Applicant ... May 10th
Check No. 09129 $150
Amount ... Category ...
Type of Fee ... Kama
Date Check Rec'd 5/14/85
Received By ...

Des Moines General Osteopathic Hospital
603 EAST TWELFTH STREET
DES MOINES, IOWA 50307
(515) 263-4200

April 26, 1985

William P. Reichhold
Materials Licensing Section
United States Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

RE: NRC License No. 14-18626-02

Dear Sir:

In response to your cover letter dated February 26, 1985 we propose the following:

Item I: The air supply and exhaust rates have been changed to meet your regulations (see enclosure #1). Des Moines General Hospital will check flow rates every six months using standard protocol and will record to assure a 10% differential for negative pressure.

Item II: In case of an accidental release of Xenon-133 the following will be done: Evacuating the area immediately and closing all open doors and windows. The exhaust from the new nuclear medicine department is isolated from the rest of the hospital, therefore the air handling system may be allowed to function normally. After an appropriate period of time, e.g. and hour, a survey meter should be used to monitor the radiation levels in the department. If the radiation levels have dropped to background, the area may again be occupied. If not, re-entry should be delayed until monitoring indicates the radiation levels are at background.

Item III: Procedure for Monitoring Xe-133 Gas Trap Saturation

1. Remove the collimator from a gamma camera.
2. Using a 5 percent window, calibrate for Xe-133.
3. Fill a large plastic bag with a known volume of clean air (typically, 50 liters).
4. Inject a known quantity of Xe-133 A_R (e.g. 100 uCi), into the bag.
5. Place the bag in front of the gamma camera crystal and count for a known period of time. The reading, C_R (in cpm), is a measure of the counting efficiency.
6. Collect the exhaust of a typical patient study in another bag of the same volume (50 liters) and count in the same position as in step #5. Record the readings, C_E (in cpm), for use in step #7.
7. The ratio of the readings, multiplied by the known activity, yields the activity in the patient exhaust bag, or $A_E = A_R(C_E/C_R)$

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REGION III

Item III: (continued)

8. The ratio of the activity in the exhaust, to the activity administered to the patient, multiplied by 100, is the collection efficiency, or Eff. = A_E/Ap
9. Record the date and results of this study. If the measured collection efficiency is 90%, or less, the activated charcoal cartridge in the Xe-133 gas trap should be replaced.
10. The frequency will be every one month. This is because the volume of studies is approximately three to four per month at present.

Item IV: Paul Kupperstein, D.O. and I.G. Groff, D.O. names should be removed from the license.

Samuel Tokuyama, D.O. should be added.

David J. Foy, D.O. and Robin Stoecker, D.O. should be added. It is my understanding that since both these individuals are Board Eligible and/or Board Certified and have had residency programs approved by the American Osteopathic College of Radiology they are automatically approved for licensure by the NRC.

Item V: In view of our use of a local nuclear pharmacy we ask the following change on "Procedures for Opening Packages Containing Radioactive Material":

1. Visually inspect package for any sign of damage (e.g., wetness, crushed). If damage is noted stop procedure and notify Radiation Safety Officer.
2. Measure exposure rate at surface and at 3 feet from package surface for those packages required by paragraphs 20.205 (a) (b) and (c) of 10 CFR Part 20, and these packages which appear damaged. If levels exceed 10 mR/hour at 3 feet or 200 mR/hour at surface, stop procedure and notify R.S.O.
3. Perform a wipe test on external package surface and find source for packages required by paragraphs 20.205 (a) (b) and (c) of 10 CFR Part 20 and those packages which appear to be damaged. If contamination is greater than 0.01 microCuries/100 cm^2 notify R.S.O.
4. Put on gloves.
5. Open the outer package (following manufacturer's directions, if supplied) and remove packing slip. Open inner package to verify contents (compare requisition, packing slips, and label on bottle), check integrity of final source container (inspect for breakage of seals or vials, loss of liquid, discoloration of packing material). Check also that shipment does not exceed possession limits.
6. Wipe external surface of final source container with moistened cotton swab or filter paper held with forceps, assay and record.
7. Monitor the packing material and packages for contamination before discarding:
   a. if contaminated, treat as radioactive waste.
   b. if not, obliterate radiation labels before discarding in regular trash.

