to be followed in the event of any exposure above the limits specified in Schedule 3 to these Regulations, including a contact point; and

(k) ensure that performance specifications, operating and maintenance instructions, including protection and safety instructions, are provided in the English language and in compliance with the relevant IEC and ISO Standards with regard to accompanying documents.

(3) The radiation safety program developed under subregulation (2)(d) shall include the actions to—

(a) determine and keep continually under review the measures needed to achieve the radiation protection and safety objectives;

(b) ensure that the resources needed for their implementation are provided regularly;

(c) verify that the non-ionising radiation safety objectives are being achieved;

(d) identify and present, or promptly correct, any failures or shortcomings in the non- ionising radiation safety measures;

(e) facilitate consultation and cooperation between all relevant parties with respect to non-ionising radiation protection and safety; and

(f) keep appropriate records regarding the discharge of their responsibilities.

(4) Notwithstanding the generality under subregulation (2), an authorised person shall—

(a) ensure that workers have fit-for-purpose protective garments and appropriate equipment to carry out installations, operations and maintenance of sources;

(b) in consultation with the Council, ensure that its staff receive appropriate training and are provided with the necessary manuals and supporting tools and procedures;

(c) ensure appropriate management and supervision of all staff;

(d) monitor compliance within such limits in accordance with these Regulations; and

(e) update the Council periodically on its operating parameters and bands in accordance with these Regulations.

(5) For the avoidance of doubt, an authorised person is liable for the actions or omissions by workers relating to installation or maintenance of its equipment.

(6) An authorised person shall be liable for any harm to any person or any damage to any property caused by any emission of non-ionising radiation specified under subregulation (4).

(7) Subject to subregulation (1), an authorised person may appoint any person to carry out actions or tasks related to responsibilities referred to in subregulation (2).

23. Installation, commissioning and maintenance of sources of non-ionising radiation

An authorised person shall—

(a) ensure that the installation of a source and the associated equipment is carried out in accordance with the specifications of the manufacturer, applicable standards and regulatory requirements;

(b) conduct commissioning tests after the initial installation or a major modification of the source and submit the test results to Council for verification;

(c) document and implement a quality control program;

(d) maintain the source in a condition for safe operation;

(e) assess the safety of the source periodically to determine that the source is in a good condition for safe operation; and

(f) keep a log of all the checks performed before and after each test maintenance activity, commissioning results or safety assessment reports.

Part III—Emergency Planning And Preparedness

24. Emergency response plans

(1) Where a practice or source within a practice has a potential for accidents that may cause unplanned exposure or injury of any person, the authorised person shall ensure that an emergency plan appropriate for the source and its associated risks is prepared and drilled.

(2) Where a source is involved in an accident or incident, the authorised person is responsible for taking such protective actions as may be required for protection of occupationally exposed workers and for the protection of the public from exposure.

(3) An authorised person responsible for a source shall ensure that the emergency plan referred to in subregulation (1) defines on-site responsibilities and takes account of off-site responsibilities of other intervening organisations appropriate for implementation of the emergency plan.

(4) The emergency plan shall, as appropriate—

(a) characterise the features and extent of the potential emergency taking into account the results of any accident analysis and any lessons learned from operating experience and accidents that have occurred with sources of a similar type;

(b) identify the various operating and other conditions of the source which could lead to the need for intervention;

(c) describe the methods and instruments for assessing the accident and its consequences on and off the site;

(d) provide for protection and mitigation actions and assignment of responsibilities for originating and discharging such actions;

(e) provide for rapid and continuous assessment of the accident as it proceeds and determine the need for protective actions;

(f) allocate responsibilities for notifying the relevant authorities and initiating intervention;

(g) provide procedures, including communication arrangements, for contacting any relevant intervening organisation and for obtaining assistance from fire-fighting, medical, police and relevant ministries, departments and agencies and other organisations;

(h) provide for the training of personnel involved in implementing emergency plans and be rehearsed at suitable intervals in conjunction with the relevant ministries, departments and agencies and other organisations; and

(i) provide for periodic review and updating of the plan.

25. Incidents and accidents

(1) Where there occurs an incident or accident that compromises radiation safety, every authorised person, shall as appropriate—

(a) investigate the incident or accident and its causes, circumstances and consequences;

(b) take appropriate action to remedy the circumstance and to prevent a recurrence of similar situations;

(c) communicate to the Council about the incident or accident, its causes, its circumstances and consequences, and on the corrective or preventive actions taken or to be taken; and

(d) undertake any other actions as may be required by the Council.

(2) The communication of an incident or accident to the Council under subregulation (1) shall be within forty eight hours of the occurrence of the incident or accident.

(3) Where an authorised person intentionally or negligently fails to take corrective or preventive actions within the reasonable time stipulated under subregulation (2), the Council may modify, suspend or revoke a certificate of compliance or authorisation granted in accordance with these Regulations.

(4) The Council shall, before modifying, suspending or revoking a certificate of compliance or an authorisation under subregulation (3), carry out investigations.

Part IV—Inspection And Enforcement

26. Inspection, testing and assessment of compliance

(1) The Council may conduct assessments or inspections at premises of authorised persons or facilities involved in practices that emit non-ionising radiation.

(2) Where a radiation protection officer or other person authorised by the Council is inspecting, testing or assessing compliance, the officer or person authorised by Council shall have unrestricted access to—

(a) the source of non-ionising radiation being operated and its infrastructure;

(b) the certificate of registration or licence issued by the appropriate authority for the source being operated; and

(c) any other document, record, or report required to be kept by the authorised person of the source regulated under these Regulations.

(3) Subject to subregulation (1), an authorised person shall, upon request by Council, provide the means required or necessary to facilitate the entry for the Council to inspect the source and its infrastructure, facilities and equipment to determine compliance with the Act and these Regulations.

(4) A radiation protection officer or a person authorised by the Council shall, in the course of inspecting, testing or undertaking compliance by the authorised person, exercise the right and powers provided for under section 20 of the Act.

27. Enforcement

(1) The Council may modify, suspend or revoke an authorisation upon finding an undue threat to health and safety or non-compliance with applicable requirements.

(2) Notwithstanding subregulation (1) the Council may direct closure or undertake an action for locking a practice or source for non-compliance with the Act and these Regulations or any other requirements commensurate with the nature of a violation.

PART IV—ADMINISTRATIVE REQUIREMENTS

28. Certificate of practice for qualified experts

(1) A person intending to provide the services of a qualified expert to authorised persons shall apply for a certificate of practice.

