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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. 58

THE ATOMIC ENERGY (RADIOACTIVE WASTE MANAGEMENT) 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

2026 No. 58

The Atomic Energy (Radioactive Waste Management) Regulations, 2026

(Under section 72(2) (j) of the Atomic Energy Act, Cap. 154)

IN EXERCISE of the powers conferred upon the Atomic Energy Council by section 72(2) (j) 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 (Radioactive Waste Management) Regulations, 2026.

2. Purpose of Regulations

The purpose of these Regulations is—

(a) to specify the minimum requirements for the management of radioactive waste;

(b) to provide for safety of people and the environment from the likely harmful effects of radioactive waste; and

(c) to provide for the security of radioactive waste.

3. Application of Regulations

These Regulations apply to—

(a) solid, liquid and gaseous radioactive waste with activity levels above the clearance levels specified in Schedule 2 to these Regulations;

(b) radioactive waste generated from the following practices and activities –

(i) medical;

(ii) industrial;

(iii) education and research;

(iv) agriculture; and

(v) any other sources of radioactive waste;

(c) radioactive waste management facilities, including decommissioning; and

(d) scrap processing and metal recycling industry.

4. Interpretation

In these Regulations, unless the context otherwise requires—

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

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

"centralised radioactive waste management facility" means a central storage facility for handling, treating, conditioning and storing all radioactive waste from the facility of the waste generator;

"clearance levels" means a set of values, established by the Council and expressed in terms of activity concentrations and the total activities, at or below which sources of radiation can be released from regulatory control;

"conditioning" means operations that produce a waste package suitable for handling, transportation, storage or disposal of waste, and includes the conversion of waste to solid form, enclosure of the waste in containers, and where necessary, providing an over pack;

"consumer product" means an appliance or device produced, made, manufactured, refined or improved in which a small amount of radioactive substance has been deliberately incorporated or induced, and which can be supplied to the members of the public;

"container" means a vessel into which waste is placed for handling, transportation, storage and eventual disposal;

"contamination" means radioactive substances on surfaces or within solids, liquids or gases, including the human body parts, where its presence is unintended or undesirable or the process giving rise to its presence in such places is undesirable;

"controlled area" means a defined area in which specific protection measures and safety provisions are or could be required for controlling exposures or preventing the spread of contamination in normal working conditions, and preventing or limiting the extent of potential exposures;

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

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

"decommissioning" means administrative and technical actions taken to allow the removal of some or all of the regulatory controls from a facility;

"delay" means the element of a physical protection system designed to increase the time required for an adversary to gain unauthorised access to a radioactive source or to remove or sabotage a radioactive source, through barriers or other physical means;

"detection" means the process in a physical protection system that begins with sensing a potentially malicious or other unauthorised act and that is completed with the assessment of the cause of the alarm;

"discharge" means the act or process of releasing of gaseous or liquid radioactive substances to the environment; and includes planned and controlled release;

"disposal" means the placement of waste in an appropriate facility without the intention of retrieval;

"disposal facility" means an engineered facility where radioactive waste is placed for disposal;

"disused source" means a radioactive source that is no longer used and is not intended to be used for the practice for which an authorisation was granted;

"dose rate" means the dose per unit time, including dose per second or dose per hour;

"effective dose" means the quantity (E) which is a summation of the tissue equivalent doses, each multiplied by the appropriate tissue weighting factor;

"exemption" means the determination by a regulatory body that a source or practice should not be subject to some or all aspects of regulatory control on the basis that the exposure and the potential exposure due to the source or practice are

too small to warrant the application of those aspects or that it is the optimum option for protection irrespective of the actual level of the doses or risk;

"exclusion" means the deliberate elimination of a particular type of exposure from the scope of an instrument of regulatory control on the grounds that it is not considered amenable to control through the regulatory instrument in question;

"exempt waste" means any waste that is released from regulatory control in accordance with clearance levels because the associated radiological hazards are negligible;

"export" means the physical transfer of radioactive waste covered under these Regulations from an exporting State into an importing State or to a recipient in an importing State;

"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;

"graded approach" means the application of nuclear security measures proportionate to the potential consequences of a malicious act;

"incident" means any unintended event, including operating errors, equipment failures, initiating events, accident precursors, near misses or other mishaps or unauthorised act, malicious or non-malicious, the consequences or potential consequences of which are not negligible with regard to protection and safety;

"import" means the physical transfer of radioactive waste covered under these Regulations into an importing State or to a recipient in an importing State originating from an exporting State;

"ionising radiation" means energy in the form of particles or electromagnetic waves of a wavelength of 100 nanometers or less or a frequency of 3×10^{15} hertz or more capable of producing ions directly or indirectly;

"legal person" means any organisation, corporation, partnerships, firm, association, trust, estate, public or private institution, group, political or administrative entity or other persons designated in accordance with any applicable law, who or which has responsibility and authority for any action having implications for protection and safety;

"licence" means an authorisation granted by the Council on the basis of a safety assessment and accompanied by specific requirements and conditions to be complied with by the licensee;

"licensee" means a person granted an authorisation by the Council on the basis of safety assessment and compliance with specific requirements and conditions;

"limit" means the value of a quantity used in certain specified activities or circumstances that must not be exceeded;

"malicious act" means an act or attempt of unauthorised removal of a radioactive waste or sabotage;

"monitoring" means the measurement of radiation or radionuclides for reasons related to the assessment or control of exposure and the interpretation of such measurements, and includes continuous and non-continuous monitoring;

"authorised person" means any person applying for authorisation or authorised or responsible for safety when undertaking activities or in relation to any nuclear facilities or sources of ionising radiation;

"practice" means work involving—

(a) the production, processing, handling, use, holding, storage, transport or disposal of radioactive substances; or

(b) the operation of any electrical equipment emitting ionising radiation and containing components operating at a potential difference of more than 5 kilovolts,

which can increase the exposure of individuals to radiation from an artificial source, or from a radioactive substance containing naturally occurring radionuclides, which are processed for their radioactive, fissile or fertile properties;

"quality assurance" means all those planned and systematic actions necessary to provide adequate confidence that an item, process or service will satisfy given requirements for quality including requirements specified in the licence;

"radioactive material" means any substance, which contains one or more radionuclides whose activity cannot be disregarded for the purposes of radiation protection;

"radioactive waste" means material for which no further use is foreseen that contains or is contaminated with radionuclides at activity concentrations greater than clearance levels as established by the Council;

"radioactive waste management" means all administrative and operational activities involved in the handling, pre-

treatment, treatment, conditioning, transport, storage and disposal of radioactive waste;

"radioactive waste management facility" means a facility specifically designed to handle, treat, condition, store or permanently dispose of radioactive waste;

"radionuclide" means a nucleus of an atom that possesses properties of spontaneous disintegration radioactivity;

"regulatory control" means any form of control applied to facilities or activities by the Council for reasons related to radiation protection or the safety or security of radioactive sources;

"response" means the actions undertaken following detection to prevent an adversary from succeeding or to mitigate potentially severe consequences;

"sabotage" means any deliberate act directed towards a radioactive waste or radioactive waste management facility or associated facility or activity that could directly or indirectly endanger the health and safety of personnel, the public or the environment by exposure to radiation or release of radioactive substances;

"safety" means measures intended to minimise the likelihood of accidents with radioactive sources and, in case of an accident, to mitigate its consequences;

"safety assessment" means a review of the aspects of design and operation of a source which are relevant to the protection of persons and the environment or the safety of the source, including the analysis of the provisions for safety and protection established in the design and operation of the source, the analysis of risks associated with normal conditions and accident situations;

"sealed source" means a source containing any radioactive substance whose structure is to prevent, under normal conditions of use, any dispersion of radioactive substances into the environment, but it does not include any radioactive substance inside a nuclear reactor or any nuclear fuel element;

"security" means measures to prevent unauthorised access or damage to radioactive sources or waste management facility, loss, theft or unauthorised transfer of radioactive sources;

"source" means anything that may cause radiation exposure including by emitting ionising radiation or by releasing radioactive substances or radioactive material and can be treated as a single entity for purposes of protection and safety;

"storage" means the holding of radioactive sources, radioactive material, spent fuel or radioactive waste in a facility that provides for its containment with the intention of retrieval;

"threat" means a person or group of persons with motivation, intention and capability to commit a malicious act;

"transport" means the deliberate physical movement of radioactive material other than that forming part of the means of propulsion from one place to another;

"treatment" means the operations intended to benefit safety and minimise costs by changing the characteristics of waste with the objective of—

(a) volume reduction;

(b) removal of radionuclides from the waste; and

(c) change of composition;

"waste" means radioactive waste;

"waste acceptance criteria" means a set of technical and administrative requirements that waste must adhere to in order for it to be accepted at a radioactive waste conditioning, storage or disposal facility.

"waste inventory" means a detailed, itemised record maintained by the authorised person or Council in accordance with these Regulations and may contain data relating to physical quantity, the activity of the waste, the radionuclide content and other characteristics;

"waste generator" means the operating organisation of a facility or activity that generates waste;

"waste management" means all activities, administrative and operational that are involved in the handling, treatment, conditioning, storage, disposal and transportation of radioactive waste;

"waste package" means the product of conditioning that includes the waste form and any container and internal barriers such as absorbing materials and liner prepared in accordance with requirements for handling, transportation, storage or disposal;

"waste form" means the waste in its physical and chemical form after treatment or conditioning resulting in a solid product prior to packaging and is a component of waste package.

General Responsibilities

5. Responsibility of authorised person

(1) An authorised person or waste generator is responsible for the safe management of radioactive waste.

(2) The authorised person or waste generator shall take all necessary actions to ensure the safety and security of the waste.

(3) The authorised person shall not transfer the responsibility for the safe management of the waste to another person or organisation without the approval by the Council.

(4) The authorised person shall—

(a) be responsible for on-site characterisation, segregation, collection, and temporary storage and security of the waste arising from their activities and discharge of exempt waste;

(b) have the responsibility of discharging exempt waste, storing and securing the conditioned waste until a disposal facility is established;

(c) establish and implement measures needed for ensuring security of the radioactive waste for which they are authorised and for compliance with the requirements of these Regulations;

(d) designate a radioactive waste management officer to carry out actions and tasks related to these responsibilities; and

(e) report any accidents, incidents and inappropriate waste management practices to the Council.

6. Notification of practice

(1) A person shall not construct or operate a radioactive waste management facility unless the person has notified the Council in accordance with section 33 of the Act and obtained authorisation in accordance with the Act and these Regulations.

(2) A person who intends to construct or operate a radioactive waste management facility shall notify the Council of the intended practice in Form 1 set out in Schedule 6 to these Regulations.

(3) The Council shall, within thirty days after receipt of a notice under subregulation (1) and upon payment by the person notifying of the fees prescribed in Schedule 9 to these Regulations, cause the notice to be published in the Gazette and in at least one newspaper of wide circulation.

(4) The notice published under subregulation (3) shall—

(a) contain a summary of the information submitted by the applicant under subregulation (1) in the notice; and

(b) inform members of the public that the notice may be inspected at the offices of the Council and at a public office within the jurisdiction of the local government council where the proposed radioactive waste management facility is to be located.

(5) The Council shall invite directly affected parties and agencies to make comments on the proposed practice as contained in the notice referred to in subregulation (3), within thirty days after publication of the notice in the Gazette and a newspaper of wide circulation.

(6) The Council shall, upon receipt of comments from directly affected parties and any relevant Ministry, department or agency of Government on the proposed radioactive waste management facility,

and review the comments and determine whether or not the person who notified should proceed and apply for authorisation.

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

7. Siting and design of radioactive waste management facility

(1) A person who intends to construct and operate a radioactive waste management facility shall, after being notified by the Council to proceed under regulation 6 (6), apply to the Council for a site permit for a radioactive waste management facility prior to the construction of the facility.

(2) An application under subregulation (1) shall be in Form 4 set out in Schedule 6 to these Regulations.

(3) An Application under subregulation (1) shall be accompanied by the proof of payment of fees prescribed in Schedule 9 to these Regulations.

(4) The site and design of a radioactive waste management facility shall ensure safety for the expected operating lifetime of the facility under both normal and possible accident conditions, and for the decommissioning of the facility.

(5) The applicant shall ensure that operational maintenance, testing, examination and inspection are catered for from the siting and design stage of the facility to decommissioning.

(6) The applicant shall submit the designs referred to in subregulation (4) to Council for review and approval prior to the grant of the permit.

(7) The applicant shall ensure that the design for the radioactive waste management facility takes into account the possible need to process waste arising from incidents or accidents.

(8) The Council shall, where it is satisfied with the application for a site permit submitted in under subregulation (1), grant a site permit to the applicant and authorise the applicant to apply for authorisation to construct or operate a radioactive waste management facility under regulation 8.

(9) The Council may, in granting a site permit under subregulation (7) attach terms, conditions and limitations to the site permit.

(10) The Council shall, where it refuses to a site permit, give the applicant a statement of reasons for the refusal, within thirty days from the date of the decision.

8. Application for authorisation to construct and operate radioactive waste management facility

(1) A person shall not construct or operate a radioactive waste management facility without an authorisation from the Council.

(2) An application for authorisation to construct or operate a nuclear and radioactive waste management facility shall, as applicable, be made to the Council in Form 2 set out in Schedule 6 to these Regulations and shall contain—

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

(b) a safety case document;

(c) the site permit granted under regulation 7 (7);

(d) designs and floor plans for the facility;

(e) a site security plan;

(f) a copy of the work place rules;

(g) the name and qualifications of at least one person designated as a radioactive waste management officer for purposes of the practice;

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

(i) reports and studies undertaken in relation to the proposed practice and facility, including an environmental and social impact assessment;

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

(k) proposed measures and necessary steps to be taken for the protection and safety of workers and members of the public;

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

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

(n) a copy of the quality assurance program; and

(o) proof of payment of the fees prescribed in Schedule 9 to these Regulations.

(3) The Council may, during the processing of an application for authorisation, require the applicant to submit additional information.

(4) The designs and floor plans referred to in subregulation (2) (d) shall be reviewed and approved by the Council prior to the grant of an authorisation.

(5) The Council shall, where it is satisfied with the application for authorisation submitted in accordance with subregulation (2), grant an authorisation to the applicant to construct or operate a radioactive waste management facility.

(6) The Council may, in granting an authorisation under the these Regulations attach terms, conditions and limitations to the authorisation.

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

(8) A person authorised to construct and operate a radioactive waste management facility shall not carry out any modification to the facility without the approval of the Council;

9. Duration of processing of application

(1) The Council shall within thirty days after receipt of an application for an authorisation under regulation 8, confirm in writing to the applicant that the application is complete in all aspects and where the application is not complete, the Council shall require the applicant to resubmit the application.

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

10. Duration of authorisation

An authorisation issued by the Council under these Regulations shall be valid for the period specified in the authorisation.

11. 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 6 to these Regulations.

(2) An application for renewal of an authorisation shall be accompanied by proof of payment of the fees prescribed in Schedule 9 to these Regulations.