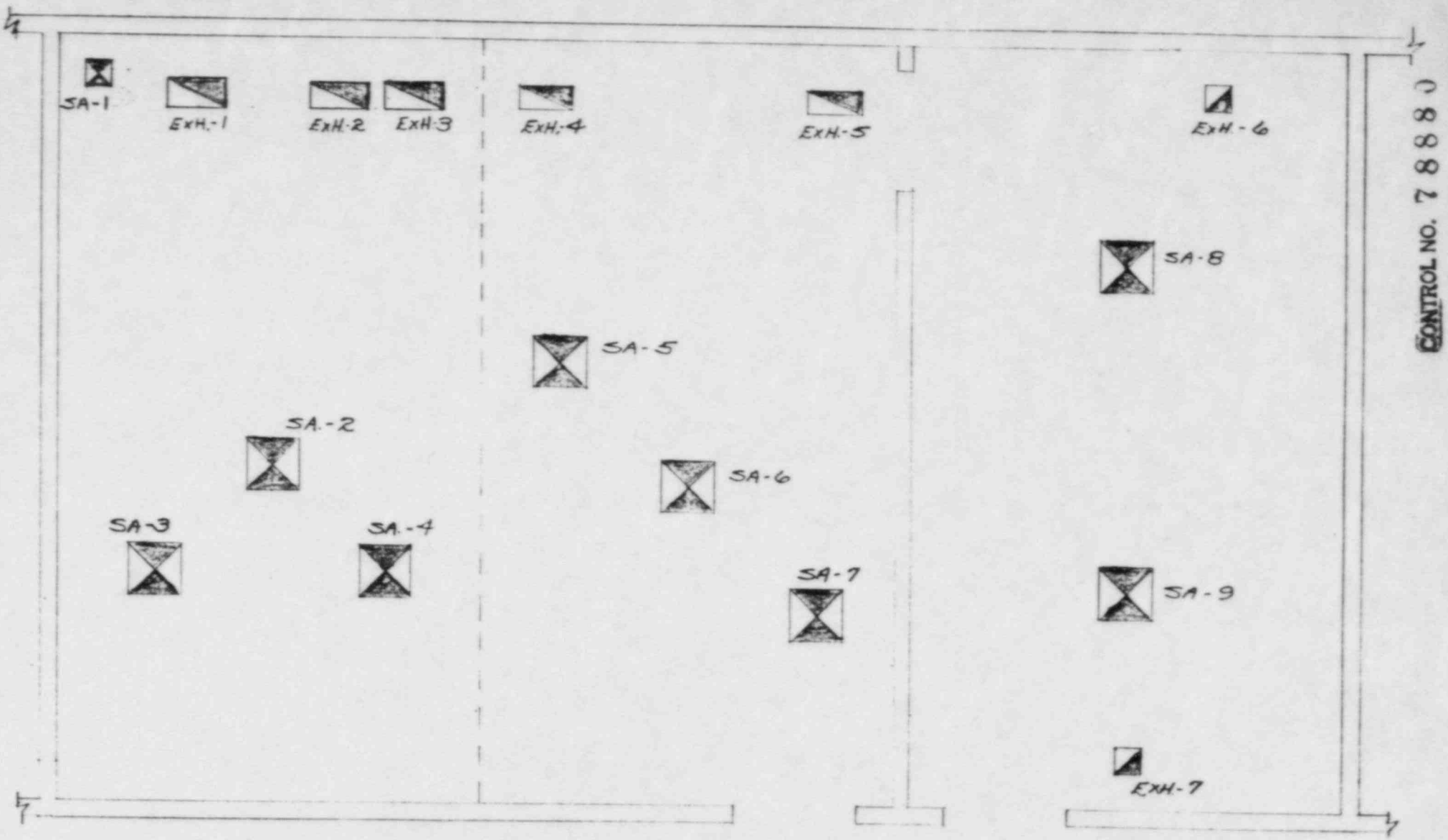
Sincerely,

John C. Agnew, Jr. D.O.

JCA/mm

enclosures

Item #1



CONTROL NO. 7888J

BACKMAN SHEET METAL WORKS
D.M. GENERAL HOSPITAL
NUCLEAR MEDICAL AREA
4-12-85 NO SCALE

VENTILATION TEST REPORT - (CONT'D)

JOB NAME D.M. GENERAL HOSPITAL DATE 4-15-85

SYSTEM NUCLEAR MEDICAL AREA.

AREA SERVED	OPENING NO.	OPENING SIZE	K FACTOR	REQUIRED VEL	REQUIRED CFM	PRELIMINARY VEL	PRELIMINARY CFM	PRELIMINARY VEL	PRELIMINARY CFM	FINAL VEL	FINAL CFM
SUPPLY AIR	1										210
	2										165
	3										245
	4				1205 CFM						100
	5										155
	6										230
	7										100
	8										65
	9										75
								TOTAL		1345	
EXHAUST AREA	1										135
	2										100
	3										185
	4				1390 CFM						155
	5										815
	6										40
	7										135
								TOTAL		1565	

FORM NRC-313M-SUPPLEMENT B
(7-77)
10 CFR 30

U. S. NUCLEAR REGULATORY COMMISSION

PRECEPTOR STATEMENT

Supplement B must be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each.

1. APPLICANT PHYSICIAN'S NAME AND ADDRESS

FULL NAME
Robin A. Stoecker, D.O.

STREET ADDRESS
603 East 12th Street

CITY	STATE	ZIP CODE
Des Moines	Iowa	50307

KEY TO COLUMN C

PERSONAL PARTICIPATION SHOULD CONSIST OF:

1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosage.