(2) An application made under subregulation (1) shall be made to the Council in Form 4 set out in Schedule 4 to these Regulations and accompanied with proof of payment of the fees prescribed in Schedule 5 to these Regulations.

(3) A certificate of practice issued under this regulation shall be valid for the duration stated on the certificate not exceeding 5 years.

(4) Notwithstanding subregulation (3), a certificate of practice issued under this regulation may be suspended or revoked in case of violation of radiation protection and safety protocols or non-compliance with requirements prescribed by the Council and other relevant professional bodies.

29. Terms and conditions of service

(1) An authorised person shall ensure that the terms and conditions of service of every worker are independent of the existence or the possibility of occupational exposure.

(2) Subject to subregulation (1), special compensatory arrangements or preferential treatment with respect to salary or special insurance coverage, working hours, length of vacation, additional holidays or retirement benefits shall not be used as substitutes for the provision of proper protection and safety measures to ensure compliance with the requirements of these Regulations.

(3) An authorised person shall advise and require all female workers to immediately notify the authorised person when pregnant.

(4) Where a female worker has made a notification under subregulation (3), the authorised person shall adapt the working conditions in respect of occupational exposure in order to ensure that the embryo or foetus is afforded the same broad level of protection, which is required for the general public, in accordance with the limits specified in Schedule 3 to these Regulations.

(5) For the avoidance of doubt, a notification of pregnancy under subregulation (3) shall not be a ground of excluding female workers from employment.

(6) An authorised person shall make arrangements to provide a worker with suitable alternative workplace or employment where it

is determined, either by the Council or through health surveillance that the worker is no longer able to continue in the employment involving occupational exposure.

(7) A person under the age of 16 years shall not be subjected to occupational exposure, and a person under the age of 18 years shall not be allowed to work in a controlled area unless supervised, and it shall only be for the purpose of the training.

30. Classification of controlled and supervised areas

(1) The authorised person shall designate controlled areas and shall, in respect of the controlled area—

(a) designate the area in which specific protective measures or safety and security provisions are or could be required for—

(i) controlling normal exposures during normal working conditions;

(ii) preventing or limiting the extent of potential exposures; and

(iii) preventing or limiting persons who are not authorised to gain access to sources of non-ionising radiation.

(b) determine the boundaries of any controlled area on the basis of the magnitude and likelihood of expected exposures and the nature and extent of the required protection and safety provisions;

(c) delineate controlled areas by physical means or, where this is not reasonably practicable, by some other suitable means;

(d) where a source of non-ionising radiation is brought into operation or energised only intermittently or is moved

from place to place, delineate an appropriate controlled area by means that are appropriate under the prevailing circumstances and specify exposure times;

(e) display a warning symbol, recommended by the International Organization for Standardisation (ISO) and appropriate instructions at access points and other appropriate locations within controlled areas as specified in Schedule 6 to these Regulations;

(f) establish occupational protection, safety and security measures, including work place rules and procedures that are appropriate for controlled areas;

(g) restrict public access by means of administrative procedures commensurate with the magnitude and likelihood of the expected exposures;

(h) provide for screening of all personnel who access the controlled area; and

(i) establish measures for providing patients with appropriate gear before they access the controlled area.

(2) The authorised person shall designate supervised areas and shall, in respect of the areas—

(a) designate an area not already designated as a controlled area, but where occupational exposure conditions need to be kept under review, even though specific protection measures and safety provisions are not normally needed;

(b) delineate and identify the supervised areas by appropriate means, taking into account the nature and extent of non-ionising radiation hazards in those areas; and

(c) periodically review the conditions within the supervised area to determine the possible need to revise the protection measures or safety provisions, including the boundaries of controlled and supervised areas.

31. Work place rules and procedures

(1) An authorised person shall develop, document and implement work place rules and procedures that are necessary for the protection and safety of workers and other persons and for the security of the sources.

(2) The work place rules and procedures referred to in subregulation (1) shall be in English and any other local language comprehensible to the workers.

(3) Subject to subregulation (1), an authorised person shall provide all workers with adequate information on—

(a) the health risks due to their occupational exposure, whether normal exposure or potential exposure;

(b) the significance for protection and safety of their actions; and

(c) general and work place rules and procedures and on the available protection and safety provisions.

(4) Notwithstanding subregulation (3), an authorised person shall provide female workers who are required to enter controlled areas or supervised areas with appropriate information on—

(d) the risk to the embryo or foetus due to exposures of a pregnant woman; and

(e) the importance for a female worker to notify the employer, as soon as she suspects that she is pregnant.

32. Personal protective equipment

(1) An authorised person shall ensure that all individuals accessing the controlled areas are provided with suitable and fit for purpose personal protective equipment.

(2) An authorised person shall arrange for regular testing and maintenance to be carried out on all personal protective equipment, including as required, special equipment for use in the event of accidents and interventions.

(3) An authorised person shall, in addition to providing personal protective equipment, provide appropriate well-engineered controls and satisfactory working conditions for protection and safety of the workers during normal operations.

(4) Subject to subregulations (1) and (2), an authorised person shall take into account the following factors when assigning personal protective equipment for a given task—

(a) medical fitness to sustain possible extra physical effort while using the protective equipment; and

(b) additional work time or inconvenience or additional non-radiological risks associated with the use of the protective equipment.

PART VI—PUBLIC AND OCCUPATIONAL EXPOSURE

33. Exposure limits

(1) An authorised person shall ensure that specific exposure limits are in conformity with limits approved by the Council to protect workers and the general public against excessive exposure to non-ionising radiation.

(2) Subject to subregulation (1), the exposure limits are—

(a) basic restrictions that should always be complied with; and

(b) reference levels that may be exceeded provided the basic restrictions are not exceeded.

(3) The basic restrictions of occupational and general public exposure in areas to which the public have access are set out in Table 1 of Schedule 3 to these Regulations and follows—

(a) between 1 Hz and 10 MHz, basic restrictions are provided on current density to prevent effects on nervous system functions;

(b) between 100 kHz and 10 GHz, basic restrictions on SAR are provided to prevent whole-body heat stress and excessive localised tissue heating; in the 100 kHz – 10 MHz range, restrictions are provided on both current density and SAR; and

(c) between 10 MHz and 300 GHz, basic restrictions are provided on power density to prevent excessive heating in tissue at or near the body surface.