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

12. Construction and commissioning of radioactive waste management facility

(1) An authorised person shall—

(a) construct the radioactive waste management facility in accordance with the design described in the safety case and approved by the Council;

(b) commission the facility to verify that the equipment, structures, systems and components, and the facility as a whole, perform as planned;

(c) ensure that in cases when commissioning is carried out in several stages, all of the stages are subject to the review and approval of the Council; and

(d) upon the completion of commissioning, submit a final commissioning report to the Council.

(2) The authorised person shall not modify a radioactive waste management facility unless approved by the Council.

13. Operation of radioactive waste management facility

(1) An authorised person shall ensure that all operations and activities related to the radioactive waste management facility are carried out by trained, qualified and competent personnel.

(2) An authorised person shall ensure that the radioactive waste management facility—

(a) is suitable for the expected period of storage, preferably using passive safety features;

(b) has sufficient capacity to process and store all the radioactive waste generated;

(c) allows waste to be inspected, monitored and preserved in a condition suitable for release or transport, as appropriate;

(d) appropriately contains waste, with the potential for degradation being taken into account;

(e) is adequately ventilated to exhaust any gas generated in normal conditions or under anticipated accident conditions;

(f) has measures to prevent, detect and control fires; and

(g) makes provision for retrieval of the waste, whenever required.

(3) The authorised person shall periodically review and assess the adequacy of the storage capacity of a waste management facility, taking into account the predicted waste arising, the expected lifetime of the facility and the availability of disposal options.

14. Safety case for radioactive waste management and decommissioning

(1) A person authorised to develop and manage a radioactive waste management facility shall prepare a safety case as a basis for the

process of regulatory decision making and approval, and ensure that the safety objectives and criteria set by the Council are met.

(2) A safety case prepared under subregulation (1) shall contain a description of how the safety aspects of the site, the design, operation, shutdown and decommissioning of a radioactive waste management facility and the managerial controls satisfy the regulatory requirements including approval of the safety case.

(3) Without limiting the general effect of subregulation (2), the safety case shall be detailed and comprehensive, and shall as a minimum contain—

(a) the executive summary;

(b) introduction and the context for the safety case including—

(i) a brief description of the project objectives and background, the various stages involved and its current status;

(ii) the policy and regulatory contexts under which the safety case has been prepared and presented;

(iii) the roles and responsibilities of the various organisations involved in the decision-making process, including the framework for public consultation and involvement;

(iv) a clear guide to the decision-making process;

(v) a comparison with other similar projects;

(vi) a discussion of the status and maturity of the technologies that will be used;

(vii) a statement on the need for and importance of the project, in order to support and justify the safety case;

(viii) a discussion of alternatives that have been considered and reasons for the preferred alternative;

(ix) the key decisions that have been and will have to be made during the course of the proposed project;

(x) a description of critical timing considerations associated with the project;

(xi) an overview of how compliance with regulatory requirements will be ensured by the authorised person and how compliance will be verified by the Council; and

(xii) an overview of the authorised person's management system and its ability to address adequately the challenges associated with the project;

(c) strategy for safety including—

(i) strategy and approach to manage the different stages of development of the facility such as siting, construction, operation and closure of facilities;

(ii) how the adopted strategies apply good engineering principles and practices;

(iii) management and reduction of uncertainties;

(iv) the degree of caution to be taken in decision making and the use of multiple lines of reasoning;

(v) safety features embedded in the design of the facility;

(vi) multiple safety functions used;

(vii) the expected robustness of the disposal system to natural events and processes as well as to human induced processes;

(viii) the rationale for selecting the assessment methodology and the time frame and time windows for the assessment, including a discussion of the various assessment approaches and the tools used to verify, confirm and compare assessment findings;

(ix) peer reviews conducted and its consistency;

(x) international guidance and practices;

(xi) other high-level arrangements as may be applicable;

(d) safety assessment;

(e) synthesis and conclusions, including—

(i) drawing together the key findings from the safety assessment;

(ii) a highlight of the main evidence, analysis and arguments that quantify and support the claim that the disposal facility is safe;

(iii) an evaluation of uncertainties and unresolved issues and planned steps to resolve them;

(iv) complementary evidence for safety such as evidence for safety beyond the time frame for which quantitative assessment has been performed;

(v) statements of confidence that take account of additional evidence and arguments that complement the findings of the safety assessment;

(f) follow-up programmes and actions

(4) The disposal facility shall be constructed in accordance with the design as described in the approved safety case and supporting safety assessment.

(5) The safety case and the supporting safety assessment shall be documented at a level of detail and to a quality sufficient to—

(a) demonstrate safety;

(b) address operational safety and all safety aspects of the facility and activities;

(c) support the decision at each stage; and

(d) allow for the independent review and approval of the safety case and safety assessment.

(6) An authorised person shall prepare and update, as necessary, a safety case and supporting safety assessment at each step in the development of a disposal facility, during operation and after closure.

(7) The safety case for a radioactive waste disposal facility shall describe the safety relevant aspects of the site, the design of the facility and the managerial control measures and regulatory controls.

(8) The safety case and supporting safety assessment for a radioactive waste disposal facility shall be documented to a level of detail and quality sufficient to inform and support the decision to be made at each step and to allow for independent review of the safety case and supporting safety assessment.

15. Integrated management system for management of radioactive waste

(1) An authorised person or waste generator shall establish and implement an integrated management system for the management of radioactive waste.

(2) The integrated management system established under subregulation (1) shall be commensurate with the hazard of the waste management activities and shall be approved by the Council.

(3) The integrated management system shall, at a minimum, contain—

(a) policies and procedures that identify safety as being of the highest priority;

(b) clear lines of authority for decisions on safety and compliance with procedures and processes;

(c) organisational arrangements and lines of communications that result in an appropriate flow of information on safety at and between the various levels of management;

(d) clear specification of safety responsibilities for each individual;

(e) responsibilities for compliance with safety program requirements;

(f) clear requirement that issues affecting safety must be promptly identified and corrected in a manner to commensurate with their importance;

(g) provision that each personnel are suitably trained and qualified;

(h) a quality assurance program that provides information on the performance of the radioactive waste management program and equipment, and establishes a review regime for the program; and

(i) provisions to ensure that the confidentiality of information that is received in confidence from another party is protected, and only provided to a third party with the consent of the first party.

(4) The integrated management system shall provide for—

(a) adequate assurance that the established requirements for safety and environmental protection is being met; and

(b) assurance that the components of the safety systems are quality sufficient for the relevant tasks.

(5) An authorised person or waste generator shall promote and maintain a strong safety culture during the management of radioactive waste and decommissioning.

(6) An authorised person shall promote and maintain a safety culture by—

(a) promoting individual and collective commitment to protection and safety at all levels of the organisation;

(b) ensuring a common understanding of the key aspects of safety culture within the organisation;

(c) providing the means by which the organisation supports individuals and teams in carrying out their tasks safely and successfully, with account taken of the interactions between individuals, technology and the organisation;

(d) encouraging the participation of workers and their representatives and other relevant persons in the development and implementation of policies, rules and procedures dealing with protection and safety;

(e) ensuring accountability of the organisation and of individuals at all levels for their protection and safety;

(f) encouraging open communication with regard to protection and safety within the organisation and with relevant parties, as appropriate;

(g) encouraging a questioning and learning attitude and discouraging complacency with regard to protection and safety; and

(h) providing means by which the organisation continually seeks to develop and strengthen its safety culture, including appropriate training.

(7) An authorised person shall provide for the assurance of quality to all safety related activities, systems and components throughout all the steps of the development and operation of the radioactive waste management facility.

16. Radioactive Waste Management Officer

(1) An authorised person shall, after consultation with Council, designate a technically competent person with the appropriate independence to be a radioactive waste management officer.

(2) The qualifications of the radioactive waste management officer designated under subregulation (1) shall include a level of academic knowledge and professional experience compatible with the levels of risk associated with the authorised practices or sources within the practice.

(3) The radioactive waste management officer shall—

(a) establish, maintain and keep up-to-date an inventory of radioactive material and waste;

(b) make and maintain contact with all on-site persons using radioactive material and provide an authoritative point of advice and guidance;

(c) liaise, as applicable, with the centralised radioactive waste management facility authorised person;

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

(e) back up records of dose rates, health and medical, effluent discharges and environmental monitoring;

(f) ensure that on-site transfer of radioactive materials and waste is carried out in accordance with written safety procedures;

(g) ensure appropriate shielding, labelling, physical security and packaging of waste;

(h) ensure that any discharge of effluents is made in accordance with clearance levels and authorised limits set by the Council;

(i) ensure that the solid waste for disposal to municipal landfills is below clearance levels;

(j) ensure that safety assessments are carried out and revised as appropriate; and

(k) ensure the safe management and security of waste.

17. Transfer of radioactive waste to radioactive waste management facilities

(1) A person shall not transfer radioactive waste to a radioactive waste management facility without authorisation from the Council.

(2) An application for authorisation to transfer radioactive waste to a radioactive waste management facility shall be made to the Council in Form 3 set out in Schedule 6 to these Regulations.

(3) An application under subregulation (2) shall be accompanied by proof of payment of the fees prescribed in Schedule 9 of these Regulations.

(4) A person authorised to transfer waste shall ensure that the waste meets the waste acceptance criteria established by the radioactive waste management facility.

(5) The waste acceptance criteria referred to under subregulation (4) shall be submitted to the Council for review, assessment and approval as part of the safety case.

18. Transfer of waste to another waste generator

(1) An authorised person or waste generator shall not transfer waste to another waste generator without authorisation from the Council.

(2) An application for authorisation to transfer waste to another waste generator shall be made to the Council in writing.

(3) The Council shall not authorise the transfer of waste from one waste generator to another as a waste management option for that source unless—

(a) the initial waste generator demonstrates that the integrity of the source can be guaranteed;

(b) the recipient of the waste satisfies the Council of the ability to safely use the source for any other purpose agreeable to Council; or

(c) the recipient satisfies the Council of the ability to manage the waste generated, as required under these Regulations.

(4) For the purposes of subregulation (1), the initial waste generator shall make an assessment of the condition of the waste at the point of transfer and make records, in addition to any previous records of the waste, and shall avail the records to the Council and the recipient of the waste.

(5) The initial waste generator shall retain the records pertaining to the source for at least fifteen years after transfer of the waste.

19. Management of disused sealed radioactive sources

(1) An owner of a radioactive source shall, upon purchasing sealed sources, make contractual arrangements for the return of the disused sealed radioactive sources to the manufacturer or the supplier.

(2) An owner of a radioactive source to which subregulation (1) applies shall be responsible for the return of the disused sealed radioactive source to the supplier in accordance with the contractual arrangements made under subregulation (1).

(3) An owner of a radioactive source shall, upon purchasing sealed sources, provide financial guarantee to the Council to ensure that the disused radioactive source is returned to the manufacturer.

(4) Where the owner of the radioactive source to which subregulation (1) applies fails to return the disused sealed radioactive source, the owner shall appropriately store or transfer the disused sealed radioactive source within a period of one year to a radioactive waste management facility for conditioning, storage and disposal at the cost to the owner of the radioactive source.

(5) The waste generator shall establish and annually review a radioactive source inventory at least to identify any sources that have become disused.

(6) The waste generator shall have the prime responsibility of reporting disused sources to Council.

20. Prohibition of importation of waste

A person shall not import waste into Uganda unless the waste or nuclear material originated from Uganda.

21. Public Notice

An authorised person shall, in consultation with Council, ensure that the public is aware of activities carried out at an authorised site.

22. Export of waste

(1) An authorised person may export waste to another facility outside Uganda where the waste can be received at the country of export.

(2) An authorised person shall seek authorisation from the Council to export waste.

23. Financing of decommissioning

(1) A waste generator shall—

(a) provide appropriate financial assurance as determined by the Council to cover waste liability of decommissioning and the management of radioactive waste;

(b) be required to pay for the treatment, conditioning, packaging, labelling, transport, storage and disposal of waste;

(c) periodically estimate the cost of the decommissioning activities, including the management of the resulting radioactive waste; and

(d) in the event of a sudden shutdown of the facility, provide financial guarantee to enable the accumulated financial resources to be used for decommissioning when they are needed.

(2) The authorised person shall provide financial assurances for ongoing monitoring, surveillance and control of the site if the decommissioned facility is to be released with restrictions.

24. Notification and reports to Council

(1) An authorised person or waste generator shall—

(a) notify the Council in writing of the intention to introduce any modification to a facility or activities affecting the security of waste for which the authorised person or waste generator is licensed;

(b) submit to the Council an up-to-date inventory of waste every quarter;

(c) send to the Council every 31st September of each calendar year, a copy of the waste inventory and a report for the previous calendar year giving types, quantities and destinations or location of—

(i) cleared radioactive materials released to the environment;

(ii) waste discharged to the environment;

(iii) waste received at the waste management facility;

(iv) disused radioactive sources returned to manufacturer or supplier; and

(v) such other details as the Council may require.

(d) inform the Council immediately, and in any case not later than forty eighty hours of any incidents or accidents, providing the definition of incidents or accidents, including spillage or theft of radioactive material; and

(e) where radioactive material has been released to the environment above the clearance levels specified in Schedule 3 to these Regulations or discharge limits specified in Schedule 2 to these Regulations, inform the

Council not later than forty-eight hours of the occurrence or discovery of the release; and

(f) provide the Council with a report within thirty days from the date of the occurrence of a release referred to in paragraph (e), on the causes of the release, the circumstances and impact of the release and the corrective or preventive actions taken or to be taken by the authorised person.

(2) The Council may inspect and review the records of the authorised person or waste generator at any time.

(3) An authorised person shall—

(a) submit a report to the Council at approved intervals on the progress of the decommissioning activities, including a summary of the monitoring results for workers and members of the public, and the status of the decommissioning fund;

(b) submit a report to the Council at approved intervals on any discharges to the environment and promptly report any discharges exceeding the authorised limits;

(c) notify the Council as soon as practicable, but not later than forty-eight hours, after the discovery of any incident or accident;

(d) submit to the Council, within thirty days after discovery of the incident or accident, a written report stating the cause of the incident or accident and including details of any exposures, corrective measures and any other relevant information; and

(e) promptly inform the Council of any abnormal situations which lead or is likely to lead to an increase of public exposure.

(8) The authorised person shall report to the Council, within twenty-four hours, any issues of non-compliance with significant implications to safety.

(9) The authorised person shall submit to Council reports on the radioactive waste generated during decommissioning in accordance with these Regulations.

(10) The authorised person shall ensure that information on normal decommissioning performance and abnormal conditions and events significant to protection and safety is disseminated, as appropriate, to the Council and any other relevant parties, as may be specified by the Council.

25. Record keeping

(1) An authorised person and a waste generator shall prepare and maintain an inventory of existing and anticipated waste containing radionuclides with half-lives above fifty days and an activity greater than 10MBq.

(2) The inventory referred to in subregulation (1) shall be in the form specified in Schedule 10 to these Regulations.

