	U.S. NUCLEAR REGULATORY COMMISSIO				
10 CFR 30, 32, 39, 34	APPROVED BY ON 3180-0120				
AFFLICATION FOR	MATERIAL LICENSE 630-80				
INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR D DF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BE	ETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES				
APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH	IF YOU ARE LOCATED IN				
U.S. NUCLEAR REGULATORY COMMISSION DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS WASHINGTON, DC 20060	ILLINDIS, INDIANA, 10WA MICHIGAN, MINNESOTA, MISSOURI, ONIO, DR WISCONSIN, SEND APPLICATIONS TO				
ALL OTHER PEABONS FILE APPLICATIONS AS POLLOWS, IF YOU ARE DCATED IN	U.S. NUCLEAR REGULATORY COMMISSION, REGION III MATERIALE LICENSING SECTION 790 RODEEVELT ROAD				
CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, KASSACHUSETTS, NEW MAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, HODE ISLAND, DR VERMONT, BEND APPLICATIONS TC:	GLEN ELLYN, IL 80137 ARKANBAS, COLORADO, IDANO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, BOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, BEND APFLICATIONS TO: US NUCLEAR REGULATORY COMMISSION, REGION IV MATERIAL RADIATION PROTECTION SECTION 611 RYAN PLAZA DRIVE, SUITE 1000 ARLINGTON, TX 78011 ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND US. TERRITORIES AND POSSEBBIONS IN THE PACIFIC, SEND APPLICATIONS TO:				
U.S. NUCLEAR REGULATORY COMMISSION, REGION I NUCLEAR MATERIALS SAFETY SECTION B SOL PARK AVENUE RINC OF BULESLE RASPACE					
ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR					
US NUCLEAR REGULATORY COMMISSION BEGINN					
NUCEAR MATERIALS SAFETY SECTION 101 MARIETTA STREET, SUITE 2000 ATLANTA, GA 30222	U.S. NUCLEAR REGULATORY COMMISSION, REGION V NUCLEAR MATERIALS SAFETY SECTION 1460 MARIA LANE, SUITE 210 WALNUT CREEK, CA BAGDG				
	1				
A STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.	REUTERTORT COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERI				
THIS IS AN APPLICATION FOR (Check appropriate (Mem)	2. NAME AND MAILING ADDRESS OF APPLICANT (Include 20 Code)				
B AMENDMENT TO LICENSE NUMBER 34-12100-03	St. Rita's Medical Center				
C. RENEWAL OF LICENSE NUMBER	730 West Market St.				
I. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION	TELEPHONE NUMBER				
David Close, Consultant, NMA	(216)641-5799				
UBMIT ITEMS & THROUGH 11 ON BH x 11" PAPER. THE TYPE AND SCOPE OF INFORMATIO	IN TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE				
 MADIDACTIVE MATERIAL a Element and mass number; b: chemical and/or physical form, and c: meximum amount which will be possessed at any one time. 					
	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT.	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT.	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM 12 LICENSEE FEES ISM 10 CFR 170 and Section 170 311 				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT.	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM 12 LICENSEE FEES ISM 10 CFR 170 and Section 170 311 FEE CATEGORY 7C AND Section 120 311 FRECOMED \$ 120.00				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT.	PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS TO RADIATION BAFETY PROGRAM 12 LICENSEE FEES IS IN 10 CFR 17C and Section (70.31) FEE CATEGORY 7C FANDUNT FEE CATEGORY 7C FAL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE F THE APPLICANT. NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION ARE F THE APPLICANT. NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION ARE F THE APPLICANT. NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION ARE INMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION INMINICS JOINEDDICTION				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. 1. WASTE MANAGEMENT. 3. CERTIFICATION. (Musi be completed by applicant). THE APPLICANT UNDERSTANDS THAT BINDIG UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF O PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART IS TRUE AND CORFECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF WARNING. 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 245 MAKES IT A DE TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITH IGNATURECERTIFYING OFFICER.	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM 12 LICENSEE FEES (See 10 CFR 170 and Section 170 31) FEE CATEGORY 7C FALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE F THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS S30, 32, 33, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, NIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TITLE DATE				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. 1. WASTE MANAGEMENT. 3. CERTIFICATION. <i>IMUSI De completed by applicanti</i> THE APPLICANT UNDERSTANDS THAT BINDING UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF O PREPARED IN CONFORMITY WITH TITLE 10. CODE OF FEDERAL REGULATIONS. PART IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDDE AND BELIEF WARNING 18 U.S.C. SECTION 1001 ACT OF JUNE 25. 