(4) Reference Levels for occupational and general public exposure in areas to which the public have access are set out in Table 2 of Schedule 3 to these Regulations.

(5) An authorised person shall ensure that any installation or device that emits non-ionising radiation complies with the exposure limits set out in these Regulations, and shall designate appropriate measures to ensure compliance.

(6) An authorised person shall comply with technical standards and specifications described in this regulation to mitigate against any harmful biological or health effects of human exposure to non-ionising radiation.

(7) The Council may amend non-ionising radiation exposure limits specified in Schedule 3 to these Regulations.

34. Conditions for limiting exposures

(1) An authorised person shall ensure that areas with access to the public and workplaces whose exposures exceed the basic restrictions specified in Schedule 3 to these Regulations meet the precautionary measures prescribed in regulation 36.

(2) Unless an evaluation shows that there are no risks of adverse biological effects or health effects, the following categories of workers shall have their exposures to non- ionising radiation in their working environment subject to the same limits as those applicable to members of the public—

(a) workers who share the same area or environment with the public by virtue of the nature of the service being provided to the public;

(b) women who have declared their pregnancy to the authorised person;

(c) workers having metallic prostheses, cardiac pacemakers, defibrillators and other electro-medical devices that are known to suffer adverse interference from the non- ionising radiation exposure levels in which they work; and

(d) workers who have not received appropriate training regarding workplace procedures in areas where the basic restrictions set out in Schedule 3 to these Regulations may be exceeded.

(3) An authorised person whose workers, due to their working environment are exposed to non-ionising radiation at or below the Reference Levels specified in Schedule 3 to these Regulations shall—

(a) ensure compliance with these Regulation; and

(b) undertake an evaluation to establish whether non-ionising radiation exposures have exceeded the basic restrictions.

(4) An authorised person shall undertake direct measurement, type testing, calculation or modelling to verify compliance with this regulation.

35. Exposure assessment

(1) An authorised person shall arrange for assessment of the occupational exposure of workers.

(2) The authorised person shall ensure that the occupational exposure of workers who are normally engaged in a controlled area where individual monitoring is not feasible is assessed on the basis of the results of monitoring of the workplace and of information on the locations and duration of exposure of the workers.

(3) The authorised person shall ensure that the occupational exposure of the workers who are normally engaged in a supervised area or who enter the controlled area occasionally is assessed on the basis of the results of monitoring of the workplace or of individual monitoring.

(4) Subject to subregulation (1), the nature, frequency and precision of individual monitoring shall be determined with consideration of the magnitude and possible fluctuations of exposure levels and the likelihood and magnitude of potential exposures.

(5) An authorised person shall—

(a) keep records of exposure assessments conducted;

(b) make the records of exposure available to the workers in an appropriate manner; and

(c) make the records of exposure available to the Council, upon request.

36. Precautionary measures

(1) The authorised person of any facility where exposure in areas accessible to the public exceeds non-ionising radiation exposure limits, shall take such measures as are necessary to restrict public access or reduce the non-ionising radiation emissions from a source contributing to the exposure.

(2) Subject to subregulation (1), an authorised person shall ensure that workers classified as trained workers who are exposed to non-ionising radiation at work, receive the necessary information and training relating to their exposure and are made aware of the mitigating measures needed to comply with non-ionising radiation exposure limits.

(3) Workers who have not received the necessary information and training as required for trained workers under subregulation (2), shall receive the same protection afforded under these Regulations as members of the public.

(4) An authorised person shall put in place precautionary measures to reduce exposure to non-ionising radiation in areas accessible to the public where non-ionising radiation exposure limits are exceeded.

(5) Subject to subregulation (4), an authorised person shall ensure that the precautionary measures taken incorporate the advice and recommendations contained in the World Health Organization Framework for Guiding Public Health Policy Options in Areas of Scientific Uncertainty.

(6) For avoidance of doubt, the precautionary measures adopted under subregulation (4) shall not extend to changing the exposure limits established by these Regulations.

(7) Notwithstanding subregulation (4), the Council shall determine the appropriate measures to be undertaken in areas to which

both the public and workers have access and which do not comply with these Regulations.

(8) The measures determined by the Council under subregulation (7), may include—

(a) extending the boundaries of areas where public reference levels set out in Schedule 3 to these regulations may be exceeded, and restricting public access to those areas;

(b) requiring the use of appropriate signs, warnings and public notices;

(c) engineering or administrative controls; and

(d) other measures as advised by the relevant regulatory body or agency.

Part VII—Medical Exposure Protection

37. General responsibilities under medical exposure

(1) An authorised person for a medical source shall ensure that—

(a) no patient is administered a diagnostic medical exposure unless the exposure is prescribed by a medical practitioner;

(b) medical practitioners are assigned the primary task and obligation of ensuring overall patient protection and safety in the prescription of and during the delivery of medical exposure;

(c) medical and paramedical personnel are available as required and are either health professionals or have appropriate training to adequately discharge assigned tasks in the conduct of the medical procedures that the medical practitioner prescribes;

(d) the exposure of individuals incurred knowingly while voluntarily helping, other than in their occupation in the care, support or comfort of patients be constrained as specified in Schedule 3 to these Regulations;

(e) personnel engaged in medical uses of radiation are well trained and qualified according to the criteria approved by the Council; and

(f) all personnel who access the MRI imaging room have appropriate safety training and that they are periodically retrained.

(2) An authorised person shall, as far as practicable, ensure that for medical uses of non-ionising radiation, the imaging and quality assurance requirements under these Regulations are complied with, on the advice of a qualified expert in radio diagnostic physics and medicine physics.

(3) A medical practitioner shall promptly inform the authorised person of any deficiencies or needs regarding compliance with respect to protection and safety of patients, and shall take action as may be appropriate to ensure the protection and safety of the patients.

(4) A person who contravenes this regulation commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years or both.

38. Justification of medical exposure

(1) A medical practitioner shall consider the justification of medical exposures that they prescribe by weighing the benefits they produce against the detriment they might cause, taking into account the benefits and risks of available alternative techniques that do not involve medical exposure.

(2) Subject to subregulation (1), a radiological examination for occupational, legal or health insurance purposes undertaken without reference to clinical indications shall be deemed unjustified unless the radiological examination is expected to provide useful information on the health of the individual examination or unless the specific type of examination is justified by those requesting it in consultation with relevant professional bodies.

(3) Mass screening of population groups involving medical exposure shall be deemed unjustified unless the expected advantages for the individuals examined or for the population as a whole are sufficient to compensate for the economic and social costs, including the radiation detriment.