PART III—WASTE MANAGEMENT OPERATIONS

26. Protection of workers and the public

(1) An authorised person and a waste generator shall put in place and maintain a radiation protection program for workers and the general public.

(2) The authorised person shall—

(a) apply the dose limits for the exposure of workers and members of the public during decommissioning;

(b) ensure that protection and safety are optimised while applying relevant dose or risk constraints during decommissioning; and

(c) make provision during decommissioning for protection against, and for reduction of exposure due to an incident.

27. Interdependencies in predisposal management of radioactive waste

An authorised person or a waste generator shall take into account, as appropriate, interdependencies among all steps in radioactive waste management and the impact of the anticipated disposal option.

28. Waste classification

An authorised person and a waste generator shall classify all radioactive waste in accordance with the criteria specified in Schedule 8 to these Regulations.

29. Control of waste generation

An authorised person and a waste generator shall develop and maintain a waste management strategy and systems to ensure that the generation of waste and its environmental impact and cost is kept to the minimum by—

(a) applying careful planning to the design, construction, administration, operation and decommissioning of radioactive waste management facilities;

(b) using the minimum quantity of radioactive material required;

(c) using short-lived radionuclides where possible; and

(d) minimising the amount of waste by preventing unnecessary contamination of materials.

30. Segregation, characterisation and collection of radioactive waste

(1) A waste generator shall process radioactive material for which no further use is foreseen, and with characteristics that make it unsuitable for authorised discharge, as radioactive waste.

(2) An authorised person and a waste generator shall—

(a) segregate, characterise and collect radioactive waste for the duration specified in the relevant authorisation in accordance with defined waste management strategy, waste acceptance criteria and these Regulations;

(b) store each category of radioactive waste separately after segregation;

(c) characterise the radioactive waste according to its physical form and composition;

(d) ensure that waste containers are easy to handle, strong enough to withstand normal handling and not affected by the waste content;

(e) ensure that waste is rendered into a safe and passive form for storage or disposal;

(f) ensure that waste is processed to ensure that—

(i) the safety of the operations is appropriately ensured during normal operations;

(ii) measures are taken to prevent the occurrence of incidents or accidents; and

(iii) provision is made to mitigate the consequences if accidents occur;

(g) ensure that the processing of radioactive waste is consistent with—

(i) the type of waste, and the possible need for its storage;

(ii) the anticipated disposal option; and

(iii) the limits, conditions and controls established in the safety case and in the assessment of environmental impacts; and

(h) establish provisions for identifying, assessing and dealing with waste or waste packages that do not meet process specifications and requirements for their safe handling, transport, storage or disposal.

31. Treatment

An authorised person and a waste generator shall ensure that—

(a) the waste is treated to reduce its volume and facilitate further conditioning;

(b) the treatment method used is appropriate for the radioactive waste depending on volume, type of the radioactive waste and the discharge requirement for liquid effluent; and

(c) the treatment of radioactive waste is done by qualified people.

32. Conditioning

An authorised person shall ensure that—

(a) radioactive waste for long term storage and disposal is properly conditioned;

(b) radioactive waste packages produced by a conditioning process are fully characterised with regard to physical, chemical, radiological, mechanical and biological properties specified by the Council;

(c) radium sources are conditioned for storage by encapsulating the source in a welded stainless tube, placing the tube in a lead shielding container followed by emplacement of the container inside a 200 litre mild steel drum filled with the concrete;

(d) provisions for the retrieval of the encapsulated radium sources from drums are made; and

(e) conditioning is done by qualified persons.

33. Packaging and labelling of radioactive waste

(1) An authorised person and a waste generator shall ensure that a package containing radioactive waste bears a durable and visible label bearing the radiation symbol specified in Schedule 7 to these Regulations which is legible for the period of storage and contain the following information—

(a) the name of radionuclide;

(b) the nature and description of the physical and chemical form of the waste generated;

(c) the date of waste generation;

(d) the date on which the storage of radioactive waste storage commenced;

(e) the content of major radiologically significant radionuclides;

(f) external surface dose rate;

(g) the radioactive waste category;

(h) the biological, chemical or other hazardous material, where applicable;

(i) the name of the authorised person responsible for the radioactive waste generation;

(j) the weight of the package; and

(k) any other information that may be required by the Council.

(2) The authorised person and the waste generator shall prior to removal of empty packages from restricted areas to unrestricted areas—

(a) monitor the inner and outer surface of the package to ensure compliance with clearance levels prescribed under these Regulations; and

(b) remove all labels from the packages with clearance levels for unrestricted use in the public domain.

(3) An authorised person and the waste generator shall remove labels from containers holding waste if the waste activity concentration and surface contamination levels are below the clearance levels specified in Schedule 2 to these Regulations prior to their disposal.

34. Requirements relating to transportation of radioactive waste

(1) An authorised person and a waste generator shall ensure that—

(a) the collection and transportation of radioactive waste is conducted in a manner that does not cause leakage,

scattering or littering of the waste or the emitting of noxious smells or harmful odours;

(b) the transportation of waste to an authorised facility is carried out in accordance with operating instructions or procedures approved by the Council;

(c) the waste to be transported to a Central Radioactive Waste Management Facility is prepared by the authorised person in accordance with the procedures developed by the Central Radioactive Waste Management Facility and approved by the Council;

(d) the Radioactive Waste Management Officer supervises the preparation of the radioactive waste for the transportation to the Central Radioactive Waste Management Facility;

(e) the vessel used for transportation of radioactive waste is labelled in accordance with regulation 33;

(f) the vessels for transportation of radioactive waste and other means of conveyance of radioactive waste follow the approved designated routes from the point of collection to the disposal site or plant;

(g) the Council is notified at least fourteen days in advance of any off-site transfer of radioactive waste;

(h) there is acknowledgement of receipt of the dispatched radioactive waste;

(i) any shipment, of which acknowledgement is not received within seven days from the date of receipt, is investigated by the waste generator and a report prepared and submitted to the Council within seven days after completion of the investigation but not later than fourteen days after the date of shipment;

(g) a waste manifest and a material safety data sheet for radioactive waste, accompany the waste to enable the tracking of each batch of radioactive waste from its source to its final disposal; and

(k) the personnel involved in the collection and transportation of radioactive waste are, in accordance with the Occupational Safety and Health Act and any other applicable law, provided with—

(i) appropriate personal protective equipment and safety clothing;

(ii) appropriate equipment or facilities for handling the radioactive waste;

(iii) safe and secure sitting facilities in the vehicles used for transporting the radioactive waste; and

(iv) proper training, information and instructions, including trainings, information and instructions on how to handle emergency situations.

(2) The designated routes referred to in subregulation (1) (f) shall be approved by the Council.

(3) An authorised person and waste generator shall not permit unauthorised access to the vehicle or vessel used for the transportation of radioactive waste.

35. Transportation journey management plan

(1) An authorised person shall develop a journey management plan before commencement of operations for the transportation of radioactive waste and shall make it available to the Council.

(2) The journey management plan referred to under subregulation (1) shall include—

(a) the designated routes;

(b) route specific speed limits;

(c) designated driving period;

(d) health, safety and environment requirements; and

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

(3) A copy of the journey management plan referred to in subregulation (1) shall at all times be present in the vessel transporting the radioactive waste.

(4) The authorised person shall—

(a) install electronic tracking systems for vehicles used in the transportation of radioactive waste;

(b) provide access to real time vehicle tracking information to the Council; and

(c) obtain a transport permit from Council prior to transporting radioactive waste.

36. Storage of waste at site of waste generator

(1) A waste generator shall, prior to generating radioactive waste that may require clearance, discharge or disposal, put in place an appropriate storage facility within the practice facility of the waste generator or in another authorised facility.

(2) The design of the storage facility referred to in subregulation (1) shall be approved by the Council.

(3) The storage facility approved by the Council under subregulation (2) shall be used for purposes of storing radioactive waste only.

(4) The storage facility shall have adequate—

(a) shielding to contain the radioactive waste;

(b) protection of the waste packages from weather elements;

(c) handling and ability to retrieve waste packages;

(d) ventilation;

(e) occupational safety measures;

(f) physical security; and

(g) clear labels.

(5) A radioactive waste storage facility shall be located away from corrosive or flammable material and shall be clearly and legibly marked with the radiation symbol and warning signs.

(6) Radioactive waste arising from consumer products shall be stored and disposed of in accordance with these Regulations.

(7) A waste generator shall put in place arrangements to verify that the radioactive waste collected or received in the storage facility under its responsibility meets the acceptance criteria approved by the Council.

(8) Where the waste or sources to be stored do not meet the acceptance criteria, the waste generator shall establish requirements which compensate for the non-compliance.

(9) The waste generator shall put in place measures to ensure that radioactive waste and disused sealed sources are stored in containers, packages and facilities that meet the requirements approved by the Council.

(10) Radioactive waste shall be stored in a manner that ensures proper segregation, and protection of the workers, the public and the environment, and enables its subsequent inspection, monitoring, retrieval and preservation in a condition suitable for movement, handling, transport or disposal.

(11) The waste generator shall maintain records and adequate labelling during the different stages of storage for traceability of the waste packages.

37. Acceptance criteria for radioactive waste

(1) A waste generator or an authorised person shall consider interdependence among the steps in the management of radioactive waste for achieving continuity in operations and consistency of the entire waste management process.

(2) An authorised person shall be responsible for defining the authorised person's own waste acceptance criteria, subject to approval by Council as part of the safety case.

(3) A waste acceptance criteria referred to in sub regulation (2) shall specify the characteristics of waste packages and unpackaged waste, under normal and abnormal conditions, to be processed, stored or disposed.

(4) An authorised person shall establish an appropriate control system to provide confidence that the waste under the authorised person's responsibility meets the applicable waste acceptance criteria.

(5) A waste generator shall ensure that radioactive waste to be transferred meets the waste acceptance criteria of the receiving waste generator.

38. Waste acceptance in a disposal facility

An authorised person shall accept waste packages and unpackaged waste for the placement in a disposal facility that conforms to criteria that are fully consistent with, and are derived from, the safety case for the disposal facility in operation and after closure.

39. Storage of radioactive waste

(1) An authorised person and a waste generator shall establish an appropriate storage facility within their premises, prior to generating radioactive waste that may require subsequent management.

(2) An authorised person or a waste generator shall—

(a) establish arrangements to verify that the radioactive waste collected or received in the storage facility under its responsibility meets the acceptance criteria approved by the Council in the safety case;

(b) establish mechanisms which compensate for the non-compliance or refusal to transfer waste or disused sources in case the waste or sources to be stored do not meet the acceptance criteria;

(c) adopt mechanisms for waste and disused sealed sources to be stored in containers, packages and facilities that meet the requirements approved by the Council in the safety case;

(d) store radioactive waste in a manner that ensures proper segregation and the protection of the workers, the public and the environment, and enables its subsequent inspection, monitoring, retrieval and preservation in a condition suitable for movement, handling, transport or disposal; and

(e) maintain full traceability of the waste packages by means of record keeping and adequate labelling during the different stages of storage.

(3) In defining the criteria for the acceptance of waste packages in a storage facility, the authorised person or a waste generator shall take account of the known or likely requirements for subsequent disposal of the radioactive waste.

(4) An authorised person or a waste generator shall ensure that the integrity of waste packages in storage is maintained until it is retrieved for further treatment, conditioning or disposal.

(5) An authorised person or a waste generator shall ensure that the waste package container provides integrity throughout the storage period and permits—

(a) retrieval at the end of the storage period;

(b) enclosure in an over pack, if necessary;

(c) transport to and handling at a disposal facility; and

(d) compliance with relevant waste acceptance criteria.

40. Waste storage facilities

(1) An authorised person or the waste generator shall store the waste in such a way that human health and the environment are protected, and ensure that the waste is not stored in the vicinity of corrosive, explosive or easily flammable materials.

(2) An applicant for an authorisation to operate a waste facility shall—

(a) meet safety requirements for the protection of human health and the environment by appropriate planning for

the design, construction, operation and maintenance of the respective facility, including provisions for eventual retrieval of the waste;

(b) ensure that the facility is designed—

(i) on the basis of assumed conditions for its normal operation and assumed incidents or accidents;

(ii) for the likely period of storage, with the potential for degradation being taken into account;

(iii) in such a way that the waste can be retrieved whenever required;

(iv) so that it is adequately ventilated to exhaust any gas generated in normal conditions or under anticipated accident conditions;

(v) so that measures to prevent, detect and control fires are incorporated as required;

(vi) so that radiological monitoring and visual inspection is readily possible; and

(vii) so that the waste material is secure from theft and having adequate surveillance by the authorised person.

41. Discharge of radioactive substances to environment

(1) A waste generator and an authorised person shall ensure that waste is not discharged into the environment unless—

(a) the waste activity or concentration are confirmed to be below clearance levels as specified in Schedule 2 to these Regulations; and

(b) liquid, gaseous or particulate effluents discharges are within the limits set specified in Schedule 3 to these Regulations.

(2) A waste generator shall only discharge to the environment liquid, gaseous and particulate waste where the waste is within discharge limits prescribed in Schedules 2 and 3 to these Regulations, with approval from Council and in accordance with the National Environment (Standards for Discharge of Effluent into Water or Land) Regulations, 2020.

(3) A waste generator shall manage non-radioactive waste in accordance with the National Environment (Waste Management) Regulations, 2020.

(4) An authorised person shall declare, in the decommissioning plan, its intention to manage discharges during the decommissioning, to assess the radiological consequences of the discharges.

(5) An authorised person shall—

(a) obtain authorisation from the Council and the National Environment Management Authority for any discharges of radioactive material into the environment during decommissioning;

(b) determine the characteristics of the discharges and the possible locations and methods of discharge;

(c) determine all significant exposure pathways by which discharged radionuclides may give rise to exposure of members of the public;

(d) assess the doses to the representative person due to the planned discharges;

(e) assess the radiological environmental impacts of the discharges in a manner that is integrated with the features of the system of protection and safety; and

(f) promptly report to the Council any unplanned discharges or discharges exceeding the approved discharge limits, in the manner specified in the conditions of authorisation.

42. Discharge record and report

A waste generator and an authorised person shall—

(a) monitor discharges from a radioactive waste management facility to demonstrate compliance with the authorised discharge limits;

(b) keep records of the discharge monitoring results; and

(c) report the monitoring results to the Council on a quarterly basis.

43. Discharge of exempt waste

(1) The Council may exempt effluents containing radionuclides from the requirements of these Regulations, where the waste generator or authorised person demonstrates to the satisfaction of the Council that the effluents containing radionuclides are below the levels specified in Schedule 4 to these Regulations.

(2) Any waste exempted under subregulation (1) shall be handled in accordance with the National Environment (Standards for Discharge of Effluent into Water or Land) Regulations, 2020.

44. Disposal of radioactive waste

(1) Where radioactive waste is not suitable for discharge or release to the environment or for clearance or long-term storage, an authorised person shall submit to the Council a proposal for the final disposal of the radioactive waste.

(2) Notwithstanding subregulation (1), the waste specified in Schedule 5 to these Regulations may be released as if it were not radioactive waste.

