

NOV 29 1993

License No. 29-05218-28  
Docket No. 030-00883  
Control No. 118124

Rutgers, The State University  
Radiation and Environmental Health  
and Safety  
ATTN: Richard M. Norman  
Vice President Administration  
and Associate Treasurer  
Kilmer Building 4127  
Piscataway, New Jersey 08854

Dear Mr. Norman:

This is in reference to your letters dated May 21, 1993 and September 13, 1993 to amend License No. 29-05218-28. In order to continue our review, we need the following additional information:

1. Your September 13, 1993 letter identifies Mr. Michael C. Quinlan as the Director of Rutgers, Environmental Health and Safety with full responsibility for the comprehensive program. Please describe what Mr. Quinlan's time commitments will be for the radiation safety aspects of his responsibilities.
2. Please provide training and experience documentation for Mr. Quinlan in addition to that provided in your September 13, 1993 letter. The description of Mr. Quinlan's experience must address the full scope of uses of radioactive materials authorized under your NRC License No. 29-05218-28. Please address Mr. Quinlan's experience in the following areas as they apply to your program:
  - a. Personal experience in safe handling of radioisotopes including the isotopes and quantities (in curie units) which he has handled, the types of use, and the location(s) and date(s) where he used them.
  - b. Experience supervising the use of radioisotopes including the types of radiological operations and personnel supervised, type and quantities (in curie units) of isotope use supervised and the location(s) and date(s) where he supervised use.

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- c. Mr. Quinlan's practical radiation safety experience in the following areas as they apply to your program:
1. Performing radiation safety evaluations of facilities and equipment for proposed uses.
  - 2. Evaluating qualifications of authorized users and individuals working under the supervision of authorized users for proposed uses.
  - 3. Conducting radiation safety audits of research and development laboratories.
  - 4. Maintaining a personnel monitoring program for determining external radiation exposure including selecting appropriate devices, monitoring exposure records and establishing exposure investigational levels.
  5. Calculating internal and external radiation doses.
  6. Monitoring and maintaining absolute and other special filter systems associated with the use, storage and disposal of radioactive material.
  7. Evaluating, selecting, designing and supervising maintenance of process control and confinement systems, such as gloveboxes and hoods.
  8. Performing shielding evaluations, including determination of type and amount needed.
  9. Calculating radioactive decay, buildup, and secular and transient equilibria.
  10. Evaluating, selecting, maintaining and effectively using respiratory protective equipment for radiological safety use.
  - 11. Maintaining a contamination control program including ambient radiation surveys, contamination surveys, air sampling programs, sealed source leak testing, sample analysis.
  12. Conducting investigations including overexposures, accidents, spills, losses, thefts; unauthorized receipts, uses, transfers and disposals.
  13. Conducting radiation protection training for facility personnel including authorized users and lab workers, animal caretakers, waste processors/handlers, security and ancillary personnel.
  14. Developing radiation safety manuals/programs.
  15. Selecting instrumentation associated with the measurement of radiation including survey instruments, counting equipment.
  16. Performing instrument calibrations and use of appropriate calibration methods/standards.
  17. Coordinating material inventory and accountability programs including monitoring the receipt, use, decay, transfer and disposal of radioactive materials.

18. Coordinating radioactive waste disposal program including effluent monitoring, collection, treatment (decay-in-storage, incineration, and compaction), packaging and disposal.
  19. Preparing radioactive packages for transportation.
  20. Developing and maintaining a facility emergency plan for responding to release of radioactive materials.
  21. Determining the need for financial assurance for decommissioning.
  22. Developing and maintaining a decommissioning financial assurance funding plan.
3. Please submit an organizational chart which indicates your total staffing (FTE) devoted to radiological safety activities, including technical and administrative/clerical staff. Include job titles and descriptions of duties. Submit the training and experience credentials of those individuals performing radiological safety duties.

Please note that the following information was requested in our letter to you dated July 22, 1993. Your response letter dated September 13, 1993 *did not* provide this information. The information requested in items 4 and 5 is critical to the oversight of your program. You are requested to address questions 4 and 5 without further delay.

4. In your letter dated May 21, 1993, you stated, in part, that the Radiation Safety Committee will increase its oversight during the interim period. Please describe the Radiation Safety Committee's increased oversight responsibilities for radioactive materials use authorized under NRC License No. 29-05218-28.
5. In your letter dated May 21, 1993, you stated, "A qualified consultant will be called for any situations requiring assistance." Please describe the qualifications you will require of a consultant for radioactive materials use authorized under NRC License No. 29-05218-28. Please give examples of situations where you would call in a consultant.

6. In your letter dated May 21, 1993, you requested to increase the possession limits of some byproduct materials with atomic numbers 3 through 83, please indicate which of the following methods you wish to utilize to list these increases on your license:
- a. List each of the four isotopes with the corresponding possession limit requested in your letter as separate line items, independent of the listing for byproduct material between Atomic Nos. 3 through 83.

OR

- b. Include your requested increases in the listing for byproduct material between atomic numbers 3 through 83 by changing condition 8 to read: Not to exceed 5 curies per radionuclide and 50 curies total.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 118124. If you have any technical questions regarding this deficiency letter please call me at (215) 337-6952.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application. Your prompt attention to this matter is appreciated.

Sincerely,

**Original Signed By:  
Pamela J. Henderson**

Pamela J. Henderson  
Nuclear Material Safety Branch  
Division of Radiation Safety  
and Safeguards

cc: Michael C. Quinlan, Director  
Environmental Health and Safety

DRSS:RI  
Henderson



11/24/93