1948. 62 STAT 746 MAKES IT A D TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITH IGNATURE -CERTIFYING OFFICER	PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS B TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTIATION ARE FTE APPLICANT. NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION ARE FTHE APPLICANT. NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS SOC 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, INMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION INTIGUISDICTION TILE				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. 1. WASTE MANAGEMENT 3. CERTIFICATION. (Musi be completed by applicant) THE APPLICANT UNDERSTANDS THAN BINDING UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF PREPARED IN CONSORMITY WITH TILE 10. CODE OF FEDERAL REGULATIONS. PART IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF WARNING 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 746 MAKES IT A CO TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES ASTO ANY MATTER WITH TO ANY DEPARTMENT	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM 12 LICENSEE FEES (See 10 CFR 170 and Section 170 31) FEE CATEGORY 7C ENCLOSED \$ 120.00 TALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE FTME APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS \$30.32,33,35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, NIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION ITTLE DATE VICE President, Professional Services 7/15/88				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. 1. WASTE MANAGEMENT. 3. CERTIFICATION (MULTION COMPLEMENT DY ADDIANT!) THE APPLICANT UNDERSTANDS THAN BINDING UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALFO PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF WARNING IS U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 745 MAKES IT A CM TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITH IGNATURE -CERTIFYING OFFICER X JALA J. MALY SATA L. POLING 8905090452 88081 REG3 L IC30 34-12100-03 F	PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS TO RADIATION BAFETY PROGRAM TO CFR 170 and Section 170311 FEE CATEGORY 7C				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. 1. WASTE MANAGEMENT 3. CERTIFICATION (MUST BE COMPLEME BY REDUCENT) THE APPLICANT UNDERSTANDS THE BINDING UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALFO PREFARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS. PART IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF WARNING IS U.S.C. SECTION 1001 ACT OF JUNE 25. 1948, 62 STAT 745 MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OR AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF AGENCY OF THE UNFILE STATES AS TO ANY MATTER WITH TO ANY DEPARTMENT OF A BENER SATA L. POLING SATA L. POLING SATA L. POLING SATA L. POLING STATES AGENCY OF AGENCY OF A SATES FOR NRC	PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS ADJATION SAFETY PROGRAM LICENSEE FEES IS 10 CFR 170 and Section 170 311 FEE CATEGORY 7C TALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS S30. 32, 33 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, NUMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TITLE VICE President, Professional Services 7/15/88 USE ONLY				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. MASTE MANAGEMENT. SCHTIFICATION (MUSI De completed by applicant) THE APPLICANT UNDERSTANDS THA BINDING UPON THE APPLICANT THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF O PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS. PART IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF WARNING. 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 745 MAKES IT A D TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITH IGNATURE-CERTIFYING OFFICER X Jual A. July Science (State) Sara L. Poling S705080452 B8081 REG3 L I C 30 34-12100-03 FOR NRC YPE OFFICE FEELOO FEELOO FEECATEGORY COMMENTS	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION SAFETY PROGRAM 12 LICENSEE FEES (Sw 10 CFR 170 and Section 17031) FEE CATEGORY 7C IMMOUNT FEE CATEGORY 7C IMOUNT FEE CATEGORY 7C IMOUNT FEE CATEGORY 7C				
INDIVIDUALISI RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE FACILITIES AND EQUIPMENT. CHECK NUMBER CONTROL OF FOLLOWS FACILITIES AND EQUIPMENT. CONTROL NO. 857	6 PURPOSEISI FOR WHICH LICENSED MATERIAL WILL BE USED 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS 10 RADIATION BAFETY PROGRAM 12 LICENSEE FEES ISM 10 CFR 17C and Section 170 311 FEE CATEGORY 7C AMOUNT FEE CATEGORY 7C AMOUNT FEE CATEGORY 7C FIC INCOME SECTION 180 S 120.00 TALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE F THE APPLICANT. NAMED IN ITEM 2. CERTIFY THAT THIS APPLICATION ARE F THE APPLICANT. NAMED IN ITEM 2. CERTIFY THAT THIS APPLICATION IS 8 30 32.33 34.35 AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN. NUMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION 17 TALE DATE VICE President, Professional Services 7/15/88 12 PNU USE ONLY 9 5				