(3) The authorised person shall document a safety case and supporting safety assessment for a disposal facility to a level of detail and quality sufficient to inform and support the decisions to be made at each step and to allow for independent review of the safety case and the supporting safety assessment.

(4) An authorised person shall ensure that—

(a) the disposal facility is sited, designed and operated in a manner that isolates the radioactive waste from people and from the accessible biosphere;

(b) an appropriate level of surveillance and control is applied to protect and preserve the passive safety features in accordance with the safety case for safety after closure;

(c) a disposal facility for radioactive waste is developed, operated and closed in a series of steps supported, as necessary, by iterative evaluations of the site, of the options for design, construction, operation and management, and of the performance and safety of the disposal system;

(d) the site proposed for a disposal facility is characterised at a level of detail sufficient to support a general understanding of both the characteristics of the site and how the site will evolve over time;

(e) the disposal facility is constructed in accordance with the design as described in the approved safety case and supporting safety assessment;

(f) the disposal facility is operated in accordance with the conditions of the authorisation and the relevant regulatory requirements;

(g) a disposal facility is closed in a manner that provides for the safety functions that have been shown by the safety case to be important after closure; and

(h) waste packages and unpackaged waste accepted for emplacement in a disposal facility conform to the criteria that are fully consistent with and are derived from, the safety case for the disposal facility in operation and after closure.

(5) An authorised person and waste generator shall ensure that no radioactive waste can be disposed of to an authorised facility unless the waste acceptance criteria approved by the Council is complied with.

(6) The final responsibility for verification of compliance of radioactive waste packages rests with the authorised person of the disposal facility.

(7) An authorised person shall put in place a monitoring plan and programme for a waste disposal facility to ensure that monitoring is carried out prior to and during the construction and operation of a disposal facility and after its closure.

(8) The results of the monitoring carried out under subregulation (7) shall be documented and shall form part of the updated safety case.

45. Safety of disposal facility

An authorised person shall select the host environment and design engineered barriers of the disposal facility to ensure that safety is provided by means of multiple physical barriers.

46. Containment of radioactive waste

An authorised person shall provide containment of the radionuclides associated with the waste through engineered barriers, including the waste form and packaging and the host environment selected.

47. Isolation of radioactive waste

An authorised person shall site, design and operate the waste disposal facility in a manner that provides features that are aimed at isolating the radioactive waste from people and from the accessible biosphere.

48. Surveillance and control of passive safety features

An authorised person shall put in place an appropriate level of surveillance and control to protect and preserve the passive safety features, to the extent that this is necessary, so that they can perform the functions that they are assigned in the safety case for safety after closure.

49. Step by step development and evaluation of disposal facilities

(1) An authorised person shall develop, operate and close in a series of steps, disposal facilities for radioactive waste.

(2) An authorised person shall ensure that the steps mentioned in subregulation (1) are supported, as required, by iterative evaluations of the site, of the options for design, construction, operation and management and of the performance and safety of the disposal system.

50. Site characterisation for disposal facility

An authorised person shall characterise the site of a disposal facility at a level of detail sufficient to support a general understanding of both the characteristics of the site and how the site will evolve over time.

51. Design of disposal facility

An authorised person shall design the disposal facility and its engineered barriers in such a way to—

(a) contain the waste with its associated hazard;

(b) be physically and chemically compatible with the host geological formation and surface environment; and

(c) provide safety features after closure that complement those features afforded by the host environment.

52. Construction of disposal facility

An authorised person shall construct a disposal facility in accordance with the design as described in the approved safety case and supporting safety assessment.

53. Operation of disposal facility

An authorised person shall operate the disposal facility in accordance with the conditions of the authorisation and the relevant regulatory requirements in order to maintain safety during the operational period and in such a manner as to preserve the safety functions assumed in the safety case that are important to safety after closure.

54. Closure of disposal facility

(1) An authorised person shall close the disposal facility in a way that provides for safety functions that have been shown by the safety case to be important after closure.

(2) An authorised person shall define, as much as practicable, plans for closure, including the transition from active management of the facility so that the closure can be carried out safely at an appropriate time.

(3) An authorised person shall prepare a post closure and institutional control plans to address institutional control and the arrangements for maintaining the availability of information about the disposal facility.

(4) The post closure and institutional control plans mentioned under subregulation (3) shall be consistent with passive safety features and shall form part of the safety case on which the authorisation to close the facility is granted.

55. Existing disposal facility

An authorised person shall periodically assess the safety of an existing disposal facility until termination of the authorisation.

56. Passive means for safety of disposal facility

An authorised person shall evaluate the site and design of the disposal facility and construct, operate and close the disposal facility in such a way that safety is ensured by passive means to the fullest extent possible and the need for actions to be taken after closure of the facility is minimised.

57. Monitoring programmes at disposal facility

(1) An authorised person shall establish a monitoring programme prior to and during the construction and operation of a disposal facility and after the closure of the disposal facility.

(2) The monitoring programme established under subregulation (1) shall be designed to collect and update information necessary for the purposes of protection and safety.

58. Recycle and reuse of radioactive material

An authorised person and a waste generator shall—

(a) not dismantle any sealed source unless authorised by the council;

(b) before declaring the radioactive material as waste, consider whether the authorised person or any other person can make use of the material; and

(c) where appropriate, transfer the material after confirming with the Council that the person to which it is transferred has the necessary authorisation to hold the material.

59. Quality assurance programme

(1) An authorised person shall carry out radioactive waste management operations in accordance with a quality assurance programme approved by the Council.

(2) The quality assurance programme referred to in subregulation (1) shall contain—

(a) an inventory of radioactive waste, including origin, location, physical and chemical characteristics, and as appropriate, a record of radioactive waste removed or discharged from the facility;

(a) site plans, engineering drawings, specifications and process descriptions;

(b) data resulting from quality assurance and quality control procedures and from operating activities;

(c) safety and environmental assessment methods and computer codes;

(d) results of safety and environmental assessments;

(e) effluent and environmental impact monitoring results;

(f) radioactive waste package identification;

(g) waste management arrangements as specified in regulation 36; and

(h) a detailed facility closure plan.

(3) The quality assurance programme shall be reviewed periodically by independent auditors.

60. Emergency preparedness and response plan

(1) An authorised person shall develop an emergency preparedness and response plan.

(2) The emergency preparedness and response plan referred to in subregulation (1) shall contain, as applicable—

(a) the name, address and job title of the owner or person responsible for the management or control of the facility or operations;

(b) alert, notification, mobilisation and demobilisation procedures;

(c) a description of the response command structure, including the job title and twenty four hour telephone number of the persons responsible for the emergency preparedness and response plan;

(d) response operational procedures and response tactics;

(e) the health, safety and security plan;

(f) facility information, including a description of the location, size and storage capacity of the facility;

(g) maps, nautical charts, site layout, process and instrumentation diagrams, drawings and photographs, including a site map of the facility, as appropriate;

(h) amount, characterisation and properties of radioactive waste normally handled at the facility;

(i) counter measures to contain, clean up and mitigate the effects of a radioactive waste contamination or spillage;

(j) identification of areas and activities which may be impacted by the identified radioactive waste spill or contamination;

(k) a description of spill containment and drainage control structures and equipment for radioactive waste storage and handling facilities;

(l) a description of the radioactive waste spill or contamination response strategy identified for the various scenarios;

(m) an inventory of the resources available for radioactive waste management response operations, including equipment, supplies and services;

(n) actions that members of the community should take in the event of a radioactive waste management emergency;

(o) training, drills and exercise programmes;

(p) procedures for external assistance;

(q) waste management strategy and procedures;

(r) procedures for post emergency assessment, aftercare and monitoring of the affected environment; and

(s) any other information that may be deemed necessary.

(3) An authorised person required to establish an emergency preparedness and response plan under subregulation (1) shall, within three months before commencement of operations of a waste management facility, submit an emergency preparedness and response plan to the council for review and approval.

61. Decommissioning

(1) An authorised person shall, within five years prior to the proposed date of commencement of decommissioning of a radioactive

waste management facility, submit to the Council an application for authorisation to decommission a facility in Form 5 set out in Schedule 6 to these Regulations.

(2) The application under subregulation (1) shall contain the final decommissioning plan and a justification of the proposed decommissioning option.

(3) An application for authorisation made under subregulation (1) shall be accompanied by proof of payment of fees prescribed in Schedule 9 to these Regulations.

(4) The Council may, where it is satisfied with the application issue to the authorised person a permit to commence decommissioning operations.

(5) An authorised person shall apply a graded approach to all aspects of the decommissioning process, consistent with the magnitude of the possible radiation risks arising from the decommissioning.

(6) An authorised person shall establish and maintain a decommissioning plan commensurate with the type and status of the facility.

(7) An authorised person shall be responsible for the safety of a facility during the decommissioning operations.

(8) An authorised person shall ensure that during all phases of decommissioning, workers, the public and the environment are protected from radiological hazards resulting from decommissioning activities.

(9) An authorised person shall ensure that the initial design and any subsequent modifications of a facility include consideration of future decommissioning requirements.

62. Responsibilities of authorised person during decommissioning

(1) An authorised person shall have the prime and non-delegable responsibility for all aspects of protection and safety of people and the environment during decommissioning.

(2) An authorised person shall—

(a) plan for decommissioning and undertake decommissioning activities in compliance with the authorisation and with other regulatory requirements;

(b) identify other parties that have specified responsibilities related or connected to the decommissioning activities;

(c) establish protection and safety objectives for the decommissioning activities;

(d) select a decommissioning strategy as the basis for preparing, maintaining and updating the decommissioning plan throughout the lifetime of the facility;

(e) prepare and submit an initial decommissioning plan and subsequent updates for review and approval by the Council;

(f) establish, implement and maintain the technical and organisational measures that are needed for ensuring protection and safety during the decommissioning activities and for compliance with these Regulations and any other applicable law;

(g) establish, implement and maintaining an integrated management system;

(h) estimate the cost of decommissioning and provide financial guarantee and resources to cover the costs associated with

safe decommissioning, including the management of the resulting radioactive materials and radioactive waste;

(i) notify the Council and any other relevant authority prior to permanent shutdown of the facility;

(j) manage the decommissioning project, conducting decommissioning activities and ensure oversight of the actions conducted by contractors;

(k) ensure the safe management and control of any remaining operational waste from the facility and all waste from decommissioning, and disposing of such waste in accordance with the regulatory requirements;

(l) ensure that the facility is maintained in a safe configuration during any period of transition from permanent shutdown to the start of decommissioning activities;

(m) develop, implement and document a protection and safety programme commensurate with the radiation risks associated with the exposure situation and sufficient to ensure compliance with the requirements of these Regulations;

(n) perform safety assessments and environmental impact assessments in support of decommissioning activities in accordance with the requirements of these Regulations and other applicable law;

(o) prepare and implement appropriate safety procedures, including emergency plans where applicable;

(p) ensure that properly trained, qualified and competent staff are available for the decommissioning project;

(q) perform radiological surveys in support of decommissioning;

(r) verify that the approved end state criteria have been met by performing a final radiological survey;

(s) prepare and submit a final decommissioning report to the Council; and

(t) keep records on the decommissioning activities and submit reports as required by the Council.

(5) The initial decommissioning plan prepared and submitted by the authorised person shall—

(a) identify decommissioning options to demonstrate the feasibility of decommissioning;

(b) confirm that sufficient financial resources are available for decommissioning;

(c) identify categories and estimate quantities of waste that will be generated during decommissioning;

(d) confirm that decommissioning can be safely conducted using techniques that are proven or under development; and

(e) cover environmental aspects of the decommissioning, including the management of waste.

(6) The initial decommissioning plan referred to in subregulation (5) shall in addition—

(a) identify major existing structures, systems and components that may be used during decommissioning, their changes or replacements and the need for new structures, systems

and components performing specific safety functions during decommissioning;

(b) identify the need for existing and new facilities to carry out decommissioning and waste management; and

(c) be supported by an appropriate safety assessment for the decommissioning activities, the details of which are commensurate with the characteristics and status of the facility, consistent with a graded approach.

63. Graded approach

(1) An authorised person shall apply a graded approach to all aspects of the decommissioning process, consistent with the magnitude of the possible radiation risks arising from the decommissioning.

(2) An authorised person shall document the way in which the graded approach is implemented to ensure that the level of analysis, documentation and actions implemented to comply with the requirements for protection and safety are commensurate with—

(a) the type and purpose of the facility;

(b) the particular characteristics of the facility;

(c) the stage of a facility within its lifetime;

(d) the relative importance to safety, safeguards and security and the magnitude of any hazards involved; and

(e) the relative importance of radiological and non-radiological hazards.

(3) The application of the graded approach under subregulation (1) shall be reassessed—

(a) during planning;

(b) as the development of the decommissioning plan progresses;

(c) during the implementation of the decommissioning plan, structures, systems and components; and

(d) as the decommissioning activities progress, depending on factors such as the complexity of the facility and the hazards involved in the decommissioning activities.

(4) When applying the graded approach, an authorised person shall ensure that the decommissioning plan, including the safety assessment carried out in or for any particular facility or activity is consistent with the magnitude of the possible radiation risks arising from the facility or activity.

(5) The safety assessment referred to in subregulation (4) shall be planned, organised, applied, audited and reviewed in accordance with the graded approach.

(6) When a phased approach is applied to a decommissioning project, an authorised person shall apply a graded approach in the identification of—

(a) the nature and extent of phases in terms of complexity and duration;

(b) the work to be performed and related techniques in each phase;

(c) the hazards and risks related to each phase;

(d) interdependencies between phases; and

(e) any milestones of the registration or licensing process and the periodic update of the decommissioning plan and supporting documents.

64. Assessment of safety

(1) An authorised person shall assess the safety of decommissioning activities for all facilities for which decommissioning is planned or ongoing.

(2) The decommissioning plan shall be supported by a safety assessment addressing the planned decommissioning activities and any incidents associated with such actions, including accidents that may occur or situations that may arise during decommissioning.

(3) The safety assessment shall demonstrate that the planned decommissioning activities meet all applicable safety requirements.

(4) An authorised person shall, before starting the safety assessment, confer with the Council to establish the scope and level of detail of the safety assessment for the facility or activity and the resources that need to be directed to the safety assessment.

(5) An authorised person shall prepare the safety assessment to—

(a) identify ways in which exposures may be incurred, account being taken of the effects of external events as well as of events directly involving the decommissioning activities;

(b) determine the expected magnitudes and likelihood of exposures in normal situations during decommissioning and to the extent reasonable and practicable, make an assessment of potential exposures; and

(c) assess the adequacy of the provisions for the protection of workers and members of the public and the provisions for safety, including the authorised person's response to incidents and accidents.

