Mallinckrodt, Inc.

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36801
3621

August 20, 1974

Mr. Douglas M. Collins
Materials Branch
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Reference: USAEC License
No. 24-04206-01

Dear Mr. Collins:

This refers to your letter dated July 12, 1974, requesting additional information in support of our application dated September 21, 1973, and our letter dated April 25, 1974.

1. Safety evaluations for new uses of radioactive materials in quantities in excess of Column II, Schedule A, 10CFR33, were in the form of verbal agreements between the RSO and the respective Department Managers and have not been documented and maintained in a central file. All such future evaluations shall be documented by the RSO and distributed within seven days of the verbal approval to all Radiation Safety Committee members for their review and comment. The original or amended evaluation will be incorporated in the minutes of the next Committee meeting.

2. At least 40 hours of training and experience in the safe use of radioactive materials are required before the Committee will consider raising an individual to a Class II or Class III category. Any proposed new use of radioactive materials by Class II or

A/88

Mallinckrodt NUCLEAR

2. (Continued)

Class III individuals in quantities less than those listed in Column II, Schedule A, 10CFR33, may be verbally approved by the respective Department Manager who shall document the safety evaluations and submit the evaluations to the RSO for his review and comments within seven days of the verbal approval. The original or amended evaluation shall be incorporated in the minutes of the next Committee meeting.

A memorandum to this effect is being prepared for distribution to all individuals in Class I, II or III categories.

Sincerely,

MALLINCKRODT NUCLEAR
MALLINCKRODT INC.

Donald W. Soldan
Chief Radiological
Protection Officer

DWS:ja

cc: Director, Region III
Directorate of Regulatory Operations
U. S. Atomic Energy Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

ENCL: (1)

ATTENTION: ALL INDIVIDUALS IN CLASS I, II AND III

CLASS I

J. R. Adams
J. L. Brown
R. L. Coslet
N. E. Drissell
K. J. Green
J. S. Hatakeyama
R. E. Nuelle
D. W. Soldan
J. W. Woods

CLASS II

R. J. Au Buchon
D. E. Brinner
D. L. Cowen
W. K. Fadling
G. D. Fritchey
A. E. Hall
P. King
C. W. Lawson
S. S. Lin
G. E. Lindenblad
L. R. Lyle
S. S. Margherita
J. C. Martin
R. H. Quint
W. P. Robb
D. R. Rodrian
A. L. Sheller
R. T. Sherman
R. B. Teeters
A. A. Temme
R. G. Wolfangel
C. Yancy

CLASS III

V. J. Becker
E. M. Bettinger
R. O. Bowlin
N. M. Brinner
W. F. Bushman
R. E. Buxton
P. A. Campbell
J. M. Chamberlain
D. A. Crnko
R. W. Comotto
F. J. Coghill
J. R. Davis
G. B. Eaves
M. C. Foster
M. A. Ghafoor
J. Glovsky
R. Granger
G. D. Grummon
J. M. Henry
A. R. Lyle
E. E. Mack
D. E. Nelson
P. A. Pattiz
W. C. Perry
D. J. Todd
L. L. Turner
R. M. Wester
D. M. Whiteside

SCOPE

The intent of this memo is to provide you the procedures to be followed regarding new uses of radioactive materials which we have established with the AEC. Please retain this procedure for future reference.

The methods for approval of new uses of radioactive materials are dependent upon an individual's classification and the quantity of the particular radionuclide to be used. Some of the major considerations in the decision making process which should be documented in the safety evaluations are listed. The classification definitions and Schedule A are attached.

PROCEDURE FOR NEW USES OF RADIONUCLIDES

1. Any proposed new use of radioactive materials in excess of those specified in Column I, Schedule A, must be approved by the Radiation Safety Committee prior to use of the by-product material.

   Approval for the proposed new use and the conditions under which the radioactive materials shall be used may be given verbally to the respective Department Manager by the Radiation Safety Committee. All such safety evaluations shall be documented by the Committee Secretary within a period of seven days and incorporated in the minutes of the Committee Meeting.

2. Any proposed new use of radioactive material in quantities in excess of those specified in Column II, Schedule A, must be approved by the Radiological Safety Officer prior to use of the byproduct material.

   Approval for the proposed new use and the conditions under which the radioactive materials shall be used may be given verbally to the respective Department Manager by the Radiological Safety Officer. All such safety evaluations shall be documented by the RSO within seven days of the verbal approval and distributed to all Radiation Safety Committee members for their review and comment. The original or amended evaluation will be incorporated in the minutes of the next Committee meeting.

3. Any proposed new use of radioactive materials in quantities less than those specified in Column II, Schedule A, must be approved by an individual approved by the Radiation Safety Committee to use or supervise the use of byproduct material prior to use.

Approval for the proposed new use and the conditions under which the radioactive materials shall be used may be given verbally to the individual by his Departmental Manager. All such safety evaluations shall be documented by the Department Manager within seven days of the verbal approval and submitted to the RSO for his review and comment. The original or amended evaluation will be incorporated in the minutes of the next Committee meeting.

4. Independent of the above guidelines, prior approval for any new use of radioactive materials must be obtained from the Radiation Safety Committee if the proposed processing or experimentation is of a sufficiently hazardous nature.

   Approval for the proposed new use and the conditions under which the radioactive materials shall be used may be given verbally to the respective Department Manager by the Radiation Safety Committee. All such safety evaluations shall be documented by the Committee Secretary within a period of seven days and incorporated in the minutes of the Committee meeting.

5. In addition to the guidelines established above, any contemplated increase in the amount of activity or change in the method to be used, or new use of radioactive materials, which might affect the Radiation Safety Program in a given area must be reviewed by the Chairman of the Radiation Safety Committee or his alternate before the plan is put into effect. The Chairman or his alternate may approve the plan if he decides that the change will not increase the exposure of personnel or the general populace. If uncertain, he will call a meeting of the Radiation Safety Committee for joint review of the planned change.

SAFETY EVALUATION CONSIDERATIONS

1. The experience and qualifications of the individuals who will use the radioactive material.

2. The adequacy of the facilities including the containment systems, shielding and apparatus.

3. The methodology to be used.

4. The quantity of radioactive material involved.

5. The decay scheme and half-life of the radionuclide.

6. The biological fate of the radionuclide in the body.

CLASSIFICATION DEFINITIONS

1.	Class I	Members of the Radiation Safety Committee who by recognition of their knowledge and experience are licensed users of byproduct materials.
2.	Class II	Individuals approved by the Committee to use or directly supervise the use of byproduct materials.
3.	Class III	Individuals approved by the Committee to use or directly supervise the use of by-product materials within their specific area of responsibility.
4.	Class IV	Individuals who may use byproducts materials only under direct supervision.
5.	Class V	Individuals who do not use byproduct materials.

Mallinckrodt drivers in Class IV are exempt from direct supervision when picking up or delivering byproduct materials packaged in accordance with DOT regulations.

SCHEDULE A 10CFR-33.100

SCHEDULE A RADIONUCLIDE	COLUMN I CURIES	COLUMN II CURIES
Carbon -14	100	1
Cesium -137	.1	.001
Chromium-51	100	1
Cobalt-57	.1	.001
Cobalt-60	.1	.001
Gold -198	10	.1
Iodine -125	.1	.001
Iodine -131	.1	.001
Iron -59	1	.01
Mercury -197	10	.1
Mercury -203	1	.01
Molybdenum -99	10	.1
Phosphorous -32	1	.01
Selenium -75	1	.01
Strontium -85	1	.01
Technetium -99m	100	1
Xenon-133	100	1
Others not listed	.1	.001