

FGH

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and Associates, Inc.
1141 Hohstelder Road
Glencoe, Illinois 60022
312 835-4433

Certified
Radiation
Physicists

Western Regional Office
2483 Whippoorwill
Las Vegas, NE 89121
702 731-6446

Applicant: *Mar 4-III*
Check No. *1450709*
Amount: *\$2.30*
Type of Fee: *2 A annual*
Date Check: *3/3/85*
Received By: *B*

Theodore Fields M.S. FACR, CHP
Charles R. Griffith M.S. FACR
Lincoln B. Hubbard Ph.D. MACR, CHP
Michael V. Broadbent Ph.D. MACR
Francis E. Gannon M.S.

March 25, 1985

Bruce Mallott, PhD
License Management Branch
Division of Fuel Cycle and Material Safety
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: License Ammendment to NRC License 12-06289-02

Dear Dr. Mallott:

It is requested that an ammendment be issued to Elmhurst Memorial Hospital teletherapy license number 12-06289-02 to allow for the reduction in the lead content in the door entering the treatment room. The door currently has 1 cm of lead in the door and the excessive weight continually causes the door frame and hinges to give way. The door is currently in need of repair. It is therefore requested that this ammendment be granted as soon as possible so that a lighter door can be installed as soon as possible.

From measurements conducted of the radiation levels at the door with the door open it can be seen that lead in the door is required and we will still maintain radiation levels at or below the permissible limits. Following is a list of the readings taken at the open door with a 25 by 25 cm beam with the beam stop in the beam.

POSITION	READING (mR/Hr)	POSITION	READING (mR/Hr)
0	4.6	180	3.8
15	4.1	195	3.5
30	4.8	210	3.8
45	4.8	225	3.4
60	5.2	240	4.2
75	4.8	255	3.8
90	5.0	270	3.2
105	5.6	285	2.9
120	4.4	300	2.9
135	4.8	315	2.9
150	4.3	330	3.5
165	3.8	345	4.0

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The beam directed down is 0 degree; 90 degrees is with the beam pointed toward the south wall; 180 degrees is with the beam pointed toward the ceiling; and 270 degrees is with the beam directed toward the south wall.

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REG3 LIC30
12-06289-02 PDR

APR 29 1985

CONTROL NO. 78814

ML-30

With the beam stop removed and the beam directed toward the south wall (90°) the maximum reading was 18.4 mR/Hr for a 35 X 35 cm field.

It is estimated that about 35 patients are treated a day with an average dose of 180 rads each. The output of the machine is about 95 rads/min. The approximate on time of the machine is 70 minutes a day for an 8 hour day. If it is assumed that the beam is on for 10 minutes out of an hour then the mR/hr reading would be less than 1 mR/hr. From this value it can be seen that it would not be necessary to have any lead in the door.

With the new source, which is to be installed within the month, the output would increase to about 140 rads per minute. With this intensity it is not anticipated that more than 35 patients will be treated a day which would give a beam on time of about 50 minutes.

The new door will have 1/8 inch of lead in it which will provide about a half value thickness for the scattered radiation. A drawing of the room is included for your information.

A check for the cost of the ammendment is included with this request. If there are further questions please contact me. Thank you for your time and effort in out behalf.

Respectfully submitted,

M. V. Broadbent

M. V. Broadbent, PhD, MACR

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85 JUL -1 19:13

U.S. N.R.C.
LIC. FEE MGMT. BRANCH

CONTROL NO. 78814

South

X Iso CENTER

Control (East)

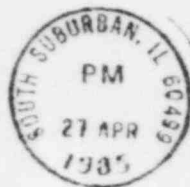
$\frac{1}{4} = 1.000$

M. V. Broadbent, PhD, MACR

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FIELDS
GRIFFITH
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& Assoc., Inc.

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1141 Hohlfelder Road
Glenview, Illinois 60022



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799 Roosevelt Road
Glen Ellyn, IL 60137

CONTROL NO. 78814



Form No. 70014

*W.D. 10/10/81
#78245
Shirley
8-58
10/10/81*

CMD: -----

LMS APPLICATION FORM

850501

DOCKET NO: 00000170 LICENSE NO: 12-06289-02 FEDERAL GOV'T: N

INSTITUTION CODE: 06289 LICENSE REGION: 3 STATUS: 0

NAME: ELMHURST MEMORIAL HOSPITAL
DEPT/BUREAU: -----
BUILDING: -----
STREET: 200 BERTHEAU AVENUE
CITY: ELMHURST STATE: IL ZIP: 60126
ATTN: M.V. BROAGENT, PH.D. MACK

MAIL CONTROL NO: 378814 RECEIPT DATE: 850429 ACTION TYPE: 4

(YYMMDD)

PRIORITY PROCESSING FLAG: N

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Certificate Of Completion

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This is to certify that FERNANDO CORCHADO has completed the basic training
course on *Radiation Safety and Use of Nuclear Soil Gauges*, held
this 25th day of OCTOBER 19 79, held at BRAINARD-KILMAN City of TUCKER
State of GEORGIA by Campbell Pacific Nuclear Corporation.

Jean Richardson
INSTRUCTOR

Jean Richardson
RADIATION SAFETY OFFICER