(6) An authorised person shall, in developing the safety assessment—

(a) document how regulatory requirements and safety criteria are met to support the authorisation of the proposed decommissioning activities;

(b) include a systematic evaluation of the nature, magnitude and likelihood of hazards and their radiological consequences for workers, the public and the environment for planned activities and for accident conditions;

(c) quantify the systematic and progressive reduction in radiological hazards to be achieved through the conduct of the decommissioning activities;

(d) identify the safety measures, limit controls and conditions that will need to be applied during the decommissioning activities to ensure that the relevant safety requirements and criteria are met and maintained throughout the decommissioning;

(e) where relevant, demonstrate that the institutional controls applied after decommissioning will not impose an undue burden on future generations;

(f) provide input to on-site and off-site emergency planning, where applicable, and to safety management arrangements;

(g) identify training needs for decommissioning and competences for staff performing decommissioning activities; and

(h) demonstrate the competence of the staff for the planned actions.

(7) An authorised person shall periodically review the safety of the facility being decommissioned at a frequency established by the Council, while taking into account—

(a) any changes that may significantly affect the safety of the facility or decommissioning activities;

(b) significant developments in knowledge and understanding such as developments arising from research or decommissioning experience;

(c) emerging safety issues due to a regulatory concern or a significant incident; and

(d) changes in the input data used in the safety analysis that may have significant implications on safety.

(8) An authorised person shall ensure that an independent verification of the safety assessment is conducted on behalf of the authorised person, consistent with the regulatory requirements, prior to finalising the safety assessment and before submitting it for regulatory review by the Council.

(9) The independent verification referred to under subregulation (8) shall ensure that—

(a) the input data and assumptions used are valid;

(b) the assessment accurately reflects the actual state of the facility and the decommissioning activities;

(c) the safety measures derived from the safety assessment are adequate for the decommissioning activities; and

(d) the safety assessment is kept updated to reflect changes to the facility and the development of knowledge and understanding about it.

(10) Where a phased approach to decommissioning is used, an independent verification shall be performed to ensure that the safety assessment for each phase is consistent with the overall safety assessment.

(11) An authorised person shall ensure that, prior to commencing a new phase of decommissioning, an independent verification is performed to ensure that the safety assessment has been appropriately updated.

(12) The development, verification and internal approval of the safety assessment for decommissioning as part of the decommissioning plan shall be part of the management system of the facility.

65. Clearance of material from regulatory control

An authorised person shall—

(a) declare in the decommissioning plan any intention to clear material from regulatory control in accordance with Schedule 2 to these Regulations;

(b) describe the methodology to be used for clearing such material, including any decontamination process involved;

(c) set out in the decommissioning plan, a formal mechanism, including rigorous control measures, for ensuring that the radioactive material to be cleared complies with the relevant clearance levels stated in Schedule 2 to these regulations; and

(d) record, within the integrated management system, relevant information on material that has been cleared and shall report this information to the Council in accordance with these regulations.

66. On-site and off-site monitoring

(1) An authorised person shall apply, review and modify, as necessary, the authorised persons on-site and off-site monitoring programme, as described in the decommissioning plan and the supporting documents to ensure that changes to the facility, specific hazards and effluents associated with decommissioning are monitored and addressed appropriately.

(2) An authorised person shall, in the case of deferred dismantling, ensure that a program for monitoring and surveillance is in place throughout the period of deferral.

(3) Where the approved decommissioning end state involves ongoing restrictions on the future use of the site, the authorised person shall establish and maintain appropriate controls and programs for monitoring and surveillance for the optimisation of protection and safety and the protection of the environment.

(4) An authorised person shall assign clear responsibility for implementing and maintaining the controls and programmes referred to in subregulation (3) to ensure compliance with the restrictions on the future use of the site.

67. Human factors

(1) An authorised person shall develop, implement and maintain a human factors programme to ensure that—

(a) new equipment and the development of procedures facilitate safe decommissioning and use of equipment, minimise the possibility that human errors will lead to accidents and reduce the possibility that indications of normal conditions and abnormal conditions will be misinterpreted; and

(b) appropriate systems, structures, components and procedures are in place—

(i) to reduce, as far as practicable, the possibility that human error or inadvertent action may give rise to accidents or other incidents leading to the exposure of any person;

(ii) to provide means for detecting human errors and for correcting them or compensating for them; and

(iii) to facilitate protective actions and corrective actions in the event of failures of safety systems or failures of protective measures.

(2) An authorised person shall inform all employees at least annually of the importance of effective safety measures and shall train the employees in the implementation of the effective safety measures.

(3) An authorised person shall develop, evaluate periodically and update, as necessary, training programmes.

68. Involvement of interested parties

A person applying for an authorisation for decommissioning shall—

(a) provide interested parties with an opportunity to comment on the application to the Council for approval;

(b) inform interested parties of any site restrictions, and the results of monitoring and surveillance; and

(c) address inputs from the public before requesting a termination of the authorisation for decommissioning.

69. Selecting decommissioning strategy

(1) An authorised person is responsible for selecting a decommissioning strategy for the facility of the authorised person.

(2) An authorised person shall—

(a) document a decommissioning strategy, including a description of the options, the overall timescales for the decommissioning of the facility and the end state after completion of all decommissioning activities; and

(b) demonstrate that, for the strategy selected, the facility shall be maintained in a safe configuration at all phases of decommissioning and reach the specified decommissioning end state as defined in the approved final decommissioning plan, and that no undue burdens shall be imposed on future generations.

(3) Where the shutdown of a facility is sudden, the authorised person shall review the decommissioning strategy on the basis of the situation that initiated the sudden shutdown to determine whether revision of the strategy is required.

(4) Where the sudden shutdown of a facility is caused by an accident, the authorised person shall bring the facility to a safe configuration before the decommissioning plan is implemented.

(5) For sites with more than one facility, the authorised person shall develop a site strategy for decommissioning to ensure that interdependences between the facilities are taken into account in the individual decommissioning plans for each facility.

(6) An authorised person shall submit to Council the site strategy referred to in subregulation (5) during the application for the grant of authorisation.

70. Planning of decommissioning

(1) An authorised person shall take into account decommissioning when siting, designing, constructing, commissioning, operating and modifying the facility in order to facilitate decommissioning and record keeping and to minimise contamination, activation and the accumulation of waste.

(2) An authorised person shall, at the siting stage during the establishment of a new facility, conduct a background survey of the site, including obtaining information on radiological conditions.

(3) An authorised person shall update the baseline data obtained in subregulation (2) prior to the commissioning of the facility.

(4) The authorised person shall—

(a) in the case of an existing facility for which no such background survey has been made in the past, use data from analogous and undisturbed areas with similar characteristics; and

(b) for a new facility, commence planning for decommissioning early in the siting or design stage, and shall continue throughout the lifetime of the facility up to decommissioning and including the decommissioning stage itself.

(5) An authorised person shall, based on the established decommissioning strategy, establish an initial decommissioning plan for the facility and submit the plan to the Council together with the application for authorisation to construct, commission and operate the facility.

(6) The authorised person shall, during the operation of the facility, update the decommissioning plan and related safety assessment at least every five years or as otherwise specified by the Council.

(7) The authorised person shall, in updating the decommissioning plan under subregulation (6), consider as applicable—

(a) the operational experience gained;

(b) the lessons learned from the decommissioning of similar facilities;

(c) new or revised safety requirements;

(d) advances in technological developments relevant to the selected decommissioning strategy;

(e) the occurrence of incidents or situations giving rise to consequences relevant to decommissioning;

(f) any change to the decommissioning strategy; and

(g) any significant deviations from the cost estimate and the scheduled programme; and

(h) any other information as may be required by the Council.

(8) The authorised person shall, for existing facilities where there is no initial decommissioning plan, prepare a suitable decommissioning plan reflecting the operational status of the installation and the plan shall be periodically reviewed and updated every five years or as otherwise specified by the Council.

(9) Where a facility is permanently shut down or is no longer used for its intended purpose, the final decommissioning plan shall be submitted to the Council for approval within a period of two years from the date of the permanent shutdown.

71. Transition from operation to decommissioning

An authorised person shall—

(a) maintain that the radioactive waste management facility in a safe configuration during any period of transition, if applicable, following permanent shutdown and until the approval of the final decommissioning plan;

(b) remove operational radioactive waste or nuclear material present in the facility prior to the conduct of decommissioning activities and transport the material to an authorised facility;

(c) address the removal of operational radioactive waste or nuclear material as part of the decommissioning plan, where the removal is not possible during the period of transition; and

(d) notify the Council as soon as the decision has been made to permanently shut down the facility.

72. Final update of decommissioning plan

(1) An authorised person shall prepare and submit a final update of the decommissioning plan and supporting documents for review and approval by the Council prior to granting the authorisation to conduct decommissioning activities.

(2) An authorised person shall, during preparation of the final decommissioning plan, examine the facility and determine the quantity and type of radioactive and other hazardous material at the facility to ensure that the final decommissioning plan and the associated safety assessment reflect the real conditions of the facility.

(3) Where contamination or radioactive waste from the operation remains at the facility after permanent shutdown, the authorised person shall include these in the detailed characterisation surveys.

(4) An authorised person shall, as part of the preparation of the final decommissioning plan, check and update the relevant facility drawings and other documents to reflect changes the made during the operational period or the transition period.

(5) The final decommissioning plan and supporting documents shall cover—

(a) the selected decommissioning strategy;

(b) the schedule, type and sequence of decommissioning activities;

(c) the waste management strategy applied, including clearance, the proposed end state and how the authorised person will demonstrate that the end state criteria have been met;

(d) the storage and disposal of the waste generated from decommissioning;

(e) the timeframe for decommissioning; and

(f) financing for the completion of decommissioning.

73. Documents in support of decommissioning plan

An authorised person shall—

(a) submit detailed supporting documents supplementing individual parts of the decommissioning plan to facilitate the approval process;

(b) submit to the Council for approval the emergency preparedness and response plan during decommissioning, reflecting the emergency arrangements and any updates; and

(c) adopt appropriate measures to ensure physical protection and security at the facility undergoing decommissioning to prevent unauthorised access of individuals and unauthorised removal of radioactive material.

74. Deferred dismantling

An authorised person shall, in the case of deferred dismantling, demonstrate in the decommissioning plan—

(a) that in the case of a nuclear facility, the facility shall be made passively safe, as far as reasonably practical, before entering the deferral period and that the need for active safety systems, monitoring and human intervention shall be minimised;

(b) that in the case of a nuclear facility, the dismantling of the facility can be conducted safely and reliably after end of the deferral period;

(c) that the care and maintenance programme shall ensure safety during the deferral period and shall not impair future decommissioning; and

(d) that the financial resources for the deferral period and the following period of dismantling are ensured.

75. Start of decommissioning activities

(1) An authorised person shall not commence—

(a) decommissioning activities until the authorisation for decommissioning has been granted by the Council; or

(b) any additional or altered decommissioning activities until the decommissioning plan has been updated and the updated version has been approved by the Council.

76. Phased approach

(1) When an authorised person implements a phased approach to the conduct decommissioning activities, all phases necessary to reach the final end state shall be described in the decommissioning plan and the supporting documents.

(2) An authorised person shall, within the decommissioning plan—

(a) provide an overview of the decommissioning of the facility;

(b) describe the content, schedule and timeframe of each phase;

(c) make provision for an overarching safety assessment;

(d) specify the end state criteria of each phase; and

(e) demonstrate that earlier phases do not jeopardise the conduct of any later phase.

(3) An authorised person shall, at least for the first phase, develop a detailed safety assessment as part of the decommissioning plan.

(4) An authorised person shall develop detailed safety assessments for each phase gradually and consistently with the progressive implementation of the decommissioning process.

77. Management of structures, systems and components

(1) An authorised person shall—

(a) determine whether the structures, systems and components identified for decommissioning activities fulfil the safety functions required of them;

(b) identify, classify and reclassify structures, systems and components as their importance for safety changes during the course of the decommissioning activities;

(c) reflect the classification or reclassification referred to in paragraph (b) in the decommissioning plan and supporting documents; and

(d) maintain and update the list of structures, systems and components important to safety.

(2) An authorised person may reclassify, progressively remove from service and dismantle existing structures, systems and

components as the decommissioning progresses, provided that the inspection and maintenance programme for the facility is updated accordingly.

(3) An authorised person shall ensure that installation and use of new structures, systems and components are consistent with the decommissioning plan.

(4) An authorised person shall address the ageing of structures, systems and components and other equipment significant to safety by establishing, if necessary, provisions for their maintenance, testing and inspection.

(5) An authorised person shall record, store, analyse and review data on maintenance, testing, surveillance and inspection of structures, systems and components and other equipment relevant to safety.

78. Feedback of decommissioning experience

An authorised person shall establish and implement arrangements for the feedback of decommissioning experience through the collection, screening, analysis and documentation of experience and events at the facility in a systematic way and in a manner that improves and ensures safe decommissioning.

79. Management of facility during period of deferral

(1) An authorised person shall, before the start of the period of deferral—

(a) demonstrate that the facility complies with the conditions for the period of deferral as described in the decommissioning plan; and

(b) implement a care and maintenance programme developed as part of the decommissioning plan, the implementation of which ensures safety and does not impair future decommissioning phases.

(2) An authorised person shall periodically review the care and maintenance programme for its appropriateness during the period of deferral focusing on the ageing of structures, systems and components.

80. Completion of decommissioning activities

(1) An authorised person shall, on completion of the decommissioning activities, prepare all the relevant records concerning the former presence of the facility on the site and the nature of the activities conducted at the facility, for the benefit of a future user of the site after its release from regulatory control.

(2) An authorised person shall prepare and submit to the Council for review and approval a final decommissioning report demonstrating that the end state of the facility as specified in the decommissioning plan has been reached.

(3) An authoised person shall, where the future use of the site is restricted, specify in the final decommissioning report any ongoing controls and monitoring and surveillance programme needed.

81. Termination of decommissioning authorisation

(1) An authorised person shall—

(a) demonstrate that the end state specified in the final decommissioning plan has been reached and is consistent with the criteria stipulated in Schedule 2 to these Regulations;

(b) address input from the public before the termination of decommissioning authorisation; and

(c) apply for the termination of the decommissioning authorisation after achieving the proposed end state as described in the final decommissioning plan.

(2) Where the authorised person applies for the release of parts of the facility from regulatory control, the remainder of the facility shall remain subject to regulatory control.

(3) An authorised person shall, where a site is released with restrictions on use—

(a) ensure that financial resources are available for monitoring, surveillance and control of the facility throughout the necessary time period;

(b) document the restrictions within the final decommissioning report; and

(c) establish and ensure that controls and programmes for monitoring and surveillance are maintained and approved by Council; and

(d) addresses any input from the public.

82. On-site storage of radioactive material

(1) An authorised person shall, where the remaining radioactive material, including radioactive waste, is to be stored on the site after completion of the decommissioning activities, apply to the Council for authorisation for the storage facility.

(2) The application for authorisation under subregulation (1) shall include requirements for the decommissioning of the storage facility.

(3) An authorised person shall, throughout the process of development and operation of a disposal facility for radioactive waste, develop an understanding of the relevance and implications for safety of the available options for the facility.

PART IV—SECURITY REQUIREMENTS

83. Physical protection

An authorised person and a waste generator shall put in place adequate physical protection measures to prevent any unauthorised access to the radioactive waste management facility.

