



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 14, 2005

Docket No. 03005222  
Control No. 137626

License No. 29-00139-02

Michael J. Vala, C.H.P.  
Manager, Environmental Health and Safety  
E. R. Squibb & Sons, LLC  
P. O. Box 191  
New Brunswick, NJ 08903-0191

**SUBJECT: E. R. SQUIBB & SONS, LLC, REQUEST FOR ADDITIONAL INFORMATION CONCERNING APPLICATION FOR AMENDMENT TO LICENSE, CONTROL NO. 137626**

Dear Mr. Vala:

This is in reference to your letter dated August 29, 2005 requesting to amend Nuclear Regulatory Commission License No. 29-00139-02. In order to continue our review, we need the following additional information:

1. Please provide the approximate total square footage of the facility in Hamilton, New Jersey, and the total square footage of the laboratories in which licensed activities were performed. Also, describe the type of area in which the facility was located (commercial, industrial, residential, etc.)
2. In the section "Objective", it states that the facility would be surveyed in order to demonstrate that it meets the release criteria of Regulatory Guide 1.86. The release criteria in this document is only applicable to equipment released from the facility. For release for unrestricted use of buildings and grounds, this criteria is superceded by the license termination criteria found in Subpart E of 10 CFR Part 20. You may use the a dose assessment method or you may use screening criteria, as described in NUREG-1757 "Consolidated NMSS Decommissioning Guidance" (NUREG-1757), Volume 2, "Characterization, Survey, and Determination of Radiological Criteria" to demonstrate that you meet the license termination criteria. If the Regulatory Guide 1.86 criteria is more restrictive than the screening values, those values may be used as your criteria to demonstrate that the facility meets the license termination criteria.
3. In the section "Survey Methodology", an equation is listed, which is stated to be used for the determination of the minimum detectable activity (MDA) for each instrument. This equation is not applicable to scanning surveys. Please provide the minimum detectable activities for instruments used in scanning, as described in the Section 6.7.2 of the NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) and Appendix A of NUREG-1757, Volume 2.
4. The section "Direct Radioactive Contamination Surveys" state that surveys were performed using the guidance in MARSSIM. It further states that the laboratories were

considered Class 2 areas. Class 2 areas require that: survey units be specified, and their area be between 100 and 1000 square meters; that the number of data points needed for each survey area be determined; that the spacing for survey points be determined, with a random starting point on a grid location. Provide this information to support the number and location of data points where measurements were made. Alternately, NUREG-1757, Volume 2, Appendix B, provides guidance for performing simplified surveys.

5. Table 1 lists the instruments used. However, there was insufficient information about the detectors to perform confirmatory calculations of the minimum detectable activities for either the static surveys or the scanning surveys (active surface area of the detector, efficiency of the detector for a specified radionuclide, background count rate or counts and counting time, etcetera. Please provide the required information, and show a sample calculation of the minimum detectable activity for a scanning instrument and for the static measurement instrument.
6. The section "Survey for Removable Contamination" does not state the criteria you used to determine that the facility meets the license termination criteria, considering that Regulatory Guide 1.86 has different criteria for iodine-125 than for other beta-gamma emitters. In accordance with NUREG-1757 screening criteria, the removable contamination may not exceed 10% of the total residual activity, and the unity rule must be applied when multiple radionuclides are present. Specify the criteria you used for removable contamination.
7. Appendix I and II provide results of surveys as "less than MDA". In accordance with MARSSIM Section 2.3.5, you should report the actual results of the analysis, because "less than MDA" results cannot be used in statistical analyses.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, industrial, and academic uses of nuclear material**; then **toolkit index page**. Or you may obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-888-293-6498. The GPO is open from 7:00 a.m. to 9:00 p.m. EST, Monday through Friday (except Federal holidays).

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 137626. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5040.

M. Vala  
E. R. Squibb & Sons, LLC

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If we do not receive a reply from you within 30 calendar days from the date of this letter, we will assume that you do not wish to pursue your application.

Sincerely,

***Original signed by Elizabeth Ullrich***

Betsy Ullrich  
Senior Health Physicist  
Commercial and R&D Branch  
Division of Nuclear Materials Safety

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**SISP Review Complete: (EXU)**

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