(4) The exposure of humans for medical research shall be deemed to be unjustified unless it is—

(a) in accordance with the guidelines for its application prepared by the Council for International Organization for Medical Science (CIOMS) and the World Health Organization (WHO); and

(b) subject to the advice of the Ethical Review Committee and to any other applicable laws and regulations.

(5) A person who contravenes subregulation (1), commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years, or both.

39. Optimisation of protection for medical exposure

(1) An authorised person shall ensure that all exposures are kept as low as reasonably achievable taking into account economic and societal factors and with restrictions on individual exposure to limit inequities in dose distribution

(2) A person who contravenes subregulation (1) commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years or both.

40. Calibration, clinical dosimetry and quality assurance for medical exposures

(1) An authorised person shall ensure that—

(a) the calibration of sources used for medical exposure is traceable to a Standards Dosimetry Laboratory approved by the Council; and

(b) calibrations of equipment are carried out—

(i) at the time of commissioning of a source;

(ii) after any maintenance procedure that may affect the calibration;

(iii) at least once in a year; and

(iv) at any other intervals approved by the Council, taking into consideration the manufacturer's recommendation and risk associated with the practice.

(2) An authorised person shall ensure that representative values of clinical dosimetry parameters are determined and documented.

(3) Subject to subregulation (1), the quality assurance programmes for medical exposures shall include—

(a) measurements of the physical parameters of the radiation generators and imaging devices at the time of commissioning and every six months after that;

(b) verification of the appropriate physical and clinical factors used in patient diagnosis;

(c) written records of relevant procedures and results; and

(d) verification of the appropriate calibration and conditions of operation of dosimetry and monitoring equipment.

(4) A person who contravenes subregulation (1) and (2) commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or imprisonment for a term not exceeding four years, or both.

41. Medical exposure limits

(1) Authorised persons shall ensure that the medical exposure limits do not exceed those specified in Schedule 3 to these Regulations.

(2) A person who contravenes subregulation (1) commits an offence and is liable, on conviction to, a fine not exceeding two hundred currency points or imprisonment for a term not exceeding four years, or both.

42. Investigation of accidental medical exposures

(1) An authorised person shall promptly investigate any of the following accidents—

(a) a medical exposure substantially greater than intended or resulting in doses repeatedly and substantially exceeding the established medical exposure limits specified in Schedule 3 to these Regulations; and

(b) a repeated equipment failure, accident, error, mishap or other unusual occurrence with the potential for causing a patient exposure significantly different from that intended.

(2) An authorised person shall, with respect to any investigation required under subregulation (1)—

(a) calculate or estimate the doses received and their distribution within the patient;

(b) indicate the corrective measures required to prevent recurrence of such an accident;

(c) implement all the corrective measures that are under their responsibility;

(d) notify the Council by telephone or electronic mail or any other efficient means of communication as soon as practicable, but not later than twenty-four hours after discovery, of any accident which has the potential for, or has resulted in, serious injury or death of a patient, or which involves more than one patient;

(e) notify the Council about any minor injuries by telephone or electronic mail or any other efficient means of communication as soon as practicable, but not later than forty-eight hours after discovery;

(f) submit to the Council, within fifteen days after discovery of the accident, a written report which states the cause of the accident and includes information on the doses, corrective measures and any other relevant information; and

(g) inform the patient and his or her doctor about the accident.

(3) A person who contravenes this regulation commits an offence and is liable, on conviction, to a fine not exceeding one hundred fifty currency points or imprisonment for a term not exceeding four years, or both.

43. General offences

A person who—

(a) contravenes any of the terms or conditions of an authorisation; or

(b) fails to comply with the order of the Council,

commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years, or both.

44. Offences relating to authorisation

(1) A person who—

(a) conducts a practice under these Regulations without an authorisation; or

(b) within the meaning of the Penal Code Act, aids or assists unauthorised person to carry out a practice in the commission of an offence, commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years, or both.

(2) A person who intentionally or negligently transgresses the boundaries of his or her area of operation or such boundaries to be so transgressed commits an offence and is liable, on conviction, to a fine not exceeding two hundred currency points or to imprisonment for a term not exceeding four years, or both.

(3) A court convicting a person under subregulation (1) may, in addition, order that the source which is extracted illegally and any items and instruments used in the commission of the offence be seized by and forfeited to the Government.

45. Counterfeiting and similar offences.

A person who—

(a) counterfeits or issues without due authority, an approval, a certificate of compliance issued under these Regulations;

(b) is found in possession of a certificate of compliance which is fraudulently issued;

(c) submits false information in an application for a certificate;

(d) counterfeits, alters, obliterates or defaces any stamp, mark or sign; or

(e) knowingly receives or keeps in his or her possession any source of non-ionising radiation acquired in contravention of these Regulations,

commits an offence and is liable, on conviction, to a fine not exceeding two hundred and fifty currency points or to imprisonment for a term not exceeding five years, or both.

46. Falsification of certificate of origin and other documents

(1) A person who knowingly falsifies a certificate of origin or any material information on a certificate of origin of a source commits an offence and is liable, on conviction, to a fine not exceeding two hundred and fifty currency points or to imprisonment for a term not exceeding five years, or both.

(2) A person who—

(a) in any application under these Regulations knowingly makes any statement which he or she knows to be false or misleading in a material way;

(b) in any report or return submitted in pursuance of any provision of these Regulations, knowingly includes or permits to be included any information which he or she knows to be false or misleading in a material manner;

(c) places or deposits, or is accessory to the placing or depositing of, any material in any place with the intention of misleading any other person as to the nature of non-ionising radiation source in that place;

(d) falsely represents himself or herself to be a person to whom a certificate of compliance has been issued under these Regulations,

commits an offence and is liable on conviction—

(i) in the case of an individual, a fine not exceeding five thousand currency points or to imprisonment for a term not exceeding three years or both; and

(ii) in the case of a body corporate, to a fine not exceeding ten thousand currency points.

47. General penalty

A person who contravenes any provision of these Regulations for which no penalty is specifically provided, commits an offence and is liable, on conviction, to a fine not exceeding three hundred currency points or to imprisonment not exceeding six years, or both.

Part VII—Miscellaneous

48. Information and documentation

An authorised person shall keep records of the trainings provided to individual workers.

