



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

February 8, 2001

Docket No. 03005222  
Control No. 129177

License No. 29-00139-02

Thomas M. Primm  
Vice President, Facilities, Engineering and Administration  
E.R. Squibb & Sons, Inc.  
One Squibb Drive  
PO Box 191  
New Brunswick, NJ 08903-0191

SUBJECT: E.R. SQUIBB & SONS, INC., ISSUANCE OF LICENSE AMENDMENT,  
CONTROL NO. 129177

Dear Mr. Primm:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Please note that License Condition 24 has been added to your license which requires the submission of a revised Decommissioning Funding Plan by June 1, 2001.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

***Original signed by Duncan White***

Duncan White, CHP  
Division of Nuclear Materials Safety

Enclosures:

1. Amendment No. 97
2. Appendix F, NUREG-1727

cc:

Michael J. Vala, C.H.P., Radiation Safety Officer  
Susan Voigt, Chair, Radiation Safety Committee

T. Primm  
E.R. Squibb & Sons, Inc.

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NAME	DWhite/ADW							
DATE	02/08/2001							

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**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p>Licensee</p> <p>1. E. R. Squibb &amp; Sons, Inc.</p> <p>2. One Squibb Drive P. O. Box 191 New Brunswick, New Jersey 08903-0191</p>	<p>In accordance with the letter dated January 17, 2001,</p> <p>3. License number 29-00139-02 is amended in its entirety to read as follows:</p> <p>4. Expiration date September 30, 2008</p> <p>5. Docket No. 030-05222 Reference No.</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material with Atomic Nos. 1-83 except Strontium 90</p> <p>B. Iodine 131</p> <p>C. Hydrogen 3</p> <p>D. Carbon 14</p> <p>E. Sulfur 35</p> <p>F. Strontium 90</p> <p>G. Any byproduct material with Atomic Nos. 84-103</p> <p>H. Nickel 63</p> <p>I. Any byproduct material with Atomic Nos. 1-83 except Strontium 90</p> <p>J. Hydrogen 3</p> <p>K. Carbon 14</p> <p>L. Phosphorus 33</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p> <p>C. Any</p> <p>D. Any</p> <p>E. Any</p> <p>F. Any</p> <p>G. Any</p> <p>H. Plated sources in detector cells</p> <p>I. Any</p> <p>J. Any</p> <p>K. Any</p> <p>L. Any</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 5 curies per radionuclide and 1000 curies total</p> <p>B. 150 curies</p> <p>C. 20 curies</p> <p>D. 20 curies</p> <p>E. 10 curies</p> <p>F. 2 millicuries</p> <p>G. 1 millicurie</p> <p>H. Not to exceed 15 millicuries per source and 750 millicuries total</p> <p>I. 200 millicuries per radionuclide and 6 curies total</p> <p>J. 7 curies</p> <p>K. 5 curies</p> <p>L. 1 curie</p>

# **MATERIALS LICENSE SUPPLEMENTARY SHEET**

License Number  
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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
M. Sulfur 35	M. Any	M. 10 curies
N. Molybdenum 99/Technetium 99m	N. Any	N. 50 curies
O. Iodine 125	O. Any	O. 500 millicuries
P. Iodine 131	P. Any	P. 500 millicuries
Q. Technetium 99	Q. Any	Q. 200 millicuries
R. Nickel 63	R. Plated sources in detector cells	R. Not to exceed 15 millicuries per source and 750 millicuries total
S. Any byproduct with Atomic Nos. 1-83 except Strontium 90	S. Any	S. Not to exceed 200 millicuries per radionuclide and 6 curies total
T. Hydrogen 3	T. Any	T. 500 millicuries
U. Carbon 14	U. Any	U. 500 millicuries
V. Sulfur 35	V. Any	V. 300 millicuries
W. Calcium 45	W. Any	W. 300 millicuries
X. Nickel 63	X. Plated sources in detector cells	X. Not to exceed 15 millicuries per source and 750 millicuries total
Y. Any byproduct material with Atomic Nos. 1 through 83 except Strontium 90	Y. Any	Y. Not to exceed 10 millicuries per radionuclide and 1 curie total
Z. Hydrogen 3	Z. Any	Z. 100 millicuries
AA. Carbon 14	AA. Any	AA. 100 millicuries
BB. Sulfur 35	BB. Any	BB. 300 millicuries
CC. Phosphorous 32	CC. Any	CC. 100 millicuries
DD. Phosphorous 33	DD. Any	DD. 200 millicuries
EE. Iodine 125	EE. Any	EE. 50 millicuries

