

MAR 13 1985

Good Samaritan Hospital  
and Health Center  
ATTN: Joseph W. Ferguson  
Assistant Vice President  
2222 Philadelphia Drive  
Dayton, OH 45406

License No. 34-01311-01  
Control No. 78165

SUBJECT: LICENSE RENEWAL APPLICATION

Gentlemen:

This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

Any correspondence regarding the renewal application should reference the control number specified and your license number.

Sincerely,

Material Licensing Section  
Region III

8507300041 850709  
REG3 LIC30  
34-01311-01 PDR



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

JUL 19 1984

TO THE LICENSEE:

Enclosed is the NRC license or license amendment which you requested.

You are encouraged to carefully review your license or amendment upon receipt as special conditions may have been added to ensure that the changes requested meet NRC requirements.

Any future correspondence relating to your license should specifically reference your license number to expedite your inquiry.

Should you have any questions regarding your new license or amendment or require clarification, please contact the Materials Licensing Section at 312/790-5625 or 312/790-5743.

*1/5/84*  
*PJW*

Materials Licensing Section

Enclosure: As Stated

8408280482 840716  
NMS LIC30  
34-01311-01 PDR



**Good  
Samaritan**

Hospital and Health Center

June 19, 1984

Bruce S. Mallett, Ph.D., Chief  
Regional Licensing Section  
United States Nuclear Regulatory Commission  
Region III  
Glen Ellyn, IL 60137

Re: NRC License #34-01311-01; Control #76734

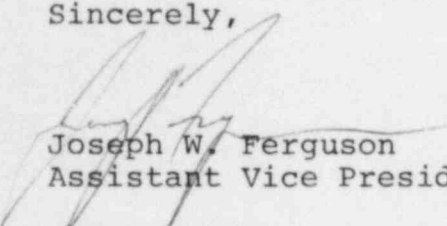
Dear Dr. Mallett:

In our letter of April 17, 1984, we informed you that we had changed certain procedures and equipment used during Xenon-133 studies. Enclosure (1) describes these new procedures and equipment more completely.

In addition, please amend our license to show the list in enclosure (2) as our current listing of survey instruments.

The forty dollar amendment fee is enclosed. Thank you for your assistance.

Sincerely,

  
Joseph W. Ferguson  
Assistant Vice President/Operations

JWF:JWI:klm

Enclosures

~~8408280484~~ 840716  
NMS LIC30  
34-01311-01 PDR

RECEIVED  
JUN 27 1984  
REGION III

JUN 27 1984

### Xenon-133 Use

Certain procedures described in Attachment M of our NRC license have been replaced by equivalent procedures. The changes are described below:

1) The Primalert 50 monitor has been replaced by a Nuclear Associates Xenalert Monitor, Model #36-751, Serial #10341. This new unit is used to monitor concentrations of Xe-133 in air during Xenon studies, and to check the efficiency of the Xenon trap.

2) The routine monitoring and emergency procedures as shown on the next page will be posted and adhered to.

3) The efficiency of the Xenon trap will be monitored on a quarterly basis following the procedure described in the attached XENON TRAP EFFICIENCY form.

All other policies and procedures concerning Xe-133 studies remain as described in Attachment M.

Encl. (1)

## XENON MONITORING and EMERGENCY PROCEDURE

1. During xenon study, set Xenalert scale to X100 and turn audible alarm on.
2. If audible alarm sounds, switch Xenalert to X1000 scale and monitor concentration. Initiate Emergency Procedure if any of the following occurs:
  - a. the concentration reaches 1000 and the audible alarm sounds
  - b. the concentration stays above 500 for five minutes or more
  - c. the concentration stays above 100 for 15 minutes or more
3. EMERGENCY PROCEDURE:
  - a. Set Xenalert scale to X100 and ensure that audible alarm is turned on.
  - b. Evacuate room and close door.
  - c. Wait until audible alarm shuts off before reentering room.
  - d. If the Xenon concentration stays above 10 for more than 20 minutes, notify the Radiation Safety Officer, or his designee.