84. Security objectives and measures for radioactive waste

(1) Where a situation involving the loss of control of, unauthorised access to, actual or attempted theft or sabotage of waste has occurred, or is occurring, an authorised person or waste generator shall—

(a) immediately inform the Council and the Uganda police;

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

(b) investigate the event and its causes, circumstances and consequences; and

(c) submit a report to Council in accordance with regulation 24.

(2) The authorised person shall—

(a) develop a security plan for the radioactive waste management facility and submit a copy to Council for approval;

(b) put in place a prevention, detection, delay and response mechanisms commensurate with the risk threat category of the radioactive waste management facility;

(c) ensure that all personnel on whom security depends are appropriately trained, qualified and competent;

(d) ensure that the personnel responsible for security are periodically retrained or re-qualified, as may be appropriate;

(e) inform employees at least annually of the importance of effective security measures and train them in the implementation of the effective security measures, as appropriate;

(f) conduct training programmes and routinely evaluate the programmes and update the programmes, as necessary;

(g) ensure that security measures are undertaken to carry out tasks related to security responsibilities;

(h) notify the Council of the intention to introduce any modification to facilities or activities affecting the security of the radioactive waste, and shall not carry out any modification without authorisation by the Council;

(i) establish a management system, commensurate with the size and nature of the authorised activity, which ensures that—

(i) procedures that strengthen radioactive waste security are applied;

(ii) issues affecting security are promptly identified and corrected in a manner commensurate with their importance;

(iii) the responsibilities of each individual for security are clearly identified and each individual is suitably trained, qualified and competent; and

(iv) organisational arrangements and lines of communications are established that result in an appropriate flow of information on security at and between the various levels in the entire organisation of the authorised person.

85. Nuclear safeguards

An authorised person shall consider nuclear safeguards requirements in the design and the operation of waste management facilities to which they apply.

86. Right of entry and inspection

(1) A person designated by the Council as an inspector may, at any time enter the premises of an authorised person, or any other premises where he or she has reason to suspect that waste is present.

(2) The Council may during inspections, conduct tests, take samples and photographs or bring in other experts where he or she deems necessary.

(3) The Council shall conduct announced and unannounced inspections at sites with waste or potential to generate waste.

(4) An authorised person and a waste generator shall grant the Council access to the facilities and records.

87. Enforcement

(1) The Council may take an enforcement measure where an authorised person fails to take corrective or preventive actions within a reasonable time in accordance with these Regulations.

(2) The enforcement measures referred to in subregulation (1) include—

(a) modification, suspension or revocation of an authorisation;

(b) prohibition from the possession of a radioactive waste;

(c) shut down of operations;

(d) closure of a facility; and

(e) fines could be expressly operationalised through a legal notice

88. Revocation of Part XI of S.I No.4 of 2012

Part XI of the Atomic Energy Regulations 2012 is revoked.

SCHEDULES

Schedule I

Regulation 4

A currency point is equivalent to twenty thousand Uganda shillings.

Schedule 2

Regulations 3 (a), 33 (3), 41 (1), 65 and 81

PART 1

Waste Clearance Criteria

Waste may be released into the atmosphere, discharged into public sewer system, incinerated in a municipal incinerator or sent for municipal landfill provided that the conditions given in the paragraphs below are satisfied.

A.1. Gaseous waste

A. 1.1 Each waste generator or the Designated Radioactive Waste Management Facility may discharge gaseous waste in quantities not exceeding 10 Sv in a year directly into the atmosphere.

A.1.2 If the waste contains more than one radionuclide, the highest permitted activity shall be calculated in accordance with the equation (1):

Ak---------- < 10……..(1) Sv

Where Ak is the activity of radionuclide.

A.2. Liquid waste

A2. 1 Each waste generator or the Designated Radioactive Waste Management Facility may discharge liquid waste into a local sewer if the total activity does not exceed 1 mSv in a year and 0.1 mSv in a year or 5MBq, whichever is less, per individual discharge.

A.2.2 If the waste contains more than one radionuclide the highest permitted activity shall be calculated in accordance with equation (1)

Ak □---------- < 1……(2) mSv

The total activity, however, must not exceed 100MBq per month.

A.3. Solid Waste

A.3.1 Each waste generator or the Designated Radioactive Waste Management Facility may dispose in a local landfill the waste containing a total activity not greater than 1 mSv in a year. The maximum activity in waste package shall not exceed 0.1 mSv in a year or 5MBq.

A.3.2 If the waste contains more than one radionuclide the highest activity shall be calculated in accordance with equation (1). For the activity in one individual package, equation (3) shall apply:

Ak □---------- < 0,1…… (3) mSv

A.3.3 The dose rate at the surface of the package to be sent to a municipal incinerator or landfill shall not exceed 5μGy/h.

A.3.4 When a waste package is sent to a municipal incinerator or landfill, it shall carry the following marking:

(a) "this waste package is exempted from nuclear control according to the Atomic Energy (Radioactive Waste Management) Regulations, 2026";

(b) name and address of sender;

(c) signature of sender

A.3.5 Records of discharged exempt waste shall be established by the waste generator and kept for at least three years. The records shall be available for inspection by the Council.

PART 2

VALUES OF ALImin FOR CERTAIN COMMON RADIONUCLIDES

Nuclides	ALImin (Bq)	Nuclides	ALImin (Bq)
Nuclides	3 x 10^9	^{85m}Sr	8 x 10^9
^{3}H eau	3 x 10^8	^{85m}Sr	6 x 10^7
^{14}C	2 x 10^9	^{87m}Sr	1 x 10^9
^{18}F	2 x 10^7	^{89}Sr	5 x 10^6
^{22}Na	1 x 10^8	^{90}Sr	1 x 10^5
^{24}Na	1 x 10^7	^{90}Y	2 x 10^7
^{32}P	9 x 10^6	^{99m}Tc	3 x 10^9
^{36}CI	6 x 10^8	^{99}Mo	2 x 10^8
^{38}CI	2 x 10^8	^{113}In	2 x 109
^{42}K	2 x 10^8	^{124}Sb	1 x 10^8
^{43}K	3 x 10^7	^{123}I	1 x 10^8
^{45}Ca	7 x 10^8	^{125}I	1 x 10^6
^{47}Ca	3 x 10^7	^{129}I	2 x 10^5
^{51}Cr	1 x 10^9	^{130}I	1 x 10^7
^{52}Mn	3 x 10^7	^{131}I	1 x 10^6
^{52m}Mn	2 x 10^8	^{132}I	1 x 10^8
^{54}Mn	3 x 10	^{109}Cd	1 x 10^6
^{56}Mn	7 x 10^7	^{115}Cd	3 x 10^7
^{52}Fe	1 x 10^7	^{111}In	2 x 10^8
^{55}Fe	7 x 10^6	^{129}Cs	9 x 107
^{59}Fe	2 x 10^7	^{130}Cs	2 x 10^9
^{56}Co	3 x 10^7	^{131}Cs	8 x 10^8
^{57}Co	1 x 10^6	^{134}Cs	3 x 10^6
^{58}Co	1 x 10^8	^{134m}Cs	4 x 10^9
^{60}Co	4 x 10^8	^{137}Cs	4 x 10^6
^{63}Ni	2 x 10^8	^{131}Ba	1 x 10^8
^{64}Cu	5 x 10^7	^{133m}Ba	9 x 10^7
^{67}Cu	1x 10^7	^{135m}Ba	1 x 10^8
^{62}Zn	2 x 10^8	^{140}La	2 x 10^7
^{65}Zn	3 x 10^7	^{169}Yb	2 x 10^7
^{69m}Zn	6 x 10^8	^{192}Ir	8 x 10^6

Nuclides	ALImin (Bq)	Nuclides	ALImin (Bq)
^{67}Ga	8×10^{8}	^{198}Au	4×10^{7}
^{68}Ga	8×10^{7}	^{197}Hg	2×10^{8}
^{73}As	6×10^{7}	^{203}Hg	2×10^{7}
^{74}As	1×10^{8}	^{201}TI	2×10^{8}
^{75}Se	6×10^{8}	^{204}TI	7×10^{7}
^{76}Br	1×10^{8}	^{210}Pb	9×10^{3}
^{77}Br	9×10^{9}	^{212}Pb	1×10^{6}
^{82}Br	1×10^{9}	^{210}Po	2×10^{4}
^{81m}Rb	2×10^{7}	^{226}Ra	2×10^{4}
^{81}Rb	7×10^{8}	^{232}Th	4×10^{1}
^{86}Rb	1×10^{9}	^{238}U	2×10^{3}
^{88}Rb	4×10^{2}	^{241}Am	2×10^{2}
^{89}Rb		^{252}Cf	$1x10^{3}$
^{244}Cm			

Schedule 3

Regulations 41

Results of Deterministic Calculations of Activity Concentration Levels for Specific Clearance for Disposal of Waste In Conventional Landfills

Radionuclide	Generic clearance level (Bq/g)	Activity concentration level for disposal in landfills (Bq/g)		
		Inert waste landfill	Municipal non-hazardous waste landfill	Hazardous waste landfill
Sr-90	1	6.3	12	46
Tc-99	1	2.8	2.8	5.3
Ru-106	0.1	11	11	14
I-131	10	87	87	110
Cs-134	0.1	0.75	0.75	1.0
Cs-137	0.1	1.7	1.7	2.2
Ce-144	10	45	45	48
Pu-239	0.1	2.7	2.7	4.2
Pu-241	10	64	64	97
Am-241	0.1	3.2	3.2	40

Schedule 4

Regulation 43 (1)

Exemption Levels for Radionuclides

Nuclide	Activity concentration (Bq/g)	Activity (Bq)	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
H-3	1×10^6	1×10^9	Fe-52	1×10^1	1×10^6
Be-7	1×10^3	1×10^7	Fe-55	1×10^4	1×10^6
C-14	1×10^4	1×10^7	Fe-59	1×10^1	1×10^6
O-15	1×10^2	1×10^9	Co-55	1×10^1	1×10^6
F-18	1×10^1	1×10^6	Co-56	1×10^1	1×10^5
Na-22	1×10^1	1×10^6	Co-57	1×10^2	1×10^6
Na-24	1×10^1	1×10^5	Co-58	1×10^1	1×10^6
Si-31	1×10^3	1×10^6	Co-58m	1×10^4	1×10^7
P-32	1×10^3	1×10^5	Co-60	1×10^1	1×10^5
P-33	1×10^5	1×10^8	Co-60m	1×10^3	1×10^6
S-35	1×10^5	1×10^8	Co-61	1×10^2	1×10^6
Cl-36	1×10^4	1×10^6	Co-62m	1×10^1	1×10^5
Cl-38	1×10^1	1×10^5	Ni-59	1×10^4	1×10^8
Ar-37	1×10^6	1×10^8	Ni-63	1×10^5	1×10^8
Ar-41	1×10^2	1×10^9	Ni-65	1×10^1	1×10^6
K-40	1×10^2	1×10^6	Cu-64	1×10^2	1×10^6
K-42	1×10^2	1×10^6	Zn-65	1×10^1	1×10^6
K-43	1×10^1	1×10^6	Zn-69	1×10^4	1×10^6
Ca-45	1×10^4	1×10^7	Zn-69m	1×10^2	1×10^6
Ca-47	1×10^1	1×10^6	Ga-72	1×10^1	1×10^5
Sc-46	1×10^1	1×10^6	Ge-71	1×10^4	1×10^8
Sc-47	1×10^2	1×10^6	As-73	1×10^3	1×10^7
Sc-48	1×10^1	1×10^5	As-74	1×10^1	1×10^6
V-48	1×10^1	1×10^5	As-76	1×10^2	1×10^5
Cr-51	1×10^3	1×10^7	As-77	1×10^3	1×10^6
Mn-51	1×10^1	1×10^5	Se-75	1×10^2	1×10^6
Mn-52	1×10^1	1×10^5	Br-82	1×10^1	1×10^6
Mn-52m	1×10^1	1×10^5	Kr-74	1×10^2	1×10^9
Mn-53	1×10^4	1×10^9	Kr-76	1×10^2	1×10^9
Mn-54	1×10^1	1×10^6	Kr-77	1×10^2	1×10^9
Mn-56	1×10^1	1×10^5	Kr-79	1×10^3	1×10^5

Nuclide	Activity concentration (Bq/g)	Activity (Bq)	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
Kr-81	1×10^{4}	1×10^{7}	Tc-97	1×10^{3}	1×10^{8}
Kr-83m	1×10^{5}	1×10^{12}	Tc-97m	1×10^{3}	1×10^{7}
Kr-85	1×10^{5}	1×10^{4}	Tc-99	1×10^{4}	1×10^{7}
Kr-85m	1×10^{3}	1×10^{10}	Tc-99m	1×10^{2}	1×10^{7}
Kr-87	1×10^{2}	1×10^{9}	Ru-97	1×10^{2}	1×10^{7}
Kr-88	1×10^{2}	1×10^{9}	Ru-103	1×10^{2}	1×10^{6}
Rb-86	1×10^{2}	1×10^{5}	Ru-105	1×10^{1}	1×10^{6}
Sr-85	1×10^{2}	1×10^{6}	Ru-106[a]	1×10^{2}	1×10^{5}
Sr-85m	1×10^{2}	1×10^{7}	Rh-103m	1×10^{4}	1×10^{8}
Sr-87m	1×10^{2}	1×10^{6}	Rh-105	1×10^{2}	1×10^{7}
Sr-89	1×10^{3}	1×10^{6}	Pd-103	1×10^{3}	1×10^{8}
Sr-90[a]	1×10^{2}	1×10^{4}	Pd-109	1×10^{3}	1×10^{6}
Sr-91	1×10^{1}	1×10^{5}	Ag-105	1×10^{2}	1×10^{6}
Sr-92	1×10^{1}	1×10^{6}	Ag-110m	1×10^{1}	1×10^{6}
Y-90	1×10^{3}	1×10^{5}	Ag-111	1×10^{3}	1×10^{6}
Y-91	1×10^{3}	1×10^{6}	Cd-109	1×10^{4}	1×10^{6}
Y-91m	1×10^{2}	1×10^{6}	Cd-115	1×10^{2}	1×10^{6}
Y-92	1×10^{2}	1×10^{5}	Cd-115m	1×10^{3}	1×10^{6}
Y-93	1×10^{2}	1×10^{5}	In-111	1×10^{2}	1×10^{6}
Zr-93[a]	1×10^{3}	1×10^{7}	In-113m	1×10^{2}	1×10^{6}
Zr-95	1×10^{1}	1×10^{6}	In-114m	1×10^{2}	1×10^{6}
Zr-97[a]	1×10^{1}	1×10^{5}	In-115m	1×10^{2}	1×10^{6}
Nb-93m	1×10^{4}	1×10^{7}	Sn-113	1×10^{3}	1×10^{7}
Nb-94	1×10^{1}	1×10^{6}	Sn-125	1×10^{2}	1×10^{5}
Nb-95	1×10^{1}	1×10^{6}	Sb-122	1×10^{2}	1×10^{4}
Nb-97	1×10^{1}	1×10^{6}	Sb-124	1×10^{1}	1×10^{6}
Nb-98	1×10^{1}	1×10^{5}	Sb-125	1×10^{2}	1×10^{6}
Mo-90	1×10^{1}	1×10^{6}	Te-123m	1×10^{2}	1×10^{7}
Mo-93	1×10^{3}	1×10^{8}	Te-125m	1×10^{3}	1×10^{7}
Mo-99	1×10^{2}	1×10^{6}	Te-127	1×10^{3}	1×10^{6}
Mo-101	1×10^{1}	1×10^{6}	Te-127m	1×10^{3}	1×10^{7}
Tc-96	1×10^{1}	1×10^{6}	Te-129	1×10^{2}	1×10^{6}
Tc-96m	1×10^{3}	1×10^{7}	Te-129m	1×10^{3}	1×10^{6}