49. Consumer electronic devices

A manufacturer and an importer of consumer electronic devices producing or emitting non- ionising radiation shall ensure that the specific absorption rate (SAR) of the consumer electronic devices do not exceed the exposure limit prescribed in Schedule 3 to these Regulations.

50. Existing licences, permits and agreements

(1) A licence or permit to install or operate a non-ionising radiation source or practice issued under any other applicable law and which is in force before the commencement of these Regulations—

(a) shall have effect from the commencement of these Regulations, as if granted under these Regulations; and

(b) in the case of licence or permit for a specified period, shall remain in force, subject to these Regulations, for so much of that period as falls after the commencement of these Regulations.

(2) Any agreement or similar arrangement made under any applicable law to install and operate a non-ionising radiation source or practice shall continue in force until terminated in accordance with the terms and conditions of the agreement or arrangement.

51. Transitional provision

(1) A person who, on the effective date of these Regulations, is responsible for a practice or is in possession of a source of non-ionising radiation referred to in regulation 2 shall notify the Council within six months from the effective date of the Regulations.

(2) Notwithstanding anything in these Regulations, an authorised person who was involved in a practice in which non-ionising radiation is emitted before the commencement of these Regulations shall submit an application for a certificate of compliance, within six months after the coming into force of these Regulations.

(3) Notwithstanding subregulation (1), an authorised person involved in practice in which non- ionising radiation is emitted shall implement and comply with all the requirements set out in these Regulations within six months after the coming into force of these Regulations.

SCHEDULES

Schedule 1

Regulation 4

Currency Point

One currency point is equivalent to twenty thousand shillings.

Schedule 2

Regulation 2(1) (b)

Sources of Non-Ionising Radiation

The following are sources of non-ionising radiation that are applicable under these Regulations.

Field and frequency range	**Sources**
Static electric and static magnetic fields: 0–1 Hz	(a) Magnetic resonance imaging (MRI) scanners (main magnet) (b) Electrochemical processes, e.g. industrial electrolysis (c) Nuclear magnetic resonance spectrometers (d) Electromagnetic lifting cranes (e) transcranial magnetic stimulation
Low frequency electromagnetic fields: 1 Hz–100 kHz	(a) High voltage power transmission lines (33kV and above) (b) Electrical arc furnaces (c) Industrial induction heating equipment (d) Magnetic resonance imaging (MRI) switched gradient fields
Intermediate frequency electromagnetic fields: 100 kHz–10 MHz	(a) Broadcasting systems and devices (AM radio) (b) Research radiofrequency systems

High frequency electromagnetic fields: 10 MHz–300 GHz	(a) Magnetic resonance imaging (MRI) radiofrequency coils (b) Mobile telecommunication transmitters (c) FM radio and television antennas (d) Radar transmitters including aviation and weather systems (e) Satellite communication systems (f) Portable, mobile and handheld wireless communicationdevices (g) Diathermy equipment (h) Industrial dielectric heating systems (i) Industrial and domestic microwave heaters

Schedule 3

Regulations 6 (4), 8 (1) (b), 22 (2) (j), 29 (4), 33(3) & (4), 34 (1) & (2) (d) 36 (8) (a), 37 (1) (d), 41 (1), 42(1) (a), 49

Exposure Limits

TABLE 1

Basic Restrictions for Static and Time-Varying Electric, Magnetic and Electromagnetic Fields for Frequencies Up to 300GHZ

Exposure scenario	Frequency range	Current density for head &trunk (mA/m^2) (rms)	Whole-body average SAR (W/kg)	Local (head & trunk) SAR (W/kg)	Local limb SAR (W/kg)	Local power density(S) (W/m^2)

Occupational	0 Hz - 1 HZ	40	NA	NA	NA	NA
	>1 Hz – 4 Hz	40/f	NA	NA	NA	NA
	>4 Hz – 1 kHz	10	NA	NA	NA	NA
	>1 kHz – 100 kHz	f/100	NA	NA	NA	NA
	>100 kHz – 6 GHz	f/100	0.4	10	20	NA
	>6 GHz – 300 GHz	NA	0.4	NA	NA	100
General public	0 Hz - 1 Hz	8	NA	NA	NA	NA
	>1 Hz – 4 Hz	8/f	NA	NA	NA	NA
	>4 Hz – 1 kHz	2	NA	NA	NA	NA
	>1 – 100 kHz	f/500	NA	NA	NA	NA
	>100kHz – 6GHz	f/500	0.08	2	4	NA
	>6GHz – 300 GHz	NA	0.08	NA	NA	20

Note:

1. "NA" signifies "not applicable" and does not need to be taken into account when determining compliance.

2. f is the frequency in hertz.

3. Because of electrical inhomogeneity of the body, current densities should be averaged over a cross-section of 1cm^2 perpendicular to the current direction.

4. For frequencies up to 100 kHz, peak current density values can be obtained by multiplying the rms value by √2 (~1.414). For pulses of duration *t*op the equivalent frequency to apply in the basic restrictions should be calculated as $f=1/(2t\text{p})$.
5. For frequencies up to 100 kHz and for pulsed magnetic fields, the maximum current density associated with the pulses can be calculated from the rise/fall times and the maximum rate of change of magnetic flux density. The induced current density can then be compared with the appropriate basic restriction.

6. Whole-body average SAR is to be averaged over 30 minutes.

7. Local SAR and power density (S) values are to be averaged over a 6-minute period.

8. Localized SAR averaging mass is any 10g of contiguous tissue; the maximum SAR so obtained should be the value used for the estimation of exposure.

9. Local S is to be averaged over a square 4cm^2 surface area of the body. Above 30 GHz, an additional constraint is imposed, such that exposure averaged over a square 1cm^2 surface area of the body is restricted to two times that of the 4-cm^2 restriction.

10. For pulses of duration tp the equivalent frequency to apply in the basic restrictions should be calculated as f=1/ (2tp). Additionally, for pulsed exposures in the frequency range 0.3 to 10 GHz and for localized exposure of the head, in order to limit or avoid auditory effects caused by thermo elastic expansion, an additional basic restriction is recommended. This is that the SAR should not exceed 10mJ/kg for workers and 2mJ/kg for the general public, averaged over 10g tissues.