1

ADDENDUM

The purpose of this application is to amend our license as per the following:

- Please name George M. Parker, M.D. as Radiation Safety Officer.
- 2) Please add S. Cyprian Schea, M.D. as an authorized user for 35.400 material. Dr. Schea is board certified by the ABR in Therapeutic Radiology (December, 1974) and has been most recently named on the NRC license for Radiation Center, Madison, Wisconsin. (No. 48-13912-01).
- 3) The Cs-137 storage area is being moved from the old Co-60 teletherapy room to a more functional area on the eighth floor. A room diagram for the new storage room enclosed. A close-out survey of the old storage area will be performed once the sources have been moved. This survey will be kept on file.
- 4) The Nuclear Medicine Department is being expanded. A floor plan is enclosed. The department is not being moved, just expanded as can be seen from the one diagram.
- 5) Included in the expansion of Nuclear Medicine is the installation of a ventilation system that will permit the use of Xenon-133. Please amend our license to include this authorization. Procedures and precautions for the use of Xenon-133, as well as aerosols, are enclosed.

CONTROL NO. 85795

RADIATION SAFET. PROCEDURES FOR RADIOACTIVE LASES AND AEROSOLS

10.13.1 Worker dose from Noble Gases, 0.1: We will collect spent noble gas in a shielded container and will check the trap effluent according to the procedure that is described below. We will follow the model procedure for calculating worker dose drom noble gases that was published in Appendix 0.1 to Regulatory Guide 10.8, Revision 2.

Procedure For Checking Trap Effluent:

After every 20 procedures, the trapping efficiency of the charcoal trap will be evaluated. A low level G-M probe will be placed against the inlet tube of the trap during the equilibrium phase of the study and a reading taken. The probe will then be placed against the outlet from the trap at the initiation of the washout phase. If the maximum exhaust reading exceeds 10% of the inlet reading, taking background into consideration, the trap will be considered saturated and the cartridge will be replaced. As an alternative, we will follow the procedure published in Appendix 0.3 to Regulatory Guide 10.8, Revision 2.

- 10.13.2 Worker dose from aerosols: We will collect spent aerosol in a shielded trap, and for reusable traps, monitor the traps effluent with an air contamination monitor that we will check regularly according to the manufacturer's instructions.
- 10.13.3 Airborn effluents: We will not directly vent spent aerosols and gases to the atmosphere and therefore no effluent estimation is necessary.
- 10.13.4 Clearance Time, Appendix 0.4: We will calculate spilled gas clearance times according to the procedure that was published in Appendix 0.4 to Regulatory Guide 10.8, Revision 2.

Prepared: 6/20,'88 License #: 34-12100-03

APPENDIX O

Model Procedure for Monitoring, Calculating, and Controlling Air Concentrations (See §§ 20.103, 20.106, 20.201, 35.90, and 35.205.)

0.1 MODEL PROCEDURE FOR CALCULATING WORKER DOSE FROM CONCENTRATIONS OF GASES AND AEROSOLS IN WORK AREAS

Collect the following data:

.

- a. Estimated number of studies per week;
- b. Activity to be administered per study:
- Estimated activity lost to the work areas per study (you may assume 20 percent loss);
- Measured airflow supplied by each vent in the imaging room (if different during heating and cooling seasons, use the lesser value);
- Measured airflow exhausted by each vent in the imaging room (the exhaust should be vented and not recirculated within the facility);
- f. Measured airflow exhaust at the storage site (e.g., a fume hood); and
- g. Maximum permissible air concentrations in restricted and unrestricted areas. For Xe-133, the maximum permissible values are 1 x $10^{-5} \mu Ci/ml$ in restricted areas and 3 x $10^{-7} \mu Ci/ml$ in unrestricted areas. For soluble Tc-9Sm, the maximum permissible values are 4 x $10^{-5} \mu Ci/ml$ in restricted areas and 1 x $10^{-6} \mu Ci/ml$ in unrestricted areas. For other gases or aerosols, see Appendix B to 10 CFR Part 20.
- 2. The following calculations must be made:
 - a. The sum of all measured exhaust rates and the sum of all measured supply rates. If the former is larger than the latter, this ensures that the imaging room is at negative pressure.
 - b. The estimated average concentration in restricted areas.
 - (1) The total activity released to the restricted area (activity used each week multiplied by estimated fractional loss per study) divided by the total air exhausted (sum of all exhaust rates multiplied by the length of the work week) must be less than the applicable maximum permissible value for a restricted area.
 - (2) If this is not the case, plan for fewer studies. (An increase in the ventilation rate will not significantly reduce the downwind effluent concentration because it is primarily a function of the natural dispersion in the atmosphere.)

APPENDIX O

Model Procedure for Monitoring, Calculating, and Controlling Air Concentrations (See §§ 20.103, 20.106, 20.201, 35.90, and 35.205.)