Nuclide	Activity concentration (Bq/g)	Activity (Bq)	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
Te-131	1×10^{2}	1×10^{5}	Ce-143	1×10^{2}	1×10^{6}
Te-131m	1×10^{1}	1×10^{6}	Ce-144[a]	1×10^{2}	1×10^{5}
Te-132	1×10^{2}	1×10^{7}	Pr-142	1×10^{2}	1×10^{5}
Te-133	1×10^{1}	1×10^{5}	Pr-143	1×10^{4}	1×10^{6}
Te-133m	1×10^{1}	1×10^{5}	Nd-147	1×10^{2}	1×10^{6}
Te-134	1×10^{1}	1×10^{6}	Nd-149	1×10^{2}	1×10^{6}
I-123	1×10^{2}	1×10^{7}	Pm-147	1×10^{4}	1×10^{7}
I-125	1×10^{3}	1×10^{6}	Pm-149	1×10^{3}	1×10^{6}
I-126	1×10^{2}	1×10^{6}	Sm-151	1×10^{4}	1×10^{8}
I-129	1×10^{2}	1×10^{5}	Sm-153	1×10^{2}	1×10^{6}
I-130	1×10^{1}	1×10^{6}	Eu-152	1×10^{1}	1×10^{6}
I-131	1×10^{2}	1×10^{6}	Eu-152m	1×10^{2}	1×10^{6}
I-132	1×10^{1}	1×10^{5}	Eu-154	1×10^{1}	1×10^{6}
I-133	1×10^{1}	1×10^{6}	Eu-155	1×10^{2}	1×10^{7}
I-134	1×10^{1}	1×10^{5}	Gd-153	1×10^{2}	1×10^{7}
I-135	1×10^{1}	1×10^{6}	Gd-159	1×10^{3}	1×10^{6}
Xe-131m	1×10^{4}	1×10^{4}	Tb-160	1×10^{1}	1×10^{6}
Xe-133	1×10^{3}	1×10^{4}	Dy-165	1×10^{3}	1×10^{6}
Xe-135	1×10^{3}	1×10^{10}	Dy-166	1×10^{3}	1×10^{6}
Cs-129	1×10^{2}	1×10^{5}	Ho-166	1×10^{3}	1×10^{5}
Cs-131	1×10^{3}	1×10^{6}	Er-169	1×10^{4}	1×10^{7}
Cs-132	1×10^{1}	1×10^{5}	Er-171	1×10^{2}	1×10^{6}
Cs-134m	1×10^{3}	1×10^{5}	Tm-170	1×10^{3}	1×10^{6}
Cs-134	1×10^{1}	1×10^{4}	Tm-171	1×10^{4}	1×10^{8}
Cs-135	1×10^{4}	1×10^{7}	Yb-175	1×10^{3}	1×10^{7}
Cs-136	1×10^{1}	1×10^{5}	Lu-177	1×10^{3}	1×10^{7}
Cs-137[a]	1×10^{1}	1×10^{4}	Hf-181	1×10^{1}	1×10^{6}
Cs-138	1×10^{1}	1×10^{4}	Ta-182	1×10^{1}	1×10^{4}
Ba-131	1×10^{2}	1×10^{6}	W-181	1×10^{3}	1×10^{7}
Ba-140[a]	1×10^{1}	1×10^{5}	W-185	1×10^{4}	1×10^{7}
La-140	1×10^{1}	1×10^{5}	W-187	1×10^{2}	1×10^{6}
Ce-139	1×10^{2}	1×10^{6}	Re-186	1×10^{3}	1×10^{6}
Ce-141	1×10^{2}	1×10^{7}	Re-188	1×10^{2}	1×10^{5}

Nuclide	Activity concentration (Bq/g)	Activity (Bq)	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
Os-185	1×10^{1}	1×10^{6}	Rn-222[a]	1×10^{1}	1×10^{8}
Os-191	1×10^{2}	1×10^{7}	Ra-223[a]	1×10^{2}	1×10^{5}
Os-191m	1×10^{3}	1×10^{7}	Ra-224[a]	1×10^{1}	1×10^{5}
Os-193	1×10^{2}	1×10^{6}	Ra-225	1×10^{2}	1×10^{5}
Ir-190	1×10^{1}	1×10^{6}	Ra-226[a]	1×10^{1}	1×10^{4}
Ir-192	1×10^{1}	1×10^{4}	Ra-227	1×10^{2}	1×10^{6}
Ir-194	1×10^{2}	1×10^{5}	Ra-228[a]	1×10^{1}	1×10^{5}
Pt-191	1×10^{2}	1×10^{6}	Ac-228	1×10^{1}	1×10^{6}
Pt-193m	1×10^{3}	1×10^{7}	Th-226[a]	1×10^{3}	1×10^{7}
Pt-197	1×10^{3}	1×10^{6}	Th-227	1×10^{1}	1×10^{4}
Pt-197m	1×10^{2}	1×10^{6}	Th-228[a]	1×10^{0}	1×10^{4}
Au-198	1×10^{2}	1×10^{6}	Th-229[a]	1×10^{0}	1×10^{3}
Au-199	1×10^{2}	1×10^{6}	Th-230	1×10^{0}	1×10^{4}
Hg-197	1×10^{2}	1×10^{7}	Th-231	1×10^{3}	1×10^{7}
Hg-197m	1×10^{2}	1×10^{6}	Th-nat	1×10^{0}	1×10^{3}
Hg-203	1×10^{2}	1×10^{5}	(incl. Th-232)		
Tl-200	1×10^{1}	1×10^{6}	Th-234[a]	1×10^{3}	1×10^{5}
Tl-201	1×10^{2}	1×10^{6}	Pa-230	1×10^{1}	1×10^{6}
Tl-202	1×10^{2}	1×10^{6}	Pa-231	1×10^{0}	1×10^{3}
Tl-204	1×10^{4}	1×10^{4}	Pa-233	1×10^{2}	1×10^{7}
Pb-203	1×10^{2}	1×10^{6}	U-230[a]	1×10^{1}	1×10^{5}
Pb-210[a]	1×10^{1}	1×10^{4}	U-231	1×10^{2}	1×10^{7}
Pb-212[a]	1×10^{1}	1×10^{5}	U-232[a]	1×10^{0}	1×10^{3}
Bi-206	1×10^{1}	1×10^{5}	U-233	1×10^{1}	1×10^{4}
Bi-207	1×10^{1}	1×10^{6}	U-234	1×10^{1}	1×10^{4}
Bi-210	1×10^{3}	1×10^{6}	U-235[a]	1×10^{1}	1×10^{4}
Bi-212[a]	1×10^{1}	1×10^{5}	U-236	1×10^{1}	1×10^{4}
Po-203	1×10^{1}	1×10^{6}	U-237	1×10^{2}	1×10^{6}
Po-205	1×10^{1}	1×10^{6}	U-238[a]	1×10^{1}	1×10^{4}
Po-207	1×10^{1}	1×10^{6}	U-nat	1×10^{0}	1×10^{3}
Po-210	1×10^{1}	1×10^{4}	U-239	1×10^{2}	1×10^{6}
At-211	1×10^{3}	1×10^{7}	U-240	1×10^{3}	1×10^{7}
Rn-220[a]	1×10^{4}	1×10^{7}	U-240[a]	1×10^{1}	1×10^{6}

Nuclide	Activity concentration (Bq/g)	Activity (Bq)	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
Os-185	1×10^{1}	1×10^{6}	Rn-222[a]	1×10^{1}	1×10^{8}
Os-191	1×10^{2}	1×10^{7}	Ra-223[a]	1×10^{2}	1×10^{5}
Os-191m	1×10^{3}	1×10^{7}	Ra-224[a]	1×10^{1}	1×10^{5}
Os-193	1×10^{2}	1×10^{6}	Ra-225	1×10^{2}	1×10^{5}
Ir-190	1×10^{1}	1×10^{6}	Ra-226[a]	1×10^{1}	1×10^{4}
Ir-192	1×10^{1}	1×10^{4}	Ra-227	1×10^{2}	1×10^{6}
Ir-194	1×10^{2}	1×10^{5}	Ra-228[a]	1×10^{1}	1×10^{5}
Pt-191	1×10^{2}	1×10^{6}	Ac-228	1×10^{1}	1×10^{6}
Pt-193m	1×10^{3}	1×10^{7}	Th-226[a]	1×10^{3}	1×10^{7}
Pt-197	1×10^{3}	1×10^{6}	Th-227	1×10^{1}	1×10^{4}
Pt-197m	1×10^{2}	1×10^{6}	Th-228[a]	1×10^{0}	1×10^{4}
Au-198	1×10^{2}	1×10^{6}	Th-229[a]	1×10^{0}	1×10^{3}
Au-199	1×10^{2}	1×10^{6}	Th-230	1×10^{0}	1×10^{4}
Hg-197	1×10^{2}	1×10^{7}	Th-231	1×10^{3}	1×10^{7}
Hg-197m	1×10^{2}	1×10^{6}	Th-nat	1×10^{0}	1×10^{3}
Hg-203	1×10^{2}	1×10^{5}	(incl. Th-232)		
Tl-200	1×10^{1}	1×10^{6}	Th-234[a]	1×10^{3}	1×10^{5}
Tl-201	1×10^{2}	1×10^{6}	Pa-230	1×10^{1}	1×10^{6}
Tl-202	1×10^{2}	1×10^{6}	Pa-231	1×10^{0}	1×10^{3}
Tl-204	1×10^{4}	1×10^{4}	Pa-233	1×10^{2}	1×10^{7}
Pb-203	1×10^{2}	1×10^{6}	U-230[a]	1×10^{1}	1×10^{5}
Pb-210[a]	1×10^{1}	1×10^{4}	U-231	1×10^{2}	1×10^{7}
Pb-212[a]	1×10^{1}	1×10^{5}	U-232[a]	1×10^{0}	1×10^{3}
Bi-206	1×10^{1}	1×10^{5}	U-233	1×10^{1}	1×10^{4}
Bi-207	1×10^{1}	1×10^{6}	U-234	1×10^{1}	1×10^{4}
Bi-210	1×10^{3}	1×10^{6}	U-235[a]	1×10^{1}	1×10^{4}
Bi-212[a]	1×10^{1}	1×10^{5}	U-236	1×10^{1}	1×10^{4}
Po-203	1×10^{1}	1×10^{6}	U-237	1×10^{2}	1×10^{6}
Po-205	1×10^{1}	1×10^{6}	U-238[a]	1×10^{1}	1×10^{4}
Po-207	1×10^{1}	1×10^{6}	U-nat	1×10^{0}	1×10^{3}
Po-210	1×10^{1}	1×10^{4}	U-239	1×10^{2}	1×10^{6}
At-211	1×10^{3}	1×10^{7}	U-240	1×10^{3}	1×10^{7}
Rn-220[a]	1×10^{4}	1×10^{7}	U-240[a]	1×10^{1}	1×10^{6}

Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-226	Ra-222, Rn-218, Po-214
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
U-240	Np-240m
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

Schedule 5

Regulation 44(3)

Release of Specific Waste

(1) A licensee may release the following material as if it were not radioactive:

(a) 0.05µCi (1.85kBq), or less of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting; and

(b) 0.05µCi (1.85kBq) or less of hydrogen-3 or carbon – 14 per gram of animal tissue, averaged over the weight of the entire animal.

Schedule 6

FORMS

Regulation 6 (2)

FORM 1

Notification of a Practice Involving the Construction and Operation of a Radioactive Waste Management Facility

1. Name and address of applicant *(Attach certificate of Registration where applicable)*:

……..

……..

Title:……. Telephone: …….……

E-mail: ……..…….....

2. Location of facility:

……..

Name of Unit/department:

……..

Sub-location/Town:

……..

District:

……..

Region:

……..

Building ……..…….. Room No. ……

3. List names and qualification of individual users/authorised persons:

Name	Title	Qualification

(Attach relevant certificates)

4. If the practice involves the storage of radioactive waste:

Give details of radioactive waste that you intend to store in the facility and attach the original owner of the radioactive waste in question and the source certificate where applicable.

#	Radiation Sources	Activity	Activity date	Model	Serial Number	Waste Form e.g. solid, liquid or gas	Manufacturer/ Supplier	Previous use	Place/location currently stored	General remarks

5. Purpose of use:

Describe the purpose for which the storage facility will be used:

……..

……..

6. Impact of the proposed practice

Describe the expected impact of the storage facility on public and private interest and possible mitigation measures *(Attach Environmental Impact Statement, where applicable).*

……..

……..

7. Declaration: I, …… *(name)* 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			
	By	Date	Signature
Received:			
Evaluated:			
General Remarks and/ or Comments:			

FORM 2

Regulations 8(2), 11

Application for Authorisation to Operate a Radioactive Waste Management Facility

Type of Authorisation

Please tick

☐ New Application

☐ Application for renewal

1. Name and address of applicant:

Main address	*Mailing address (if different)*	*Address of use (if different)*

2. Name and information of qualified expert:

Expertise: Radiation Waste Management officer

Name: _____

Qualification: _____

Certification:_____

Experience: _____

Telephone number: _____

3. The representative of the applicant (where applicable):

Name: _____ Telephone number: _____

Title: _____ E-mail address: _____

4. Describe the nature and purpose of the proposed facility and equipment that generates radioactive waste:—

   a) Purpose (e.g. major repair, source change, protection etc.)

   _____

   _____

   b) Nature: -

   _____

   _____

5. Describe the suggested operational procedures, taking into account reduction of radioactive waste generation to the extent practicable.

