

The medical physicist may be given responsibility for the radiation safety of the nuclear medicine department or facility because he/she has primary work obligations in that area or is designated as the Radiation Safety Officer (RSO) on the Nuclear Regulatory Commission (NRC) or Agreement State license.

As background, the NRC strongly emphasizes the current concept of the "management triangle". This concept emphasizes that there are three primary entities that are equally responsible and accountable for the radiation safety program: executive management, the RSO, and the Radiation Safety Committee (RSC). In those small programs without a RSC, the involvement of executive management in routine operations may actually be greater.

The purpose of an audit is to provide the RSO, Radiation Safety Committee (RSC), and management with specific information on the status of compliance with the regulations and facility standards, and the strengths and weaknesses of the program. Early identification of problems and immediate corrective action will be viewed much more favorably than discovery by the regulatory agency.

There are two types of audits that involve the nuclear medicine facility. One is a program audit that reviews the overall radiation safety program which includes all areas using ionizing radiation and reports to executive management. The program audit is done annually. The second type of audit is specific to the nuclear medicine operation and reports to the nuclear medicine director, manager, and/or authorized user, depending on the size of the program. These audits are usually done more frequently to identify problems in a timely manner, but not more often than quarterly. The nuclear medicine area frequency may be specified in the license application or condition.

This presentation will reflect NRC regulated licensees. It must be recognized that the NRC regulations for the medical use of byproduct material (10 CFR 35) are undergoing revision and that some requirements may be modified or eliminated in the future revision. If the final revision is available, the impact of the revised regulations on the audit process will be addressed.

Educational Objectives:

1. To describe the components for an audit of a nuclear medicine facility or department.
2. To describe the components for an audit of the radiation safety program involving radioactive materials.
3. To provide an audit guide to the medical physicist that will result in confidence that the daily use of diagnostic and therapeutic amounts of radioactivity is done properly.