Nuclear Medicine Section  
XENON TRAP EFFICIENCY

Good Samaritan Hospital  
and Health Center, Dayton, Ohio

1. Read and record activity of the dose to be used:

$$\begin{aligned} \text{Input Activity, } A_i &= (\text{Activity in vial before injection}) - \\ &\quad (\text{Activity in vial after injection}) \\ &= ( \quad ) - ( \quad ) = \quad \text{mCi} \end{aligned}$$

2. Fill Xenon delivery system with above dose. Connect output hose from delivery system to intake on trap. Connect output hose from trap to intake on XenAlert. Begin washout procedure and record MPC readings at one minute intervals for five minutes.

time	0	1	2	3	4	5
MPC						

3. Record average of MPC readings;  $\text{MPC}_{\text{avg}} = \quad$
4. Calculate activity lost from trap using the following formula\*:

$$\begin{aligned} A_{\text{lost}} &= \text{MPC} \times 10^{-8} \text{ mCi/ml} \times 5000 \text{ ml/min} \times 5 \text{ min} \\ A_{\text{lost}} &= ( \quad ) \times 10^{-8} \times 5000 \times 5 = \quad \text{mCi} \end{aligned}$$

5. Calculate Xenon Trap Efficiency (E)

$$E = \frac{A_i - A_{\text{lost}}}{A_i} \times 100 = \frac{( \quad ) - ( \quad )}{( \quad )} \times 100$$

$$E = \boxed{\quad \%} \quad (\text{Acceptable efficiency} - 80\%)$$

☐ Acceptable

☐ Unacceptable

James W. Israel  
Medical Physicist

date

\* In the equation for lost activity, MPC is the fraction (or multiple) of the Maximum Permissible Concentration measured in the chamber of the XenAlert, averaged over the time of the test;  $10^{-8}$  mCi/ml is the value of Maximum Permissible Concentration; 5000 ml/min is the flow velocity of the "Nonex" Xenon Gas Trap, and 5 min is the washout time.

SURVEY INSTRUMENTS  
Good Samaritan Hospital  
and Health Center

# of instruments	manufacturer	model #	minimum range	maximum range
2	Victoreen	490	0 - 0.2 mR/hr	0 - 20 mR/hr
1	Victoreen	470A	0 - 3 mR/hr (or mR)	0 - 1000 R/hr (or mR)
1	Victoreen	740F	0 - 25 mR/hr	0 - 25,000 mR/hr
1	Eberline	E120G	0 - 10 mR/hr	0 - 1000 mR/hr
1	Eberline	E140	0 - 500 cpm	0 - 50,000 cpm
1	Nuclear Chicago	2612	0 - 0.2 mR/hr	0 - 20 mR/hr
1	Nuclear Associates (Xenalert)	36-751	0 - 1 MPC	0 - 1000 MPC

Pocket Dosimeters

1	Dosimeter Corporation of America	862	0 - 200 mR
5	Victoreen	541L	0 - 200 mR





**Good  
Samaritan**

Hospital and Health Center

April 17, 1984

030-02674

Bruce S. Mallett, Ph.D., Chief  
Regional Licensing Section  
United States Nuclear Regulatory Commission  
Region III  
Glen Ellyn, NY 60137

Re: NRC License #34-01311-01

Dear Dr. Mallett:

For your information, the Primalert 50 monitor which was described in Attachment M of our license has been lost or stolen. All Xenon-133 studies are now monitored with a newly acquired Xenalert - Xenon Room Air and Trap Monitor, Model #36-751, Serial #10341, distributed by Nuclear Associates. This unit is also used to monitor Xenon trap efficiency.

Please contact me at (513) 278-2612, ext. 2028, if you have any questions concerning this new equipment.

Sincerely,

James W. Israel  
Radiation Safety Officer

JWI:klm

RECEIVED BY LFMB

Date 5/18/84

Log May 13

By [Signature]

Orig. To [Signature]

Action Compl. [Signature]

Applicant

Check No. 142584

Amount Fee \$40.00

Amount [Signature]

Received By [Signature]

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APR 20 1984