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April 26, 1985

United States Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

ATTENTION: Mr. Jack Davis  
Radiation Specialist  
Nuclear Materials Safety Section A  
Division of Radiation Safety and Safeguards

REFERENCE: Mail Control No. 03254

Dear Jack:

In response to your request for additional information on License Number 29-21102-01 (Amendment), attached are resumes for Diane L. Mauriello and Larry R. Feldberg describing their formal training and work experience with radiation. With respect to question two, we wish to drop the request for the use of  $P^{32}$  and  $S^{35}$  as sealed sources in the Microbiology Laboratory. They will not require these isotopes due to a change in project development.

I hope that the information is satisfactory to complete your review.

Sincerely,

*Robert F. Draeger*

Robert F. Draeger  
Industrial Hygienist

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Attachments

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Diane L. Mauriello

1980 - 1982 University of Medicine and Dentistry of NJ.

Radiation safety officer for laboratory.

H<sup>3</sup>, C<sup>14</sup>, S<sup>35</sup>, P<sup>32</sup>, I<sup>131</sup> Department of Microbiology

1980 - 1984 Overlook Hospital

Microbiological instrumentation

C<sup>14</sup>-metabolites

- Courses:
- (1) Physics of Radioactivity (1978-1982)
  - (2) Biological Effects of Radiation
  - (3) Radiation Instrumentation
  - (4) Radiation Safety Procedures  
(Given by George Govelitz; Radiation Safety Officer for UMDNJ and University Hospital).
  - (5) Mathematics of Radioactivity (Departmental course)

From 1978 to 1982 at the University of Medicine and Dentistry of NJ, she worked in Drs. Jansons and Feldman laboratories on a variety of programs concerning the use of isotopes in Liposomal entrapment and macrophage secretion. The work included the use of H<sup>3</sup>, C<sup>14</sup> and P<sup>32</sup> for labelling experiments and cellular localization of polymers and proteins. By the end of the 4 year project, enough experimentation was performed that isotopes amounted to millicurie amounts.

From 1980 to 1984 at Overlook Hospital, she was automating clinical enumeration of bacterial human isolates. The identification and enumeration of these isolates were based on their utilization of labelled C<sup>14</sup> substrates. Microcuries were used in the range of 10-40 per 50 ml bottle per bacterial strain. The amount of C<sup>14</sup> utilization in this 4 year program was well into the millicurie range.

Larry R. Feldberg

1982 - 1983 University of Medicine and Dentistry of NJ

Radiation officer for laboratory

Department of Microbiology

$H^3$ ,  $C^{14}$ ,  $S^{35}$ ,  $P^{32}$

Courses: (1) Physics of Radioactivity (1981-1982)  
(2) Biological Effects of Radiation  
(3) Radiation Instrumentation  
(4) Radiation Safety Procedures  
(Given by George Govelitz; Radiation Safety Officer for  
UMDNJ and University Hospital)

From October 1979 to January 1983, he worked at the University of Medicine and Dentistry of NJ with Dr. D. Kaback in the Department of Microbiology. There he used radioactive isotopes to perform various experiments.

The predominant isotopes used were  $H^3$ ,  $P^{32}$ ,  $C^{14}$ . These were used for in vivo labelling of nucleic acids and proteins to analyze rates of replication, translation, transcription and to produce uniformly labelled total R.N.A. In vitro labelling of D.N.A. by nick translation was used to produce radioactive probes for many northern and southern blot experiments. The range of the experiments covered 0.1-1 millicurie  $C^{14}$ ,  $H^3$  and 0.1-10 millicuries  $P^{32}$  total.

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