

Department of Radiological Safety
NIGERIAN NUCLEAR REGULATORY AUTHORITY

**1.0 MINIMUM STANDARDS FOR ACCREDITATION OF RADIATION SAFETY ADVISERS
(RSA)/CONSULTANT**

All licensees should appoint one or more suitably qualified person or an organization as RSA to advise on all matters concerning radiation safety and security of sources in the use and operation of all radiation producing sources under its control. The RSA sometimes referred to as “qualified expert in radiation protection” should also advise the licensee on regulatory matters in so far as they relate to radiation safety and security of sources in the facility.

1.1 Qualifications and Experiences of the RSA

The RSA should be experienced in matters of radiological safety and security of sources and should have such theoretical training as would ensure the necessary knowledge of the properties of ionizing radiation and its effects on humans and the environment. The RSA must have a thorough understanding of hazards of ionizing radiation, working practices of the area he/she wishes to advise on, detailed working knowledge of regulatory provisions, relevant codes of practice and radiation protection standards. A good communication skills, and show of willingness to keep up-to-date with developments in the area of radiation protection are also important qualities.

A prospective RSA must have any of these qualifications:

- i. at least a Master of Science degree in radiation protection, health physics, medical physics or radiation biophysics plus at least 3 years post qualification experience.
- ii. at least a first degree or higher national diploma in science, radiography or engineering plus a post-graduate diploma in radiation protection and at least 5 years cognate experience in the area he is to give advice.
- iii. a masters or doctorate degree in nuclear physics, nuclear engineering, nuclear/radiation chemistry or nuclear/radiation biology, plus evidence of having a practical training in radiation protection and evidence of cognate experience in the field where he/she is to advise.
- iv. a master or doctorate degree in other sciences or engineering (geology, biology, medicine, chemistry etc) plus a postgraduate diploma in radiation protection.

An institution wishing to serve as corporate RSA must have at least two persons with any of the above mentioned qualifications. University Departments that have suitably qualified staff may also serve. For corporate RSA, an officer with the relevant qualification must be designated as representative RSA for the purpose of discharging the duties that are expected of the RSA.

1.2 Responsibilities of the RSA

An RSA should be able to train and advise on the following:

- i. methods of dose limitation, justification and optimization of practice as is relevant in instituting the ALARA principles.
- ii. methods of restricting exposures, installation and maintenance of engineering structures and control system necessary for protection of workers, the public and the environment from all harmful effects of ionizing radiation (this should include facility layout design and shielding).

- iii. examination of plans to establish new practices or modify existing ones; drawing up application for authorization including establishment of radiation protection programme in form of reference manual as required by NNRA guides for applications.
- iv. methods of storage and handling of radioactive materials including transportation and disposal of wastes arising in accordance with national regulations and international standards.
- v. methods of identification and assessment of hazards and potential exposures, designing and implementation of access and egress control systems; and designation of controlled and supervised areas and making and implementation of contingency plans
- vi. methods of proper dose accounting, auditing, dosimetry, personnel/workplace monitoring including calibration of all equipments.
- vii. methods of designing and implementation of safety culture, use of procedures and work permit
- viii. methods of investigating abnormal and high exposures; designing reports of incidents and accidents; training and evaluation of emergency drills/exercises, intervention processes and on how to mitigate consequences of such exposures

1.3 Conditions of Appointment

It would be important to note that RSA position is not a contractor job. It is more specifically a consultancy in radiation protection and nuclear safety only. Employers must determine the specific qualifications of the consultants they wish to engage. NNRA does not dictate to operators who to appoint as RSA, but accreditation of RSA is to fulfil the quality management condition for hiring qualified staff for the radiation and nuclear industry.

Appointment of an RSA does not in any way imply that the operating organization should delegate the responsibility for compliance with regulations and international standards to the RSA. The appointment can be on part-time basis and the RSA need not necessarily be a full-time employee of the organization but should be available to give advice and help when required.