   _____

   _____

6. Give details of the quantity, type and characteristics of radioactive waste generated:

   _____

   _____

7. Describe how assessments of the safety and environmental impact of the facility under normal and accident conditions will be conducted

   _____

   _____

8. State the proposed destination for the radioactive waste.

   _____

   _____

9. Describe and attach the decommissioning plan and where possible procedures.

   _____

   _____

10. Mention the availability of competent staff and provisions for further trainings.

_____

_____

11. State the systems for records keeping and reporting.

_____

_____

12. Describe and attach a quality assurance program at the facility.

_____

_____

13. Describe and attach an emergency plan at the facility

_____

_____

14. Describe and attach an effluent monitoring and environmental monitoring plan.

_____

_____

15. DECLARATION

I, _____*(name)* 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			
Permit No:			
	By	Date	Signature
Received:			
Evaluated:			
General Remarks and/or Comments:			

FORM 3

Regulation 17 (2)

Application Form for Authorisation to Transfer Radioactive Waste to the Radioactive Waste Management Facility

Application Form (AEC/RWMF/01)			
1. Name and address of the organisation			
Name:			
Address:			
Name of the legal person:		Title:	
E-mail:		Tel:	

2. Details of the Radiation Safety Officer	
Name:	
Contact:	
Email address:	

3. Information on the radioactive waste to be transferred to the RWMF				
Type of radioactive waste				
Manufacturer:				
Device type:	(e.g. soil density, level gauge)			
Serial number:				
Current licence no.	(Licence from AEC)			
Device documentation included:	Yes		No	
Dose rate at surface:				
Dose rate at 1m:				
Unit dimensions:				
Estimated weight (kg):				
Duration under storage:				
Year of import:				

4. Source(s) Information							
No. of DSRS in the device							
Sources certificates attached:		Yes			No		
Source leaking?		Yes			No		
Source/unit contaminated?		Yes			No		
#	**Nuclide**	**Activity (GBq)**	**Activity date**	**Model**	**Serial number**	**Manufacturer**	**Purpose**
1							
2							
3							

5. State the current security/ Physical security measures at the facility

……

……

……

……

6. User declaration:			
I hereby confirm that this information is correct and provided all the information that is available to me in my knowledge			
Name	Position	Signature	Date

Attachments

1. Original source certificates
2. Storage area design/ layout
3. Photo of source (s)

FOR OFFICIAL USE ONLY			
	By	Date	Signature
Received:			
Evaluated:			
General Remarks and/ or Comments:			

ANNEX1

DETAILS OF THE DISUSED SEALED RADIOACTIVE SOURCES

#	Radiation Sources	Activity	Activity date	Model	Serial Number	Manufacturer/ Supplier	Previous use	Place/ location currently stored	General remarks

FORM 4

Regulation 7(2)

Form for Application of a Site Permit of the Radioactive Waste Management Facility

Section A: Applicant Information

1. Name and address of applicant

_____

Title: _____ Telephone: _____

2. Registration number / certificate of incorporation:

_____

(attach certificate of registration of business in Uganda, where applicable).

3. Legal status of applicant:

□ Government institution □ private company □ international organization □ other *(specify):*

4. Authorised contact person:

_____

i. Designation: _____

ii. Telephone / Email: _____

Section B: Proposed Site Information

5. Location of the facility:

_____

Name of Unit/department: _____

Sub-location/Town: _____

District: _____

Region: _____

6. Proposed location coordinates:

   Latitude: _____ Longitude: _____ Altitude: _____

   District: _____

7. Site characteristics (attach report on geology, hydrology, seismology,meteorology):_____

8. Land ownership/lease agreement *(attach evidence)*.

Section C: Safety and Environmental Considerations

9. Safety assessment report *(attach document)*.

10. Environmental and Social Impact Assessment Report (ESIA)

11. Safety Case *(attach report)*.

Section D: Regulatory Compliance

12. Confirmation of Compliance with Atomic Energy Act, Cap. 154 and the Atomic Energy (Radioactive Waste Management) Regulations, 2026

    - Yes □ No □

13. Previous licences / permits held: _____

DECLARATION

I, _____ *(name)* 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			
Notification No:			
	By	Date	Signature
Received:			
Evaluated:			
General Remarks and/or Comments:			

FORM 5

Regulation 7 (2) and 61(1)

Application for Permit to Decommission a Radioactive Waste Management Facility

1. Name and address of applicant (Facility)

Main address	Mailing address	Telephone number

2. Details of the radioactive waste management officer
   Name: _____
   Qualifications: _____
   Experience: _____
   Telephone number: _____
   Email: _____

3. Details of the legal person
   Name: _____
   Title: _____
   Telephone number: _____
   Email: _____

4. Location of facility:
   Name of unit/department:
   _____
   Plot No.: _____
   Area/Town: _____
   Street: _____
   District: _____
   Name of building: _____

5. Names of the radiation workers at the facility

Name	Designation	Qualifications	Contacts

6. Type of radioactive waste stored at the facility: medical/ industrial/research/other *(specify)*.

_____

_____

7. Classification of facility (Category I, II, III, IV, V)

_____

_____

8. If facility has radioactive material:

Give details of radioactive materials

Name of source	*Element mass No.*	*Chemical or physical state*	*No. of sources*	*Current Activity (Curies/Bq)*	*Volume*	*Name of manufacturer*	*Model number*

11. Type of installation: enclosed installation/ open installation:

a) Enclosed installation:

With the aid of a clear diagram of the layout plan of the facility, to be attached, describe the facility with specific reference to:

(i) Construction material

(ii) Interlocks

(iii) Warning signals/radiation monitors installed iv) Equipment layout

(iv) Radiation shields

(v) Fume holds

(vi) Remote handling equipment

(vii) Means of escape or communication

(viii) Any other protection measures and devices

Note: *indicate on diagram the directions in which exposure is possible.*

b) Open installation:

(i) Indicate the distance from radiation source to:

- Controlled areas _____
- Supervised areas _____

(ii) Indicate positive measures taken to maintain this degree of isolation (demarcations, physical barriers etc.)

_____

_____

(iii) How will you ensure that radiation workers involved in the decommissioning project will be adequately protected?

_____

_____

12. If facility involves raw material mining and/or processing:

 Give details of practice:

Name of practice	*Fuel involved*	*Estimated Investment (USD)*

13. Hazard assessment:

Identify the hazards, their consequences and safeguards during decommissioning (Include accident analysis where possible)

Hazard	*Consequences*	*Safeguards*

14. Risk assessments:

(a) Provide estimates of the magnitude of the expected doses to persons during normal decommissioning:

_____

_____

(b) Identify the probability and magnitude of potential exposures arising from accidents or incidents:

_____

_____

15. Name and information about qualified experts that will be involved in decommissioning

Name	*Expertise*	*Qualification*	*Certification*	*Experience*	*Reg. No.*	*E- mail*
	Radiation Safety Officer					

16. Other classified workers that will be responsible for decommissioning the equipment (e.g. technologist, technicians, social worker etc.)

Name	*Title*	*Qualification*	*Certification*	*Experience*	*Reg. No.*	*E-mail*

17. Describe and attach architectural drawings of the premises.

_____

_____

_____

18. On submission for your application, please provide the following-

(a) final decommissioning plan;

(b) final radiation survey report;

(c) quality assurance program and supporting documentation;

(d) safety assessment and supporting documentation;

(e) procedures for dealing with and reporting abnormal events, incidents and emergencies;

(f) a work breakdown structure and implementation program;

(g) administrative control procedures for individual tasks;

(h) procedures for the collection and maintenance of records during and after completion of decommissioning; and

(i) any other information that may be required by the atomic energy council.

19. Proposed start and end date of decommissioning:

(a) Starting _____

(b) Ending _____

20. Describe and attach a Radioactive Waste Management Plan

_____

_____

_____

Note: You must provide a final decommissioning report on completion of the decommissioning.

DECLARATION

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

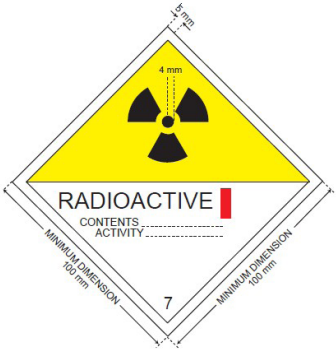
Date _____ *Signature of applicant* _____

FOR OFFICIAL USE ONLY			
License No:			
	By	Date	Signature
Received:			
Evaluated:			
General Remarks and/or Comments:			

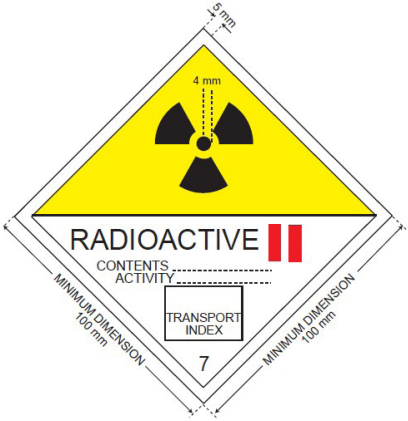
Schedule 7

Regulation 33 (1)

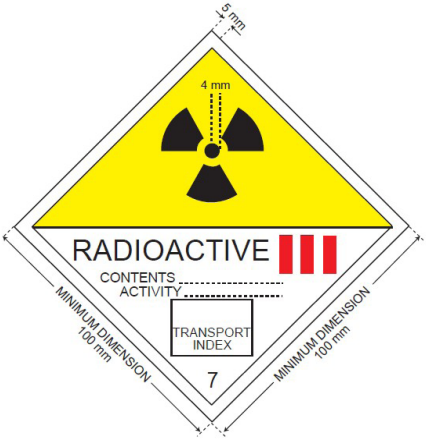
Radiation Symbols and Transport Packages Symbols to Indicate Ionising Radiation



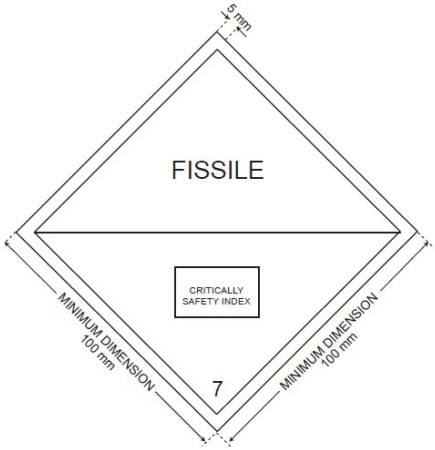
Category I-WHITE label. The background colour of the label shall be white, the colour of the trefoil and the printing shall be black, and the colour of the category bar shall be red.



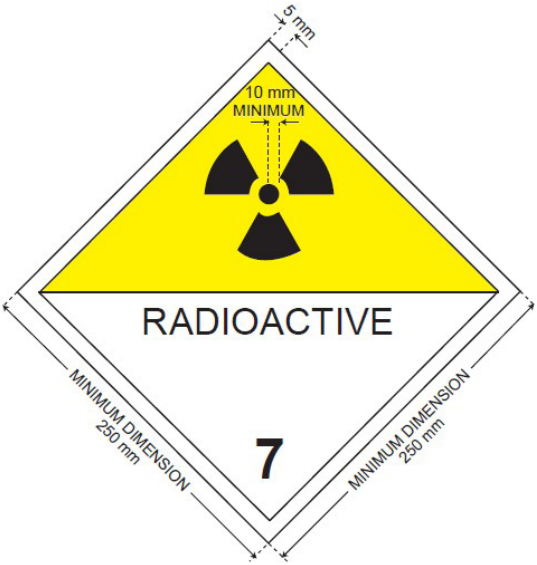
Category II-YELLOW label. The background colour of the upper half of the label shall be yellow and the lower half white, the colour of the trefoil and the printing shall be black, and the colour of the category bars shall be red.



Category III-YELLOW label. The background colour of the upper half of the label shall be yellow and the lower half white, the colour of the trefoil and the printing shall be black, and the colour of the category bars shall be red.



Criticality safety index label. The background colour of the label shall be white, the colour of the printing shall be black



Placard. Minimum dimensions shall be as shown; when different dimensions are used the relative proportions must be maintained. The number '7' shall not be less than 25 millimeters high. The background colour of the upper half of the placard shall be yellow and of the lower half white, the colour of the trefoil and the printing shall be black. The use of the word "RADIOACTIVE" in bottom half is optional to allow the alternative use of this placard to display the appropriate United Nations for the consignment.

Schedule 8

Regulation 28

Radioactive Waste Classification

1. Exempt Waste (EW): Waste that meets the criteria for clearance, exemption or exclusion from regulatory control for radiation protection purposes.

2. Very Short-Lived Waste (VSLW): Waste that can be stored for decay over a limited period up to a few years and subsequently cleared from regulatory control for uncontrolled disposal, use or discharge. This class includes waste containing primarily radionuclides with very short half-lives often used for research and medical purposes.

3. Very Low-Level Waste (VLLW): Waste that does not need a high level of containment and isolation and, therefore, is suitable for disposal in near surface landfill type facilities with limited regulatory control.

4. Low Level Waste (LLW): Waste above clearance levels, but with limited amounts of long-lived radio nuclides. Such waste is suitable for disposal in engineered near surface facilities. LLW may include short lived radionuclides at higher levels of activity concentration, and also long-lived radionuclides, but only at relatively low levels of activity concentration.

5. Intermediate Level Waste (ILW): Waste which contains long live radionuclides and requires a greater degree of containment and isolation than that provided by the near surface disposal. Therefore, this waste requires disposal at greater depths of the order of tens of metres to a few hundred metres.

6. High level waste (HLW): Waste which is produced by nuclear reactors and nuclear weapons processing. It contains fission products in form of spent nuclear fuel and transuranic elements generated in the reactor core. It is highly radioactive and often thermally hot, hence requires very deep disposal in stable geological formations several hundred metres below the earth's surface.

Schedule 9

Regulations 6 (3) &11 (2)

FEES AND CHARGES

No	Item	Fees or Charges
1.	Notification of practice	30 currency points
2.	Authorisation to transport radioactive waste	50 currency points
3.	Authorisation to store mixed Radioactive waste	10 currency points per source/ package
4.	Training and specialised services	10 currency points per module as may be determined by Council from time to time.
5.	Safety assessment of waste management facility	50 currency points
6.	Authorisation to operate waste management facility	80 currency points
7.	Authorisation for a site permit of a radioactive waste management facility	80 currency points
8.	Authorisation for a construction permit of a radioactive waste management facility	80 currency points
9.	Authorisation to decommission a facility within a disused radioactive source	80 currency points
10.	Authorisation to decommission a radioactive waste management facility	300 currency points

Schedule 10

Regulation 25 (2)

INVENTORY OF NON-CONDITIONED DISUSED SOURCES IN THE RADIOACTIVE WASTE MANAGEMENT FACILITY

Source ID	Device type or model	Serial number of the device	Contact dose rate, µSv/h	Number of sources	Rn	Activity, Bq	Reference date	Source serial number	Source Description	Date of receipt	Location in the storage (cage no.)	Remarks	Conditioned package

1050

Inventory of conditioned packages in the Radioactive Waste Management Facility

Package ID	Type of container	Rn	Total Activity, GB	Reference date	Type of DSRS	Number of sources	Contact dose rate, µSv/h	Dose rate at 1m, µSv/h	Location in the storage	Remarks

Cross Reference

National Environment (Standards for Discharge of Effluent into Water or Land) Regulations, 2020, S.I 144 of 2020.

National Environment (Waste Management) Regulations, 2020, S.I 49 of 2020.

Atomic Energy Regulations, 2012, S.I 4 of 2012.

PROF. OBWOYA KINYERA SAM
Chairperson, Atomic Energy Council