

File

APR 19 1985

Mount Vernon Nazarene College
ATTN: Joseph H. Lechner, Ph.D.
800 Martinsburg Road
Mount Vernon, OH 43050

Control No. 78553

Gentlemen:

We have reviewed your application dated March 12, 1985 requesting a byproduct material license and find that we will need additional information as follows:

Individual Responsible for Radiation Safety Program

1. Please provide more detailed information for Dr. Lechner's training and experience. This information should include the type (on-the-job or formal course), location, and the number of hours of training for the following topics:
 - a. Principles and practices of radiation protection; and
 - b. radioactivity measurements, standardization, and monitoring techniques and instruments; and
 - c. mathematics and calculations basic to the use and measurement of radioactivity; and
 - d. biological effects of radiation.
2. The qualifications, training, and experience of each person should be commensurate with the material and its use as proposed in the application. Therefore, please provide information on Dr. Lechner's training and experience using and handling millicurie quantities of high energy beta emitters such as phosphorus-32.
3. Submit a description of the duties and responsibilities of your Radiation Protection Officer, Dr. Lechner, under your license. The typical duties of a Radiation Protection Officer would be:
 - a. To ensure that the use of radioactive material is by or under the direct supervision of individuals specifically listed on your license.
 - b. To ensure that all users (where appropriate) wear personnel monitoring equipment when using radioactive materials.
 - c. To ensure that radioactive materials are properly secured against unauthorized removal at all times when not in use.

8506060606 850520
REG3 LIC30
34-24478-01 PDR

APR 19 1985

- d. To perform routine inspections of all laboratories using or storing radioactive materials.
- e. To ensure that the terms and conditions of your license are met, and that all required records are maintained.
- f. To immediately halt any activity judged to be a threat to health, safety, the environment or a violation of the conditions of your license or the regulations.

Training

- 4. Modify your training requirements for individuals who work with radioactive materials to include all of the topics in 10 CFR Part 19.12 (enclosed).
- 5. Please identify the instructors (and their qualifications) who will teach the supplementary radiation safety classes for individuals who work with radioactive material. Refer to page 1, Item 8.B. of your application dated March 12, 1985.
- 6. Ancillary personnel (clerical, receiving, housekeeping, security, etc.) whose duties may require them to work in the vicinity of radioactive material (whether escorted or not) need to be informed about radiation hazards and appropriate precautions. Outline your method to assure that these employees receive the necessary instructions. Confirm that this instruction will be given both initially and annually thereafter on a refresher basis.

Personnel Monitoring

- 7. Indicate how you will determine the radiation dose to the hands of personnel handling phosphorus-32. We recommend the use of TLD finger badges for anyone handling 1 millicurie or more of phosphorus-32 including stock vials and solutions.

Survey Program

- 8. In addition to survey meter surveys, modify your survey program to include the performance of surface wipe tests to detect the presence of removable surface contamination. State the frequency at which they will be performed. Monthly and after each experiment as with the other surveys is adequate.
- 9. Modify your survey procedures to include surveys of all areas where radioactive material is used or stored (i.e., Rooms FA 109, and FA 226). Submit the modified procedures.
- 10. Specify the radiation exposure levels and contamination levels above which corrective actions will be taken. For recommended action levels refer to

APR 19 1985

Table 2 of Regulatory Guide 8.23 (enclosed). Describe the corrective actions taken when these levels are exceeded.

11. Describe your procedures for ordering radioactive materials, for receipt of materials and for notification of responsible persons upon receipt of radioactive materials. These procedures should be adequate to ensure that possession limits are not exceeded, that radioactive materials are secured against unauthorized removal at all times, and that radiation levels in unrestricted areas do not exceed the limits specified in Section 20.105 of 10 CFR Part 20. Sample procedures are enclosed as Appendix E in Regulatory Guide 10.8. Even though this guide addresses medical institutions, the procedures are appropriate to your program. Include in your procedures receipt during nonregular working hours and instructions given to receipt personnel.
12. Describe your procedures for examining incoming packages for leakage, contamination or damage, and for safely opening packages in accordance with Section 20.205 of 10 CFR Part 20. It is recommended that, as a minimum, these include instructions to wear gloves, monitor the packages before opening, and monitor the packing material for contamination after opening. Appendix F of Regulatory Guide 10.8 contains acceptable procedures. You may reference Appendix F as your procedures or submit alternate procedures.

If you have any questions or require clarification on any of the information stated above, you may contact us at (312) 790-5625.

We will continue our review of your application upon receipt of this information. Please reply in duplicate, within 30 days, and refer to Control Number 78553.

Sincerely,

Original Signed By
Evelyn R. Matson
Materials Licensing Section

Enclosures: 1. Regulatory Guides 10.7,
10.8, 8.23
2. Part 19

R111

ERM
Matson/jl
4/17/85