

PUBLIC

FEB 10 1994

24-20274-01
030-18183

The Stolar Partnership
Attorneys At Law
ATTN: Dale E. Hermeling
The Lammert Building
911 Washington Avenue
St. Louis, MO 63101

Dear Mr. Hermeling:

This refers to your letter dated December 22, 1993, requesting NRC consent to the proposed change of ownership of St. Mary's Hospital of Blue Springs, NRC License No. 24-20274-01. Based upon information submitted, the NRC has no objection to the sale.

In addition, we have determined that the transaction as described in your December 22, 1993 letter does not require an amendment to the existing license and, therefore, an amendment fee is not necessary.

If you have any questions or require clarification on any of the information stated above, you may contact us at (708) 829-9887.

Sincerely,

Original Signed By
Peter J. Lee, Ph.D.
Nuclear Materials Licensing Section

9402180229 940210
PDR ADOCK 03018183
C PDR

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R111

Lee/bt
12/29/93

Gattone

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DH*

477 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63141



(314) 994-7800
FAX: (314) 994-7900

December 30, 1993

VIA FACSIMILE (708/515-1259)

Mr. Peter Lee
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, IL 60532-4351

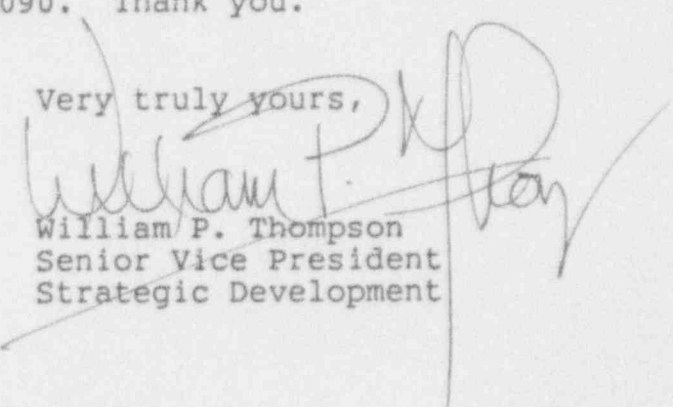
Re: St. Mary's Hospital of Blue Springs, Inc.
NRC License No. 24-20274-01

Dear Mr. Lee:

This letter acknowledges the December 31, 1993 transaction referenced in Mr. Dale Hermeling's correspondence to the Nuclear Regulatory Commission dated December 22, 1993 which accurately describes the transfer of St. Mary's Hospital of Blue Springs, Inc. from SSM Health Care II to Carondelet Health System, Inc. SSM Health Care II is a member of the SSM Health Care System.

If you have any questions, or require additional information, please contact Mr. John Traeger at 314/241-9090. Thank you.

Very truly yours,


William P. Thompson
Senior Vice President
Strategic Development

JWT

516/244

cc: Mr. Bruce Burgess - NRC Regional Counsel

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JAN 12 1994

REGION III

JAN 12 1994



December 28, 1993

TRANSMITTED VIA FACSIMILE AND U.S. POSTAL SERVICE

Mr. Peter Lee
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

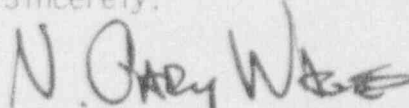
Re: St. Mary's Hospital of Blue Springs

Dear Mr. Lee:

This is to confirm that The Stolar Partnership is representing the Carondelet Health System which will become the sole member of St. Mary's Hospital of Blue Springs, Inc. pursuant to the transaction scheduled to close December 31, 1993. St. Mary's Hospital of Blue Springs, Inc. is the owner and operator of St. Mary's Hospital of Blue Springs, which is the holder of the Nuclear Regulatory Commission license number 24-20274-01.

Should you have any further questions, please contact Dale Hermeling at (314) 231-2800.

Sincerely,


N. Gary Wages, FACHE
President

NGW/jr

cc: Dale Hermeling

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JAN 03 1994
REGION III



JAN 03 1994

THE STOLAR PARTNERSHIP
ATTORNEYS AT LAW

THE LAMMERT BUILDING
911 WASHINGTON AVENUE
ST. LOUIS, MISSOURI 63101
(314) 231-2600

TELEX: 880984 (SHERH STL)
TELEFAX: (314) 436-8400

DALE E. HERMELING

H.M. STOLAR
(RETIRED 1984)

December 22, 1993

VIA FEDERAL EXPRESS

Mr. John Madera
Section Chief
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Re: St. Mary's Hospital of Blue Springs

Dear Mr. Madera:

This firm serves as legal counsel for Carondelet Health System, Inc., a Missouri not-for-profit corporation ("CHS"). The purpose of this letter is to inform you, on behalf of CHS, that CHS intends to close a transaction on December 31, 1993 under which, among other things, CHS will become the sole member of St. Mary's Hospital of Blue Springs, Inc., a Missouri not-for-profit corporation ("SMHBSI").