TABLE 2

Reference Levels for Exposure to Static and Time-Varying Electric, Magnetic and Electromagnetic Fields (Unperturbed RMS Values)

Exposure scenario	Frequency range	IncidentElectric (E) field strength (V/m)	Incident Magnetic (H) fieldstrength (A/m)	B-field (B)(μT)	Incident power density (S)(W m^2)
Occupational	0 Hz – 1 Hz	NA	$1.63x10^5$	$2 x 10^5$	NA
	>1 Hz – 8Hz	$2x10^4$	$1.63x10^5/f^2$	$2 x 10^5/f^2$	NA
	>8 Hz – 25Hz	$2x10^4$	$2 x 10^4/f$	$2.5 x 10^4/f$	NA
	>25 Hz – 300 Hz	$5x10^5/f$	$8x10^2$	$1x10^3$	NA
	>300 Hz – 3 kHz	$5x10^5/f$	$2.4x10^5/f$	$3x10^5/f$	NA
	>3kHz – 100 kHz	170	80	100	NA
	>100kHz - 30 MHz	$1504/fM^{0.7}$	10.8/fM	NA	NA
	>30 MHz– 400 MHz	139	0.36	NA	50
	>400 MHz – 2GHz	$10.58fM^{0.43}$	$0.0274fM^{0.43}$	NA	$0.29fM^{0.86}$
	>2 GHz – 6 GHz	NA	NA	NA	200
	>6 GHz – <300 GHz	NA	NA	NA	$275fG^{0.177}$
	300 GHz	NA	NA	NA	100

Generalpublic	0 Hz - 1 Hz	NA	3.2×10^4	4×10^4	NA
	>1 Hz – 8 Hz	$5x10^3$	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	NA
	>8 Hz – 25 Hz	$5x10^3$	$4x10^3/f$	$5x10^3/f$	NA
	>25 Hz – 50 Hz	$5x10^3$	160	200	NA
	>50 Hz – 400 Hz	$2.5x10^5/f$	160	200	NA
	>400 Hz – 3 kHz	$2.5x10^5/f$	$6.4 \times 10^4/f$	$8 \times 10^4/f$	NA
	>3kHz – 100 kHz	83	21	27	NA
	>100 kHz – 30 MHz	$671/fM^{0.7}$	4.9/fM	NA	NA
	>30 MHz – 400 MHz	62	0.163	NA	10
	>400 MHz – 2 GHz	$4.72fM^{0.43}$	$0.0123fM^{0.43}$	NA	$0.058fM^{0.86}$
	>2 GHz – 6 GHz	NA	NA	NA	40
	>6 GHz - <300 GHz	NA	NA	NA	$55/fG^{0.177}$
	300GHz	NA	NA	NA	20

Note:

1. f is frequency in Hz; fM is frequency is MHz; fG is frequency in GHz.

2. "NA" signifies "not applicable" and does not need to be taken into account when determining compliance.

3. Provided that basic restrictions are met and adverse indirect effects can be excluded, field strength values can be exceeded.

4. E, H, B and S are to be averaged over 6-minutes, and where spatial averaging is specified in Notes 7–8, over the relevant projected body space. Temporal and spatial averaging of each of E and H must be conducted by averaging over the relevant square values.

5. For frequencies of 100 kHz to 30 MHz, regardless of the far-field/near-field zone distinctions, compliance is demonstrated if neither peak spatial E or peak spatial H, over the projected whole-body space, exceeds the above reference level values.

6. For frequencies from 30 MHz to 6 GHz:

   (a) within the far-field zone, compliance is demonstrated if one of peak spatial S, E or H, over the projected whole-body space, does not exceed the above reference level values (only one is required); S equivalent may be substituted for S incident;

   (b) within the radiative near-field zone, compliance is demonstrated if either peak spatial S, or both peak spatial E and H, over the projected whole-body space, does not exceed the above reference level values; and

(c) within the reactive near-field zone: compliance is demonstrated if both E and H do not exceed the above reference level values; S cannot be used to demonstrate compliance; for frequencies greater than 2 GHz, reference levels cannot be used to determine compliance, and so basic restrictions must be assessed.

7. For frequencies from 6 GHz to 300 GHz:

(a) within the far-field zone, compliance is demonstrated if S, averaged over a square 4- cm^2 projected body surface space, does not exceed the above reference level values; S equivalent may be substituted for S incident;

(b) in the radiative near-field zone, compliance is demonstrated if, averaged over a square 4-cm^2 projected body surface space, does not exceed the above reference values;

(c) within the reactive near-field zone reference levels cannot be used to determine compliance, and so basic restrictions must be assessed.

8. For frequencies from 30 GHz to 300 GHz, exposure averaged over a square 1-cm^2 projected body surface space must not exceed twice that of the square 4-cm^2 restrictions.

9. No E-field value is provided for frequencies less than 1 Hz, which are effectively static electric fields. Electric shock from low impedance sources is prevented by established electrical safety procedures for the equipment. Perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.

TABLE 3

Exposure Limits and Estimated Exposures in Magnetic Resonance Imaging

Field	Frequency	Exposure level value	Estimatedmaximumoccupational exposure in MRI
Static magnetic field (always present for most scanners)	0 Hz	None (action value 200mT)	3 T (clinical) 9.4 T (research)
	Less than 1 Hz (typical; generated by movement of subject)	Current density40mA/m^2 head & trunk	200 – 400 mA/m^2 (Central Nervous System); limitexceed 0.5 – 1.0m from magnet if moving at 1m/s
Switched gradients (present onlyduring imaging)	1 kHz (typical)	Current density10mA/m^2 head and trunk	>200 mA/m^2 (Central Nervous System); limit exceeded ≈ 1m from endof scanner bore.
RF (presentonly duringimaging)	10kHz – 100 MHz	Specific absorptionrate (SAR) • 0.4W/kg whole body • 10 W/kg head &trunk • 20W/kg limbs;	Not exceeded in normalcircumstances

Note:

1. For whole-body exposures, no biological effect that has a detrimental effect on mental, physical and/or general wellbeing of exposed people, either in the short term or long term are expected if the increase in body core temperature does not exceed 1°C. In the case of infants and persons with cardio circulatory impairment, the temperature increase should not exceed 0.5°C. With regard to localized heating, it seems reasonable to assume that adverse effects will be avoided with a reasonable certainty if temperatures in localized regions of the head are less than 38°C, of the trunk less than 39°C, and in the limbs less than 40°C.

