# ENVIRONMENTAL RADIATION CONTROL AND QUALITY MANAGEMENT SYSTEM IN DESIGN AND OPERATION OF SEALED RADIOACTIVE SOURCES

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New environmental regulations and radiation safety standards are being implemented almost daily to ensure radiation safety, in particular for practices causing exposures to undue radiation doses. A particular emphasis of real challenge for organizations and users of radiation sources has to be for proper radiological safety assessment and is becoming cost effectively to be prepared for auditing. Special concern for the environment is of global nature, and hence environmental auditing has been and will continue to be an essential practice for improving the environment and for meeting the relevant regulations and standards.

In general, most facilities that deal with radioactive sources undertake strict safety measures in terms of personnel radiation protection, handling procedures and security. Hence, those measures should comply with the requirements of the environmental protection standards. Accordingly, a successful quality management system must balance realities of organization and personnel in achieving quality objectives. Organizational principles are found in the technical aspects of quality management, such as, charting, requirements, measurements, procedures,..., etc. Human principles are found in the communication side of quality management (e.g. meetings, decision making, teams,…, etc). The quality management must understand and balance skills needed to blend them together. Large gamma irradiators present a high potential radiation hazard to the surrounding environment, since the amount of radioactivity is of the order of "PBq" and a very high dose rates are produced during irradiation. Application of environmental radiation control deemed by regulatory authority and a proper quality management system by the utility would serve public health and safety.