SMHBSI owns and operates St. Mary's Hospital of Blue Springs, a licensed hospital located in Blue Springs, Missouri. SSM Health Care II, a Missouri not-for-profit corporation, is currently the sole member of SMHBSI. Following the closing of the transaction, CHS will replace SSM Health Care II as the sole member of SMHBSI.

We want to emphasize that SMHBSI will remain the same corporate entity following the transaction. St. Mary's Hospital of Blue Springs will retain its name and continue its operations at the same location after the transaction. CHS contemplates no material changes in the hospital's operations.

Pursuant to NRC Information Notice No. 89-25 (IN 89-25) relating to the transfer of ownership or control of licensed activities, I am attaching hereto Exhibit A which responds to the general guidance provisions set out in IN 89-25. Notwithstanding the fact that there will be

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REGION III

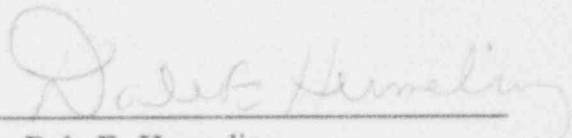
THE STOLAR PARTNERSHIP

no change of personnel or operations relating to licensed activities at the hospital, this notice is submitted to the NRC for its records.

It is very important that the transaction close by December 31, 1993 and we will cooperate with you to assure compliance with your requirements. Please advise me promptly by telephone if the enclosed information is insufficient to allow your agency to give the necessary approvals before December 31, 1993. If you have any questions concerning the transaction or any advice which would help to facilitate your approval, please let me know. Thank you.

Very truly yours,

THE STOLAR PARTNERSHIP

By: 
Dale E. Hermeling

DEH/lle
enclosure

GREENSFELDER, HEMKER & GALE, P.C.

ATTORNEYS AT LAW

1800 EQUITABLE BUILDING
10 SOUTH BROADWAY
ST. LOUIS, MISSOURI 63102-1774
TELEPHONE (314) 241-9090
TELEFAX (314) 241-8624

December 14, 1993

VIA FEDERAL EXPRESSMs. Colleen C. Casey
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, IL 60532-4351Re: Notice of Transfer of Ownership of St. Mary's Hospital
of Blue Springs from SSM Health Care II to St. Mary's
Hospital of Blue Springs, Inc.NRC License No. 24-20274-01

Dear Ms. Casey:

This Law Firm represents the SSM Health Care System ("SSMHCS"). SSMHCS is comprised of various not-for-profit health care organizations sponsored by the Franciscan Sisters of Mary, including SSM Health Care II and St. Mary's Hospital of Blue Springs, Inc.

This letter is written to inform you that St. Mary's Hospital of Blue Springs (the "Hospital") has been transferred from SSM Health Care II to St. Mary's Hospital of Blue Springs, Inc. The transfer represents a transfer of the Hospital between related entities within SSMHCS that are under the common control of SSMHCS. The operations of the Hospital will remain the same after the transfer of the Hospital from SSM Health Care II to St. Mary's Hospital of Blue Springs, Inc.

Pursuant to NRC Information Notice No. 89-25 (IN 89-25) relating to the transfer of ownership or control of licensed activities, I am attaching hereto Exhibit A which responds to the general guidance provisions set out in IN 89-25. Notwithstanding the fact that there will be no change of personnel or operations relating to licensed activities at the Hospital, this notice is submitted to the NRC for its records.

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DEC 15 1993

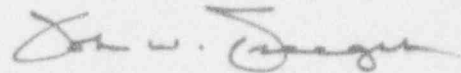
REGION III

Thank you for your cooperation in this matter. If you have any questions, don't hesitate to contact me at 314/241-9090.

Very truly yours,

GREENSFELDER, HEMKER & GALE, P.C.

By



John W. Traeger

364/244

cc: Mr. N. Gary Wages
Bernard C. Huger, Esq.
John Dillane, Esq.
Mr. Bill Thompson
Sally Specht, Esq.
Evan Goldfarb, Esq.
Dale E. Hermeling, Esq.

EXHIBIT A

NRC Information Notice 89-25
Transfer of Ownership or Control of Licensed Activities

2.a. The name of the organization, if changed. Provide the new name of the licensed organization and if there is no change, so state.