2. All SAR values averaged over 6 min; localized SAR averaged over 10g tissue.

TABLE 4

Basic Restrictions for Body Temperature Rise and Partial-Body Temperatures in Magnetic Resonance Imaging

Operating mode	Rise of body core temperature(^{0}C)	Spatially localized temperature limits		
		Head (^{0}C)	Trunk (^{0}C)	Extremities (^{0}C)
Normal	0.5	38	39	40
Controlled	1	38	39	40
Restricted	>1	>38	>39	>40

TABLE 5

SAR Levels for Magnetic Resonance Imaging Valid At Environmental Temperatures below 24°C

	Whole body SAR (W/kg)	**Partial-body SAR (W/kg)**		**Local SAR (averaged over 10g tissue)**		
Body region → Operating mode ↓	Whole body	Any, except head	Head	Head	Trunk	Extremities
Normal	2	2 – 10[a]	3	10[b]	10	20
Controlled	4	4 – 10[a]	3	10[b]	10	20
Restricted	>4	> (4 – 10[a])	>3	10[b]	>10	>20

Note:

1. Averaging time is six minutes
2. The SAR limit over any 10s period should not exceed 3 times the corresponding average SAR limit.

3. [a] Partial-body SARs scale dynamically with the ratio *r* between the patient mass exposed and the total patient mass:

   (a) normal operating mode: SAR = (10–8*r*) W/kg

   (b) controlled operating mode: SAR = (10–6*r*) W/kg

4. The exposed patient mass and the actual SAR levels are calculated by the SAR monitor implemented in the MR system for each sequence and compared to the SAR limits.

5. [b] In cases where the eye is in the field of a small local coil used for RF transmission, care should be taken to ensure that the temperature rise is limited to 1°C.

TABLE 6

Limits on Static Magnetic Field Exposure

Operating mode	Upper limit for Whole Body Exposure
Normal	< 4T
Controlled	< 8T
Experimental	

Schedule 4

Regulation 11

FORMS

ATOMIC ENERGY ACT, CAP. 154

FORM 1

Notification of a Practice Involving Non-Ionising Radiation

1. GENERAL INFORMATION

Name of authorised person *(full registered name)*:

_____

Physical and Postal Address:_____

_____

_____

Email:_____Telephone No:_____

Name of legal person:

_____

Email:_____Telephone No:_____

Name of Radiation Safety Officer:

_____

Email:_____Telephone No:_____

Name of Responsible Officer or Representative:

_____

2. GENERAL NOTIFICATION OF NON-IONISATION PRACTICES

Equipment Name	Application / Use/Purpose	Site Name	Operation Frequency	Input power	Output Power

3. TELECOMMUNICATION AND BROADCAST EQUIPMENT

a. Communication Tower /Base Station/Radio Transmitter Information

District	Site ID	Site Name	Latitude	Longitude	Tower Height (m)	No. of Transmitters

b. Site Information

Site ID	No. of Antennae on Mast	Mounting Height ofeach Antenna	Effective Power foreach Antenna	Gain of each Antenna	Output Power of Transmitter	Operating Frequency (MHz)

c. Antenna information

Antennae Type	Number of Elements	Element Spacing	Vertical Effective Radiated Power (ERP)	Horizontal Effective Radiated Power (ERP)	Azimuth Angle

d. Installation data

Site ID	Freq Band	Ant. Dia (m)	Band (A)	Ant. Height (A)m	Az[A] Deg	Band [B]	Ant. Height [B]m	Az [B] deg	Band Width

e. Commissioning and configuration data

Site ID	MOD	T/R Spacing (MHz)	Transmission Frequency [A, B, etc.] MHz	Receiving Frequency [A, B, etc.] MHz	Transmitting Power (dBm)	Receiving Power (dBm)

4. MEDICAL AND INDUSTRIAL EQUIPMENT

Equipment name	Purpose	Manufacturer/ country of origin	Model	Serial No.	Electromagnetic field operating parameters

6. HIGH VOLTAGE POWER TRANSMISSION LINES

Project/Line name	Line route	Line voltage	Line length

7. CONSUMER ELECTRONIC DEVICES

Device name	Purpose	Manufacturer/ country of origin	Model	Batch number	Quantity	Specific Absorption Rate (SAR)

I certify that all the information given herein is true and correct to the best of my knowledge.

Name of legal person: _____

_____Title:

Official Stamp

FOR OFFICE USE ONLY

Application No: ……/20…….

…… ……

Name of officer receiving application *Signature*

……

Date

FORM 2

Regulations 12 (2), 16 (1)

Application Form to Possess and Use a Medical Source(s) of Non- Ionising Radiation

TYPE OF AUTHORIZATION ***(please tick)***

☐ New Application

☐ Renewal of authorisation number: _____

File No. _____

GENERAL INFORMATION

1. Name and address of applicant:

Name of Applicant	**Mailing address**	**Address of use (if different)**
E-mail of Applicant		
Phone Contact (Including Mobile No.)		

2. Name and information about expertise:

A. Expertise: Radiation Safety Officer B. **Qualified Expert:**

_____

Name: _____ Name: _____

Qualification: _____ Qualification: _____

Experience:_____ Experience:_____

Telephone No:_____ Telephone No: _____

Email:_____ Email::_____

3. The representative of the applicant:

Name:_____

Telephone: _____

Title:_____

E-mail address: _____

4. Date of installation (or date installed) and /or commissioning of facilities and equipment; _____

_____

PART I—MEDICAL EQUIPMENT

5. Details of radiation generator

#	Equipment Name	Field Strength (Tesla)	Field of View (FOV)	Freq. Range (MHz)	Clinical Application	Power requirement
1.						
2.						
3.						
4.						
5.						

6. Device Standards

a) *Tick where appropriate*

ISO ☐

IEC ☐

b) Please provide the details of the standards.

_____

_____

7. Type of installation ☐ fixed ☐ mobile

8. Please provide details of the service provider for regular servicing and maintenance

Name:_____

Experience:_____

Phone contact:_____

Email:_____

9. Location of the device

Provide the details of a location in which the device will be used

i. Name of unit/department_____ Building No._____ Room No. _____ Plot No. _____

ii. Town/street/ward_____

iii. Vehicle No. _____

iv. District _____

PART II—RADIATION AND SAFETY PROGRAMME

10. Please attach the following

(a) Documented responsibilities of different categories of workers in the department including the RSO.

(b) Departmental communication/administration flow chart.

(c) List and quantities of Personal Protective Equipment (PPE).

(d) List of all workers in the department including their roles, highest qualifications, emails and phone contacts.

(e) Qualification documents for secondary and post-secondary education.

(f) Quality control program for the equipment.

