

FCMLB:PCJ
030-08086
(08902)

OCT 23 1981

New England BioLabs
ATTN: Dr. Donald G. Comb
President
32 Tozer Road
Beverly, Massachusetts 01915

Gentlemen:

This is in reference to your application dated August 27, 1981, to renew License No. 20-14809-01. In order to continue our review, we need the following additional information:

1. It appears that we have not received a reply to our letter dated June 22, 1981. In this letter we asked for a description of your new facility at 32 Tozer Road and the results of your close-out survey at your old facility at 283 Cabot Street. Please submit.
2. Submit a description of the duties and responsibilities of the radiation protection officer. 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.
 - 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.
3. If you propose to calibrate your own radiation survey and monitoring instruments, you should submit a detailed description of your planned calibration procedures. These procedures require a calibration source of sufficient activity to provide readings of approximately 100 milliroentgens per hour at 20 cm. Identify the source that you will use by nuclide, activity, and calibration accuracy.

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Please confirm these procedures will include a two-point calibration

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DATE	10/22/81	10/22/81					

OCT 23 1981

on each scale with the points located at approximately 1/3 and 2/3 of full scale.

If you do not have adequate calibration sources available to you, you may return the instrument(s) to the manufacturer for calibration or employ the services of a consultant in your area. If you intend to have a consultant calibrate your survey meters, you should contact the consultant to determine if procedures for operating a commercial calibration service have been filed with the NRC. If so, submit the name, address, and NRC license number of the consultant. If not, you should obtain and submit the step-by-step procedures (including a description of the sources) that the consultant will use.

4. Describe your program for ensuring that all personnel, including clerical and housekeeping personnel, receive proper instruction in accordance with Section 19.12 of 10 CFR Part 19.
5. 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.
6. 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 wipe test the inner container for contamination.
7. Submit a copy of general safety instructions to be followed by laboratory personnel while working with radioactive materials.
8. Submit a copy of the emergency procedures to be followed in case of spills or other types of accidents involving radioactive materials. It is recommended that such procedures contain:
 - a. Instructions to be followed during minor spills.
 - b. Instructions to be followed during major spills.
 - c. Instructions to notify the radiation protection officer.

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OCT 23 1981

9. Describe your routine area survey program, including the type and frequency of surveys, the areas to be surveyed, and the levels of contamination that you consider to be acceptable, and provisions for preserving records of such surveys. For an institution using the types and quantities of materials listed on your present license, it is recommended that a brief contamination survey be conducted at the end of each experiment, and a comprehensive survey performed once monthly.
10. Your application does not state how you will dispose of solid radioactive waste (contaminated underpads, etc.). Please submit this information.
11. In support of your request for 10 millicuries of phosphorus-32, you should develop and submit special safety instructions to be provided to individuals using millicurie quantities of P-32. We recommend that your procedures include, but not be limited to, the following:
 - a. The use of low density shielding (e.g., plexiglass) in order to keep Bremsstrahlung radiation at a minimum.
 - b. A mandatory radiation survey and wipe test procedure after each use.
 - c. The use of finger type extremity monitors for procedures that involve 1 millicurie or more.
 - d. The use of a dry run prior to the performance of unfamiliar procedures in order to preclude unexpected complications. In addition, it is recommended that the radiation protection officer be present during new procedures.

We will continue our review of your application upon receipt of this information. Please reply in duplicate and refer to Control No.08902.

Sincerely,

Original Signed By
John E. Glenn, Ph.D.

John E. Glenn, Ph.D.
Material Licensing Branch
Division of Fuel Cycle and Material
Safety

Enclosures:

1. 10 CFR 19
2. 10 CFR 20

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