ATOMIC ENERGY COUNCIL

GUIDE TO THE APPLICATION TO POSSESS AND USE A SOURCE(S) FOR INDUSTRIAL APPLICATIONS

	Item	Guiding Notes
	Type of Application	1.The applicant is required to; mark the relevant section if application is to obtain, either New application or renewal of application number; 2. For renewals, indicate the current license number e.g AEC/PU/0000. ***(attach a copy if the license to be renewed)***
1	**Name and address of applicant**	1. Indicate the name as it appears on the proof of legal status documentation, such as the proof of incorporation or sole proprietorship e.g Atomic Energy Council.***(Attach certificate of registration where possible)*** 2. Provide the mailing address, if it is different than the head office address, including the complete street name and number, and rural route number if appropriate, city, province or territory, and postal code e.g • Name of the facility applying for possess and use of radioactive materials e.g. Atomic Energy Council • Location of the facility applying for possess and use of radioactive materials e.g. Plot 001, Kampala Road • City e.g Kampala • Postal code e.g P.O.Box 000, Kampala, Uganda • Email address of the facility applying for possess and use of radioactive materials e.g. mm@ysi.com • Telephone details of the facility applying for possess and use of radioactive materials e.g. +256-414 000 000
2	**Radiation safety Officer (RSO)**	1. The RSO is one responsible for the radiation protection and safety in the operation of the practice and any source of ionizing radiation in the practice. 2. Provide the name, qualification, telephone number, experience and email address of the RSO. e.g; Name: John Paul Qualifications: Radiation physics Telephone: +256 712 000 000 Email: johnpaul@yy.com Experience: 10yrs 3. The RSO must be at the site of the licensed activity or reasonably be able to attend to the site of licensed activity as required. Alternate RSOs may be utilized where a licensee has multiple locations of licensed activity

		(attach copy of the formal appointment of the RSO)
3.	**Name and information about Qualified experts (QE)**	1. Provide the name, qualification, address, telephone number, experience and email address of the Qualified Expert. E.g. Name: Wawu Titi Qualifications: Medical Physics Telephone: +256 700 000 000 Email: wawutiti@cc.com Experience: 15yrs 2. A QE is an individual who by virtue of certification by appropriate boards or societies, professional license or academic qualification and experience, is duly recognized by the Council as having expertise in a relevant field of specialization e.g. medical physics, radiation protection, occupational health, quality assurance or any relevant engineering or safety specialty ***(Attach qualification documents of the QE or certificate of approval from the Council)***
4	**Other classified workers that will be responsible for the equipment**	Provide personnel(s) who my use the source(s) or who work in controlled areas in the vicinity of source(s) with appropriate training and experience for the range of radiation sources to be used. E.g. Name: John Patrick Title: Source In-charge Qualifications: Physics Telephone: +256 700 000 000 Email: johnpatrick@ee.com ***(Attach list of workers and their qualification documents)***
5	**Proposed date of Installation and/ or Commissioning**	Provide the proposed date of Installation and/ or Commissioning of Facilities and Equipment. E.g January 01, 2000.
PART I: WELL LOGGING, PORTABLE GAUGES, DETECTION AND ANALYTICAL DEVICES		
6	**Purpose of the device or what the radioactive material will be used for**	State the purpose of the device (e.g well logging, portable gauges, detection and analytical devices, fixed or installed gauging detection and other similar devices etc.)
7	**Describe the details of the radiation devices or**	Provide Details of the sources as per the table including: Manufacturer e.g Uganda radiation engineering Co. Ltd Type of radiation e.g (alpha, beta, gamma & neutron), Model e.g UG00/12/90

	radioactive sources	Serial number e.g 354EUI78 Maximum kV e.g 120 Maximum mA e.g 300 Neutron energy (for b) Target Nuclide ***(Attach source certificate from manufacturer)***
8	**Details of equipment**	Provide details as per the appropriate table for: a) Sealed source radiographic devices b) X-ray generators c) accelerator
PART III: AN IRRADIATOR FACILITY		
9	**Type Sources and Irradiator**	Check the appropriate box for the type of irradiator
10	**For Gamma irradiator facility**	a) Give the irradiator details as per the table including: Manufacturer e.g Uganda radiation engineering Co. Ltd Model No. of irradiator e.g UG00/13/90 Supplier of irradiator e.g All Uganda Services b) Provide details of radioactive source as per the table
11	For accelerator	Fill accelerator details and specifications as per the table
PART IV: FACILITIES AND EQUIPMENT		
12	**Location of Equipment/Sources**	Provide details of the location of equipment/sources including: Name of unit/department e.g Safety Building No. e.g Amber House Floor and Room No. e.g Room 1 Plot No. Town/Street/ward. E.g Plot XX District and City. E.g Kampala
13	**Layout of the Installation**	Describe the layout and safety systems of the facility including: Building materials, Alarms, Shielding, Engineering controls (e.g. Interlocks, Warning safety devices/systems, Emergency stop button, Prevention of unauthorized access, Means of escape or Communication from within enclosure etc.)
14	**Standards**	Indicate to which IEC or ISO standards does the equipment and sources used for radiation exposure conform; ***If "Yes",*** ***(Attach certificate if available)***

