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30 May 1997

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Mr. John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
US Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Mail Control No. 124469
Docket No. 030-34438

Dear Mr. Kinneman:

This is in response to your letter dated 8 May 1997 requesting further information regarding our application for a radioactive material license. We provide answers to your eight specific questions as follows.

1. The Radiation Safety Officer, Mr. Robert J. White, has limited direct experience with using radioactive materials in unsealed form. Therefore, Mr. White's name is withdrawn as an authorized user of licensed materials. Our application remains unchanged in that Mr. Robert J. White would be the Radiation Safety Officer. In the event that Mr. White handles licensed materials, such handling will be under the supervision of an authorized user named on the license.

2. The proposed Radiation Safety Officer, Mr. Robert J. White, reports directly to Dr. Thomas Oglesby, Vice President Technical Operations. As such, Mr. White has a direct reporting path to senior management.

3. A copy of senior management's delegation of authority to the Radiation Safety Officer is attached.

4. We understand and agree that the Radiation Safety Officer has responsibility for maintaining required records and for implementing the radiation safety program. While maintaining this responsibility, the Radiation Safety Officer may delegate certain tasks to others. The responsibilities of the Radiation Safety Officer are as follows:

a. To assess radiological hazards and to prescribe and implement appropriate radiation safety precautions.

b. To ensure that the use of licensed material is by or under the supervision of individuals specifically listed on the Nuclear Regulatory Commission license.

c. To ensure that all radiation users, where appropriate, wear personnel monitoring equipment.

d. To ensure that licensed materials are properly secured against unauthorized removal at all times when not in use.

e. To perform routine inspections of all laboratories using or storing licensed materials.

f. To ensure that the terms and conditions of the Nuclear Regulatory Commission license are met, and that all required records are maintained.

5. Ancillary personnel (clerical, administrative, housekeeping, etc.) whose job responsibilities require them to work in the vicinity of licensed materials will receive initial orientation training and annual refresher training appropriate to the radiation hazard. Appropriate training will be given to the supervisors of any contract cleaning staff which may work in the vicinity of licensed materials.

6. A backup portable radiation survey meter will be available on site for use when the GM survey meter is off-site for calibration or repair. Radiation survey meters will be calibrated by an entity that is licensed by the Nuclear Regulatory Commission or an Agreement State to perform such calibrations.

7. Facilities and equipment will be released for unrestricted use only after they have been surveyed and determined to be below the criteria for contact dose rate (mR/h) and removable activity (dpm per 100 cm^2).

   a. Our criteria for release for unrestricted use are:

      i. Dose rate on contact using most sensitive scale of portable survey meter of less than twice background.

      ii. Removable activity on a swipe of less than 1000 dpm per 100 cm^2.

   b. The radiation detection equipment used for the above surveys are:

      i. A thin window GM probe and ratemeter. As described in our application, the manufacturer and model number are Ludlum Measurements Model 44-9 GM pancake probe with a Model 3 ratemeter. The GM pancake probe has a typical 4-π geometry detection efficiency of 5% for C-14 betas.

ii. Swipes will be counted with the liquid scintillation counter described in our application. Counting efficiencies of the liquid scintillation counter are estimated at better than 50% for H-3 and 90% for C-14 and S-35.

8. The required annual review of the radiation protection program content and implementation will be done by an outside health physics consultant. Senior management will sponsor the audit and will receive the final audit report. The audit will include a review of our compliance with Nuclear Regulatory Commission regulations and our license conditions, and a review of the Radiation Safety Officer and staff performance. The minimum qualifications for the individual conducting the audit will be certification in Health Physics by the American Board of Health Physics.

   The Radiation Safety Officer will conduct a safety and compliance audit on a quarterly basis. This routine audit includes review of individual users' survey records, evaluation of users' radiation safety procedures through observation and discussion, observation for compliance with radiation safety rules and procedures, as well as direct surveillance with a radiation survey meter.

Please feel free to call me if you have any additional questions or concerns regarding our pending application for a radioactive material license.

Very truly yours,
TAYLOR TECHNOLOGY, Inc.

5/30/97

Thomas Oglesby, Ph.D.
Vice President, Technical Operations

Attachments:
Memo: Delegation of Authority for Radiation Safety