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6. Byproduct, source, and/or special  
nuclear material

7. Chemical and/or physical form

8. Maximum amount that licensee may  
possess at any one time under this  
license

FF. Nickel 63

FF. Plated sources in detector  
cells

FF. Not to exceed 15 millicuries  
per source and 750  
millicuries total

9. Authorized use:

- A. and B. (1) Research and development as defined in 10 CFR 30.4; animal studies.  
(2) For possession, use, and processing incident to the manufacture of radiochemicals and radiopharmaceuticals.  
(3) For storage prior to distribution of manufactured radiochemicals and radiopharmaceuticals.  
(4) For packaging and distribution of manufactured radiochemicals and radiopharmaceuticals to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State.
- C. through FF. Research and development as defined in 10 CFR 30.4 including animal studies; calibration of instruments.
- F. and G. Calibration of instruments; interim storage
- H., R., X., and FF. In electron capture detector cells which are distributed under a specific license issued by the U.S. Nuclear Regulatory Commission or any Agreement State.

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CONDITIONS

10. A. Licensed material in Items 6.A. through 6.H. may only be used at the licensee's facilities located at One Squibb Drive, New Brunswick, New Jersey.
- B. Licensed material in Items 6.I. through 6.R. may only be used at the licensee's facilities located at Route 206 and Provinceline Road, Lawrenceville, New Jersey.
- C. Licensed material in Items 6.S. and 6.X. may only be used at the licensee's facilities located at 311 Pennington-Rocky Hill Road, Pennington, New Jersey.
- D. Licensed material in Items 6.Y. through 6.FF. may only be used at the licensee's facilities located at Three Hamilton Health Place, Hamilton, New Jersey.

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11. A. Licensed material shall be used by, or under the supervision of, individuals designated by the licensee's Radiation Safety Committee.
- B. The Radiation Safety Officer for this license is Michael J. Vala, CHP.
12. This license does not authorize commercial distribution of licensed material to persons generally licensed pursuant to 10 CFR 31 or to persons exempt from licensing pursuant to 10 CFR 30.18.
13. The licensee shall not use licensed material in or on human beings.
14. The licensee shall not use licensed material in field applications where activity is released.
15. Experimental animals administered licensed materials or their products shall not be used for human consumption.
16. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
  - (ii) they contain only a radioactive gas; or
  - (iii) the half-life of the isotope is 30 days or less; or
  - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or

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- (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
17. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding that specified by the manufacturer.
18. The licensee shall conduct a physical inventory every six months, or at other interval approved by NRC, to account for all sealed sources and/or devices received and possessed under the license.
19. The licensee shall not acquire licensed material in a sealed source or in a device that contains a sealed source unless the source or device has been registered with the Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State.
20. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.



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21. The licensee shall maintain and execute the response measure of his Radiological Emergency Contingency Plan submitted to the Commission on February 18, 1997. The licensee shall also maintain procedures as necessary to implement the plan. The licensee shall make no change in his Radiological Emergency Contingency Plan that would decrease the response effectiveness of the plan without prior Commission approval as evidenced by license amendment. The licensee may make changes to his Radiological Emergency Contingency Plan without prior Commission approval if the changes do not decrease the response effectiveness of the plan, and shall maintain records of changes that are made to the plan without prior approval for a period of two years from the date of the changes and shall furnish the Chief, Nuclear Materials Safety Branch, Division of Nuclear Materials Safety, U.S. Nuclear Regulatory Commission, Region I, 475 Allendale Road, King of Prussia, Pennsylvania 19406, a report containing a description of each change within six months after the change is made.
22. The licensee is authorized to hold radioactive material with a physical half-life of less than 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of ten half-lives.
  - B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
  - C. A record of each such disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
23. The licensee may transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
24. The licensee shall submit a revised Decommissioning Funding Plan that includes all licensed locations and activities to the Nuclear Regulatory Commission's Region I office by June 1, 2001.



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25. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Letter dated March 23, 1992
- B. Letter dated May 8, 1992
- C. Letter dated February 17, 1994
- D. Letter dated June 20, 1994
- E. Application dated February 18, 1997
- F. Letter dated August 26, 1997
- G. Letter dated August 29, 1997
- H. Letter dated October 15, 1997
- I. Letter dated June 19, 1998
- J. Letter dated August 19, 1998



For the U.S. Nuclear Regulatory Commission

Date February 8, 2001By ***Original signed by Duncan White***

Duncan White  
Division of Nuclear Materials Safety  
Region I  
King of Prussia, Pennsylvania 19406