15	**Services and Maintenance**	Provide details person/organization authorized to perform the service and maintenance of the equipment : Name: e.g peter wanu Authorization reference No: Organization: Uganda Technical Services ltd Address: P.O.Box 000, Kampala Telephone number: e-mail: peterwanu@utsl.com
16	**Safety Assessments:**	(i) Taking into account of shielding, provide calculation of maximum dose rates in all adjacent areas outside the installation: e.g 0.521μSv/hr (ii) Provide estimates of the magnitude of the expected doses to persons during normal operations; 5.12mSv/yr (iii) Identify the probability and magnitude of potential exposures arising from accidents or incidents: ***(Attach a layout drawing of the installation showing adjacent surroundings with controlled and supervised areas clearly identified).***
	Safety assessment report	Safety assessment report should include provisions for; Persons at risk, existing measures to control exposures, possible accident scenarios and mitigation measures, designation of controlled & supervised areas, provisions for restricting exposures, arrangements for female employees, individual dose assessments, health surveillance, dose investigation levels, training and qualifications of employees, work place monitoring, a system of accounting for of radiation sources, safety system evaluations. ***(Attach a safety assessment report)***
17	**Safety System (For irradiators)**	Describe the over roll safety system which will be used to ensure the safe operation of the irradiator (e.g.) design features, defence in depth, layout). Further describe in detail the safety systems for preventing access to the irradiation room whilst the source is exposed and for the warning of unsafe conditions (e.g. interlocks, installed monitors). (ii)Attach the manufacturer's specifications of the system.
18	**Personal Protective Equipment**	Name any Personal Protective Equipment (PPE) e.g lead aprons, that will be provided including number, type and specifications e.g 0.5mmPb
PART V: RADIATION PROTECTION AND SAFETY PROGRAMME		
19	**Organizational structure**	

i.	Staffing level	Number of radiation workers at the facility e.g 02
ii.	Equipment selection	List of protective gears to be employed at the facility e.g
iii.	Other assignments of Radiation Protection officer (RPO)	Indicate other assignments of the RPO
iv.	Authority of the RPO to stop unsafe operation	Authority should be indicated in the appointment letter
v.	Personal Training	Indicate the training programs attended or at the facility related to radiation protection
vi.	Maintenance of records	Detail how records are maintained at the facility such as inventory of sources, source movement log book including disposal, occupational dose records, audits, etc.
vii	How problems affecting safety are identified to stop unsafe operations	Indicate the regular audits performed at the facility for radiation safety practices of its personnel
20.	**Security and safety of radiation sources during;**	Describe the security and safety plan for the source to be possessed/used ***(Attach a security and safety plan)***
i.	Use	Detailing the suitability of the bunker including meeting external dose rate limits and potential public exposure, stating the means of contacting the operator and / or RPO in case of emergency,
ii.	Transport	Detailing arrangement plans for the transport of radioactive sources, Source containers and Procedures for monitoring incoming and outgoing packages satisfactory
iii.	Storage	Detailing arrangements for the storage of radioactive source(s)
21	**Radioactive waste management**	Detail the mode of managing the radioactive material at the end of the source life time e.g suitable arrangements for disposal of unwanted sources and clearly identified how this will be achieved ***(Attach a detailed waste management plan)***
22	**Emergency**	Indicate a detailed emergency response plan and this should contain

	procedures	a List of possible radiological emergencies, Allocation of responsibilities, Procedures for assessing the seriousness of the situation, Procedures for communicating and cooperating with other relevant stakeholders, Arrangements for worker to deal with induced injuries, The immediate mitigating actions, Means of preventing access to the affected area. Arrangements for informing the public, The nature and location of the PPE required e.g remote handling tools, lead pots, etc, The procedures to be adopted in using the equipment, The number and type of radiation detection equipment that will be required. Arrangements for maintaining, reviewing and updating of the emergency plan and appropriate training in relation to handling emergencies ***(Attach an emergency plan)***
23	**Occupational and public exposures control**	Provide detailed procedures to ensure that occupational and public radiation protection is optimized, work areas are appropriately classified, and doses will comply with the prescribed limits, protocols to ensure dose rates at boundaries around logging operations comply with prescribed limits
Part VI: Declaration		1. Here the applicant/ representative of the applicant e.g CEO, Managing Director, etc, is required to fill in his/her name, and indicate the date of submission of the application 2. The application must be signed and stamped by the applicant/ legal person thus making the information authentic