0.3 MODEL PROCEDURE FOR MONITORING OR CHECKING TRAP EFFLUENT

Charcoal traps can significantly reduce air contamination. They can also become saturated or be spoiled by improper use, humidity, chemicals, or inadequate maintenance.

- If the trap effluent is monitored by a radiation detector designed to monitor effluent gas, check the detector according to the manufacturer's instructions and keep a record of the checks.
- If you do not monitor the trap effluent, check it on receipt and once each month. Collect the effluent from the trap during one patient study in a plastic bag and then monitor the activity in the bag by holding the bag against a camera, with the camera adjusted to detect the noble gas, and compare its counts per minute (cpm) to background cpm with no other radioactivity in the area. Keep a record of the date, background cpm, and bag cpm.
- 3. The RSO will establish an action level based on cpm or a multiple of background cpm. If you measure a significant increase in the bag cpm, the trap is breaking down and must be replaced.
- 4. Follow the trap manufacturer's instructions for replacing the trap.

APPENDIX O

Model Procedure for Monitoring, Calculating, and Controlling Air Concentrations (See §§ 20.103, 20.106, 20.201, 35.90, and 35.205.)

SPILLED GAS CLEARANCE TIME (Item 10.13.4)

0.4 MODEL PROCEDURE FOR CALCULATING SPILLED GAS CLEARANCE TIME

1. Collect the following data:

. .

- a. A, the highest activity of gas in a single container, in microcuries;
- Measured airflow supply from each vent in the room (if different during heating and cooling seasons, use the lesser value), in milliliters per minute;
- c. Q, the total room air exhaust determined by measuring, in milliliters per minute, the airflow to each exhaust vent in the room (the exhaust should be vented and not recirculated within the facility); this may be either the normal air exhaust or a specially installed gas exhaust system;
- d. C, the maximum permissible air concentrations in restricted and unrestricted areas. For Xe-133, the maximum permissible values are $1 \times 10^{-5} \mu$ Ci/ml in restricted areas and $3 \times 10^{-7} \mu$ Ci/ml in unrestricted areas. For other gases, see Appendix B to 10 CFR Part 20; and
- e. V. the volume of the room is milliliters.
- 2. For each room make the following calculations:
 - a. The airflow supply should be less than the airflow exhaust to ensure the room is at negative pressure.
 - b. The evacuation time $t = \frac{-V}{O} \times \ln (C \times V/A)$.

	Facilities and Equipment						
Air Supply	Diagram	(o)	Sink				
Ø Air Exhaust		[]]	Lead	Castle			
Scanner Uptake/Well	•	Lead	Shie	lding			
4 Lockable Door	1. Cs-137		Lx_	w x	H	× _	T
Receipt Area Generator Kit Preparation	2. 2" L-Shield 3. Lead bricks as necessary		L×_	W x	_н	× _	T
Dose Preparation			L×_	w x	_н	×_	T
Waste Storage Dose Calibrator Refrigerator			L×_	w x	н	× _	T





• • • •

· · · · ·

.

. .



Item #11 1 of ³ pages Prepared 6/20/88

	Facilities and Equipment	
Air Supply	Diagram	o(Sink
Ø Air Exhaust		[] Lead Castle
Scanner Uptake/Well Camera Lockable Door Receipt Area Generator Kit Preparation Storage Dose Preparation Waste Storage Dose Calibrator Refrigerator	Adjacent Areas	Lead Shielding <u>5</u> L-Shield <u>8" L x 12"W x 10"H x ½" T</u> <u>6</u> Lead Bricks <u>11" L x18" W x 12"H x 2" T</u> <u>L x W x H x T</u>
4 Receipt Area Generator 5 Kit Preparation 6 Isotope Storage 5 Dose Preparation 6 Waste Storage 7 Dose Calibrator Refrigerator 8 Fume Hood		<u>6</u> Lead Bricks <u>11" L x 18" W x 12"H x</u> <u>L x W x H x</u> <u>L x W x H x</u>



• . • •

1

* . . .



CONTROL NO. 85795

Facilities and Equipment Diagram Sink 0 Air Supply Lead Castle Air Exhaust Lead Shielding Adjacent Areas Scanner Uptake/Well Camera Lx Wx Hx T Lockable Door Receipt Area Generator Lx Wx Hx T Kit Preparation Isotope Storage Lx Wx Hx T Dose Preparation Waste Storage Dose Calibrator Lx Wx Hx T Refrigerator

• . •

• • •

Relationship of current and future floor plans.



Item #11 3 of 3 pages Prepared 6/20/88

CONTROL NO. 85795