

August 11, 1988

U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Rd.  
Glen Ellyn IL 60137

Attn: Chief, Nuclear Materials Safety and  
Safeguards Branch

Dear Sir or Madam:

We wish to have our NRC license No. 34-03279-3 amended to read as follows:

- |  |                                  |   |
|--|----------------------------------|---|
| 6. Byproduct, source and/or special nuclear material                   | 7. Chemical and/or physical form | 8. Maximum amount of possession   |
| A. Any byproduct material with Atomic Nos. 3-83 except as noted below: | A. Any                           | A. Not to exceed 5 millicuries per radionuclide. Total possession limit not to exceed 250 millicuries except as listed below: |

- |                    |   |  |
|--------------------|---|--|
| B. Hydrogen - 3    | B. Any  | 1000 millicuries                           |
| C. Carbon - 14     | C. Any  | 1000 millicuries                           |
| D. Sulfur - 35     | D. Any  | 25 millicuries                             |
| E. Phosphorus - 32 | E. Any  | 25 millicuries                             |
| * F. Iodine - 125  | F. Any  | 25 millicuries                             |
| G. Nickel - 63     | G. Foil Source (Hewlett-Packard Detector Cell Model No. 18713A) | G. No single cell to exceed 15 millicuries |

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- |                 |   |                                    |
|-----------------|---|------------------------------------|
| H. Hydrogen - 3 | H. Foil Source (Bendix Detector Cell Model 100) | H. Now decayed to 49.9 millicuries |
|-----------------|---|------------------------------------|

- |                |  |  |
|----------------|--|--|
| I. Nickel - 63 | I. Foil Source (Tracor Detector Cell Model No. 115500) | I. No single cell to exceed 15 millicuries |
|----------------|--|--|

- |                 |   |   |
|-----------------|---|---|
| J. Hydrogen - 3 | J. Foil Source (F&M Scientific Detector or Cell Model 2-2837) | J. Now decayed down to 51.7 millicuries |
|-----------------|---|---|

- |                 |                            |   |
|-----------------|----------------------------|---|
| K. Cesium - 137 | K. Sealed Source (ICN m/n) | K. One source not to exceed 100 millicuries |
|-----------------|----------------------------|---|

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EXEMPT  
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L. Cobalt - 60

L. Sealed Source  
(Tracerlab,  
Serial No. 338)

L. Now decayed down  
to 0.3 millicuries

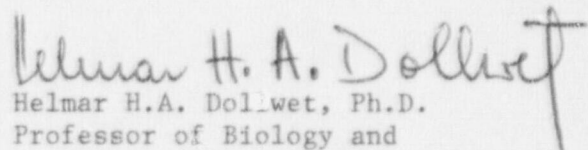
Please delete the name of Dr. Karen Cozad from the list of licensed users (Item II).

The following University of Akron personnel are requesting to be added to the list of licensed users (Item II).

Dr. James H. Holda  
Dr. Ronald L. Salisbury  
Mr. Nathan Cardarelli

I have included a summary of their training and experience.

Sincerely yours,

  
Helmar H.A. Dollwet, Ph.D.  
Professor of Biology and  
Radiation Safety Officer

HD:dlr

cc: Dr. C. Frank Griffin  
Dr. Frank Marini, Senior Vice-President & Provost

Enclosures

CONTROL NO. 86016

# TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4

8. Type of Training - On the job and formal classroom training.	Where Trained	Duration of Training	On the job (circle)	Formal Course (Circle)
a. Principles and practices of radiation protection.....	U. of Akron and (see below)	10 years	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
b. Radioactivity measurement standardization and monitoring techniques and instruments .....	U. of Akron and (see below)	10 years	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
c. Mathematics and calculations basic to the use and measurement of radioactivity...	U. of Akron	4 days	<input type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No
d. Biological effects of radiation.....	U. of Akron and (see below)	10 years	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No

## 9. Experience With Radiation (Actual use of radioisotopes or equivalent).

Isotope	Maximum Amount	Where Experience Was Gained	Duration of Experience	Type of Use
125 I	10 mCi	Medical College of Virginia	2 yrs	RIA
"	10 mCi	M.S. Hershey College of Medicine	3 yrs	"
"	5 mCi	NEOUCOM	5 yrs	"

RIA = radioimmunoassay

Frank:

I am applying to be put on the University of Akron Radiation License.

R. Salisbury



# Mr. Nate Cardarelli

## TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4

### 8. Type of Training

a. Principles and practices of radiation protection.....

Where Trained

Duration of Training

On the job (circle)

Formal Course (Circle)

b. Radioactivity measurement standardization and monitoring techniques and instruments .....

University of Akron

1 week

Yes No ☒ Yes No

c. Mathematics and calculations basic to the use and measurement of radioactivity...

University of Akron

1 week

Yes No ☒ Yes No

d. Biological effects of radiation.....

University of Akron

1. week

Yes No ☒ Yes No

### 9. Experience With Radiation (Actual use of radioisotopes or equivalent).

Isotope

Maximum Amount

Where Experience Was Gained

Duration of Experience

Type of Use

Co-60

1000+ Curies

B. F. Goodrich Co.

1 yr.

(1)

C-14

100 millicurie

University of Akron

1/2 yr.

(2)

Sn-113

2 millicurie

Unique Technologies, Inc.

1 yr.

(3)

- (1) Radiation crosslinking of rubber and plastics using cobalt 60 source.
- (2) Use of C-14 labelled organotin compounds in controlled release formulations. Preparation of formulation. Bioassay with rodents and snail. Analysis using scintillation.
- (3) Sn-113 introduced into mice. Time profile study of tin movement through tissue. Use of gamma counter to measure.

# TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM #

8. Type of Training	Where Trained	Duration of Training	On the job (circle)	Formal Courses (Circle)
a. Principles and practices of radiation protection.....	SEE BELOW	SEE BELOW	Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments .....			Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity...			Yes No	Yes No
d. Biological effects of radiation.....			Yes No	Yes No

9. Experience With Radiation (Actual use of radioisotopes or equivalent).				
Isotope	Maximum Amount	Where Experience Was Gained	Duration of Experience	Type of Use
<sup>3</sup> H	1mCi	Wayne State Univ., Detroit and University of Colorado, Denver.	10 yrs.	
<sup>51</sup> Cr	500μ Ci	Wayne State Univ., Detroit and University of Colorado, Denver.	5 yrs.	

Dr. Holda