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July 16, 1987

License No. SNM - 771

Docket No. 070-00817

Control No. 24542 *completed*

FILED TO BY LFMS
7/28/87
Jul 14
EX- <i>S. Kimbrey</i>
Date Completed 7/28/87

John E. Glenn, Chief  
Nuclear Materials Safety Section B  
Division of Radiation Safety & Safeguards  
Nuclear Regulatory Commission

Dear Mr. Glenn:

The following information is in support of the application for amending Special Nuclear Materials License No. SNM-771. The below numbered items refer to the numbers found in NRC form 313, Application for Material License.

5. Radioactive Material-

C(14) (5 millicuries), H(3) (50 millicuries), P(32) (20 millicuries), and S(35) (1 millicuries). The chemical forms of the above isotopes will be either carbohydrates, nucleotides or amino acids or their derivatives.

6. Purpose for which licensed material will be used -

The purpose of the above material is to conduct basic biochemical research in the field of nucleotide metabolism, including Isotope Effect Studies, metabolic pathway studies, and molecular biology studies on enzymes important in the metabolism of purine nucleosides and nucleotides.

7. The individual responsible for radiation safety program and his training and experience -

David W. Parkin, Ph.D., Assistant Professor of Chemistry, Research Associate-Biochemistry Department Temple University School of Medicine

Academic Training - Ph.D. in Chemistry, University of Nebraska-Lincoln, 1982. Postdoctoral Trainee - Temple University School of Medicine with Vern L. Schramm, 1981 - 1983.

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Training and Experience Extensive training on the use of the above listed Isotopes was received while working on Ph.D. under the guidance of Dr. Robert B. Johnston. Experience was obtained in the use of various C(14) and tritium labeled amino acids; also experience was obtained in the use of P(32) in the assay of Tyrocidine Synthetase. Labeled pyrophosphate was synthesized chemically from P(32) inorganic phosphate.

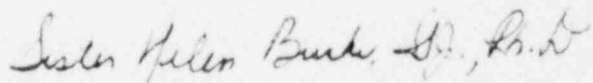
Further training and experience was obtained in the laboratory of Vern L. Schramm during postdoctoral training. Several specifically radiolabeled nucleotides such as C(14), H(3) AMP's and ATP's were synthesized by Dr. Parkin. Also S(35) was used in labeled S-adenosylmethionine. These compounds were used in the Kinetic ~~Isotope~~ Studies on AMP nucleosidase and S-adenosylmethionine synthetase.

Items 8-10 will remain the same as described in the original application.

11. Waste management-

All materials will be divided into the following categories containing C(14) and or H(3); samples containing S(35); and samples P(32). All P(32) and S(35) samples will be allowed to decay until levels are acceptable for either liquid or solid disposal. All liquid samples containing C(14) and or H(3) will be diluted to levels as described in 10 CFR Part 20 pp 20.301 -20.305 and disposed of via the sanitary sewer system. All solid waste or liquid which will not be disposed of in the sanitary system will be transferred to Teledyne Isotopes of Westwood, New Jersey. They are presently on contract for the inspection of the Pu-Be source.

Sincerely yours,



Sister Helen Burke, S.S.J., Ph.D.  
Chairwoman, Chemistry Dept.

SHB/sgm

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BETWEEN: C. James Holloway, Chief  
License Fee Management Branch  
Office of Resource Management

John E. Glenn, Chief  
Nuclear Materials Safety & Safeguards Section B  
Division of Radiation Safety and Safeguards

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee:

Application Dated:

Control No.:

License No.:

Chestnut Hill College  
7/16/87  
107554  
SNM-771 70-817

2. FEE ATTACHED

Amount:

Check No.:

3. COMMENTS

Signed

Date

Foster  
7/23/87  
**FEE EXEMPT**

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount:

2. Correct Fee Paid. Application may be processed for:

Amendment

Renewal

License

EX 1K 170.11(a)(4)

Signed

Date

S. Kimberley  
7/28/87