12. Security and safety of radiation sources

(a) Please provide details on the onsite measures—

(i) For preventing unauthorized access to the imaging room.

(ii) For ensuring that the equipment is used for the intended purpose.

13. Occupational and public exposure control

(a) Describe the measures to be implemented for the control of—

(i) Occupational exposures of workers

.....

.....

.....

(ii) Members of the public.

.....

.....

.....

14. Medical exposure control

Describe your program for ensuring the radiation protection of patients and/or comforters during medical exposure with reference to the patient flow in your department

.....

.....

.....

PART VI—DECLARATION

I, ... *(name of legal person)* Certify that all the information given herein is true and correct to the best of my knowledge.

Date: ..... Signature of applicant: .....

FOR OFFICIAL USE ONLY

Registration No.			
	BY	**Date**	**Signature**
Received			
Evaluated			
General Remarks and/or comments			

FORM 3

Regulations 18 (2) & 20 (4)

Application Form for Certificate of Compliance for a Non-Ionising Radiation Equipment/Installation Non-Medical

TYPE OF AUTHORISATION *(please tick)*

☐ New application

☐ Renewal of authorisation number: _____

☐ File No. _____

GENERAL INFORMATION

5. Name and address of applicant:

Name of Applicant	**Mailing address**	**Address of use (if different)**
E-mail of applicant		
Phone contact (Including Mobile No.)		

6. Name and information about qualified experts:

A. Expertise: Radiation Safety Officer

Name:_____

Qualification:_____

Experience:_____

Telephone No:_____

Email: _____

7. The representative of the applicant:

Name:_____

Telephone:_____

Title:_____

E-mail address:_____

8. Date of installation (or date installed) and/or commissioning of facilities and equipment; _____

_____

PART I—RADIATION EMITTING DEVICE

14. Details of radiation emitting device

No.	Name of Equipment/ Installation	Model No.	Serial No.	Number of Antennae/ Satellite dishes	Output Power of Transmitter	Frequency (MHz)

15. Device Standards

a) Is each device manufactured, prototype tested and subject to quality control provisions of an international standard setting organization (e.g. IEC, ISO)? *Tick where appropriate*

Yes ☐

No ☐

b) If the answer above is yes, identify the standards and any applicable classification numbers.

_____

_____

16. Is the type of installation fixed or mobile? _____

a) Identify who is (or will be) authorized to perform the service and maintenance of the device (organisation and address)

_____

_____

17. Location of the device

Provide the details of a location in which the device will be used/ installed

i) Name of unit/_____ Village _____

ii) Parish:_____ Subcounty_____

iii) County _____ District_____

iv) Plot No. _____ Town/street/ward_____

v) GPS coordinates _____

18. RADIATION PROTECTION AND SAFETY PROGRAM

1.1 Provide a brief description of your arrangements on each of the following requirements (attach document where applicable)

(i) Policies and procedures on public and occupational radiation protection

_____

_____

_____

_____

i. Environment and social impact assessment related to radiation

_____

_____

_____

_____

ii. Site design showing location of source and surrounding occupancies

_____

_____

_____

_____

iii. Staffing levels at the site of the source and their qualifications

_____

_____

_____

_____

iv. Control and supervision of operations involving emission of non-ionising radiation

v. Exposure levels assessment (occupational)

vi. Radiation protection and safety training program

vii. Equipment maintenance and servicing

viii. Work place rules and procedures

_____

_____

ix. Access control and management

_____

_____

_____

_____

x. Site security

_____

_____

_____

_____

xi. Radiation emergency preparedness and response

_____

_____

_____

_____

PART VI—DECLARATION

I..... (name of legal person) Certify that all the information given herein is true and correct to the best of my knowledge.

Date: …… Signature of applicant: .....

FOR OFFICIAL USE ONLY

Registration No.			
	BY	**Date**	**Signature**
Received			
Evaluated			
General Remarks and/or comments			

FORM 4

Regulation 28 (2)

Application for Certificate of Practice for Qualified Experts

1. PERSONAL DETAILS
   (a) Name:_____
   (b) Postal Address:_____
   (c) Phone _____
   (d) E-mail:_____
   (e) Date of birth:_____
   (f) Gender:_____

2. APPLICATION

   (a) State practice for which you are applying for certification

_____
_____

   (b) Previous AEC Registration (if not new application): Certificate No._____Practice_____

3. QUALIFICATIONS AND EXPERIENCE

   (a) Describe field of expertise/specialization in relation to your application.

_____

_____

(b) Highest qualification or certification attained in field applied for: (attach certified copy of certificates and brief resume)

_____

_____

(c) Provide details about length of service and experience acquired in field applied for;

_____

_____

(d) Provide highlights about any previous works conducted in field applied for;

_____

_____

(e) List any memberships to professional bodies:

_____

_____

4. EMPLOYMENT DETAILS

(a) Current employer and address (if different from that above)

_____

_____

(b) Institutions you work for as part time: -

_____

_____

5. DECLARATION

I, _____*(name)*, certify that all the information given herein is true and correct to the best of my knowledge.

Signature:_____ Date:_____

FOR OFFICE USE ONLY

Application No: ……/20…….

……	…….....	…….....
Name of officer receiving application	*Signature*	*Date*

Schedule 5

Regulation 16 (2), 18 (2) & 28 (2)

Fees and Charges

No	Requirement	Fees or Charges
1.	Notification of a practice	1 currency point per source
2.	Certificate of compliance to use or possess a source of non-ionizing radiation for medical purposes	25 currency points per source
3.	Certificate of compliance to operate a radiofrequency or microwave telecommunicationor broadcast base station	50 currency points per toweror base station
4.	Safety assessment after implementing modifications to a source	25 currency points
5.	Testing of consignments of portable, mobile and handheld devices	1 currency point per device
6.	Training and specialized services	100 currency points (subject to request)
7.	Consultation fee for a non-ionising radiation practice	50 currency points (subject to request)
8.	Certificate of practice for qualified expert	100 currency points

Note:

Due to economy of scale, sharing of telecommunication infrastructure among service providers is becoming a necessity in order to lower their increasing investments, for the purpose of these Regulations; each of the service providers will be considered separately.

Schedule 6

Regulation 30 (1) (e)

Non-Ioniznig Radiation Warning Signs

(1) The following are signs used to caution about radiation hazards at sites.

(2) The warning signs are used to identify areas, which may exceed the general public exposure lim.















PROF. OBWOYA KINYERA SAM
Chairperson, Atomic Energy Council