

Charles Hehl, Director
USNRC
Region I
475 Allendale Rd.
King of Prussia, PA 19406

July 22, 1996

Dear Mr. Hehl,

Thank you for inviting me to your Region I workshop on August 21 to participate in a discussion regarding security and control of Licensed Material. Unfortunately I will not be able to attend. I would like to offer my personal comments on these topics so that it can be added to your workshop discussions.

I am a director of a broad medical licensed program at a major academic medical center as well as a consultant to numerous NRC licensees. My experience covers almost 30 years as a health physicist. These comments relate to radioactive tracer quantities used in research and medical use of radioisotopes such as nuclear medicine. My comments on security and control of licensed materials are my own but I do believe they reflect many of my fellow radiation safety officers as well as users of licensed materials.

Comment

- 1) The incidents of apparent deliberate radioactive internal contamination by knowledgeable persons familiar with laboratory operations cannot be prevented by increasing security. I feel the NRC is reacting in a "knee-jerk" fashion to events which may cast them in an unfavorable light by undue attention to security since the MIT P-32 incident.
- 2) It is not possible to secure every radioactive atom against real or hypothetical removal scenarios by unauthorized individuals. The cost to achieve this outweighs any benefit to researchers using radioactive materials. We are living in an era of downsizing, and less federal grant support and reimbursement to hospitals. How can institutional money put into additional security be justified against other competing and perhaps more important issues such as eliminating medical residency programs.
- 3) It is unreasonable to assume that security in a laboratory that is unlocked must be by physical attendance with line of sight to all radioactive atoms.

Attachment (3)

4) The interpretation of security and control of licensed materials during inspections in my opinion has varied widely among inspectors over the years. The reason is that the NRC has no clear definition of security and appropriate levels. Refer to comments made in sections 5-3, 5-4 of NUREG 1535. Increased security of radioactive material is not necessary for levels determined to be non-exempt.

5) Risk management should be correlated with risk not perception of risk. Thus a BL-4 facility needs to be secured to contain microbes which can kill a population. Compare this security to securing trace quantities of radioactive materials.

My Suggestions on Adequate Levels of Security

1) Security and Control of radioactive materials is to prevent unauthorized individuals and/or situations that result in the licensee losing control of the radioactive material. It is not to prevent knowledgeable persons who intend to commit malicious acts.

2) Levels of security need to be related to quantity levels in Appendix C with specific levels of security mandated. I propose a threshold of 10 times Appendix C for exempt and non-exempt radioactive quantities.

3) Suitable and reasonable methods to achieve security and control of radioactive materials include:

a) locking floors that permit access to radioactive materials 24 hours a day. e.g. combination door locks or identification card locks.

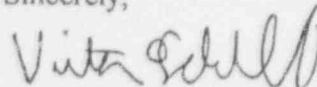
and/or

b) locking laboratories when unattended.

4) It should be required that stock solutions of non-exempt quantities of radioactive materials in refrigerators or freezers be locked if the lab is unattended and unlocked. I would propose that this be time dependent since it is unreasonable to think that a lab must be locked if it is unattended for several minutes. Labs unattended for greater than 30 minutes should be locked.

5) Common areas on secured floors or buildings such as coldrooms and equipment rooms containing licensed exempt quantities need not be locked. Non exempt quantities of these stock solutions in these areas however must be secured by either a locked storage receptacle or locked door.

Sincerely,



Victor Evdokimoff, CHP

cc: Joseph Ring, Ph.D. CHP