2-Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related measurements and plotting of data.

3-Adequate period of training to enable physician to manage radioactive patients and follow patients through diagnosis and/or course of treatment.

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS *(Additional information or comments may be submitted in duplicate on separate sheets.)* D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	28	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	2	
	LIVER FUNCTION STUDIES	–	
	FAT ABSORPTION STUDIES	–	
	KIDNEY FUNCTION STUDIES	30	
	IN VITRO STUDIES	–	
OTHER			
I-125	DETECTION OF THROMBOSIS	1	
I-131	THYROID IMAGING	25	
P-32	EYE TUMOR LOCALIZATION	–	
Se-75	PANCREAS IMAGING	–	
Yb-169	CISTERNOGRAPHY	6	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	32	
OTHER			
Tc-99m	BRAIN IMAGING	12	
	CARDIAC IMAGING	126	
	THYROID IMAGING	43	
	SALIVARY GLAND IMAGING	1	
	BLOOD POOL IMAGING	7	
	PLACENTA LOCALIZATION	–	
	LIVER AND SPLEEN IMAGING	60	
	LUNG IMAGING	41	
	BONE IMAGING	49	
OTHER			

CONTROL NO. 78880

PRECEPTOR STATEMENT *(Continued)*

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN *(Continued)*

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS *(Additional information or comments may be submitted in duplicate on separate sheets.)* D
P-32 *(Soluble)*	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 *(Colloidal)*	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM AND CARDIAC CONDITION		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT		
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR	1	
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS	5	
Other			

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING

Beginning January 1, 1982 and ending December 31, 1984
1,200 hours of clinical preceptorship and basic radioisotope handling techniques.

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:

a. NAME OF SUPERVISOR
John C. Agnew, D.O.

b. NAME OF INSTITUTION
Des Moines General Hospital

c. MAILING ADDRESS
603 East 12th Street

d. CITY
Des Moines

5. MATERIALS LICENSE NUMBER(S)
14-18626-02

6. PRECEPTOR'S SIGNATURE
Robin A Stoecker D.O.

7. PRECEPTOR'S NAME *(Please type or print)*
Robin A. Stoecker, D.O.

8. DATE
4/30/85

FORM NRC-313M-SUPPLEMENT B
(7-77)

CONTROL NO. 78880

FORM NRC-313M-SUPPLEMENT B
(7-77)
10 CFR 30

U. S. NUCLEAR REGULATORY COMMISSION

PRECEPTOR STATEMENT

Supplement B must be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each.

1. APPLICANT PHYSICIAN'S NAME AND ADDRESS

FULL NAME: SAMUEL TORIYAMA

STREET ADDRESS: DMGH HOSPITAL
603 E. 12TH

CITY: DES MOINES | STATE: IA | ZIP CODE: 50307

KEY TO COLUMN C

PERSONAL PARTICIPATION SHOULD CONSIST OF:

1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosage.

2-Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related measurements and plotting of data.

3-Adequate period of training to enable physician to manage radioactive patients and follow patients through diagnosis and/or course of treatment.

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	48	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	10	
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES	38	
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS	17.0	
I-131	THYROID IMAGING	48.0	
P-32	EYE TUMOR LOCALIZATION	3	
Se-75	PANCREAS IMAGING	1	
Yb-169	CISTERNOGRAPHY	2.0	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	17.0	
OTHER			
Tc-99m	BRAIN IMAGING	31	CT SCANS DECREASED BRAIN SCANS.
	CARDIAC IMAGING	38	
	THYROID IMAGING	48	
	SALIVARY GLAND IMAGING	1	
	BLOOD POOL IMAGING	1	
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING	62	
	LUNG IMAGING	17	
	BONE IMAGING	71	
OTHER			

PRECEPTOR STATEMENT *(Continued)*

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN *(Continued)*

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS *(Additional information or comments may be submitted in duplicate on separate sheets.)* D
P-32 *(Soluble)*	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	6	
P-32 *(Colloidal)*	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM AND CARDIAC CONDITION		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT		
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	1	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR	15	
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS	10	
Other			

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING

APRIL '77 – DEC '77

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:

a. NAME OF SUPERVISOR
THOMAS JU M.D + J. GOLDFARB, M.D

b. NAME OF INSTITUTION
U.S. PUBLIC HEALTH HOSPITAL & BETH ISRAEL HOSPITAL

c. MAILING ADDRESS
139 CLIFTON ST MANHATTAN

d. CITY
STATEN ISLAND, N.Y. N.Y

5. MATERIALS LICENSE NUMBER(S)
14-1862-02

6. PRECEPTOR'S SIGNATURE

7. PRECEPTOR'S NAME *(Please type or print)*
SAM TOKUYAMA

8. DATE

FORM NRC-313M-SUPPLEMENT B
(7-77)

CONTROL NO. 78880