The name of Licensee remains St. Mary's Hospital of Blue Springs.

b. Identification of any changes in personnel named in the license, including any required information on personnel qualifications.

No change is anticipated.

c. An indication of whether the seller will remain in business without the license.

The transferor, SSM Health Care II, will remain in business without the license.

d. A complete, clear description of the transaction. The description should include any transfer of stocks or assets.

St. Mary's Hospital of Blue Springs, Inc. ("SMHBSI"), a Missouri not-for-profit corporation, owns and operates St. Mary's Hospital of Blue Springs. SSM Health Care II is the sole member of SMHBSI. Following the closing of the transaction on December 31, 1993, Carondelet Health Systems, Inc. will replace SSM Health Care II as the sole member of SMHBSI. (The transaction is similar to the sale of all stock in a for-profit corporation.) SMHBSI will remain as the same corporate entity and there are no contemplated changes in the hospital's operations.

e. An indication of any planned changes in organization, location facilities, equipment, procedures or personnel. If such changes are to be made, they should be fully described.

No change is anticipated.

f. An indication of any changes in the use, possession, or storage of the licensed materials. If such changes are to be made, they should be described.

No change is anticipated.

g. An indication of whether all surveillance items and records, including radioactive material inventory and accountability requirements, will be current at the time of transfer. A description of the status of all surveillance requirements and records, e.g., calibrations, leak tests, surveys, etc. should be provided.

Surveillance items and records, including radioactive material inventory and accountability requirements are current. Attached to this Exhibit A are records supporting this statement. Further, Mr. Emory Larimore or Dr. Joseph Goetz (RSO) may be contacted at the Hospital for further information. Mr. Larimore's telephone number is 913/236-5126. Dr. Goetz may be contacted at the hospital at 816/228-5900.

h. A description of the status of the facility. Specifically, the presence or absence of contamination should be documented. If contamination is present, will decontamination occur before transfer? If not, does the successor company agree to assume full liability for the decontamination of the facility or site?

There is no contamination at the hospital. St. Mary's Hospital of Blue Springs, Inc., which will continue to own the hospital, remains responsible for any future decontamination.

i. A description of any decontamination plans, including financial assurance arrangements of the transferee, should be provided as specified in 10 CFR Sections 30.35, 40.36, and 70.25. This should include information about how the transferee and transferor propose to divide the transferor's assets, and responsibility for any cleanup needed at the time of transfer.

There are no financial assurance requirements based on the threshold levels of regulated materials that trigger such a requirement. There is no contamination at the hospital, therefore, there was no cleanup at the time of transfer.

j. An indication of whether the transferor and transferee agree to the change in ownership or control of the licensed material and activity. If so, documentation stating this should be provided.

The transferor and transferee agree to the change in ownership. There is no change in the control of the licensed material.

k. A commitment by the transferee to abide by all constraints, conditions, requirements, representations, and commitments identified in the existing license. If not, the transferee must provide a description of its program to assure compliance with the license and regulations.

The transferee is committed to the continued compliance with all constraints, conditions, requirements, representations, and commitments identified in the existing license. This transfer will not result in any change in the hospital's compliance program. Policies and procedures relating to the license will remain the same.

EXHIBIT A

NRC Information Notice 89-25
Transfer of Ownership or Control of Licensed Activities

2.a. The name of the organization, if changed. Provide the new name of the licensed organization and if there is no change, so state.

The name of Licensee remains St. Mary's Hospital of Blue Springs.

b. Identification of any changes in personnel named in the license, including any required information on personnel qualifications.

No changes anticipated.

c. An indication of whether the seller will remain in business without the license.

The transferor will remain in business without this license.

d. A complete, clear description of the transaction. The description should include any transfer of stocks or assets.

St. Mary's Hospital of Blue Springs (the "Hospital") has been transferred from SSM Health Care II to St. Mary's Hospital of Blue Springs, Inc. The transfer represents a transfer of the Hospital between related entities within SSMHCS that are under the common control of SSMHCS. The operations of the Hospital will remain the same after the transfer of the Hospital from SSM Health Care II to St. Mary's Hospital of Blue Springs, Inc.

e. An indication of any planned changes in organization, location facilities, equipment, procedures, or personnel. If such changes are to be made, they should be fully described.

No changes anticipated.

f. An indication of any changes in the use, possession, or storage of the licensed materials. If such changes are to be made, they should be described.

No changes anticipated.

g. An indication of whether all surveillance items and records, including radioactive material inventory and accountability requirements, will be current at the time of transfer. A description of the status of all surveillance requirements and records, e.g., calibrations, leak tests, surveys, etc. should be provided.

Surveillance items and records, including radioactive material inventory and accountability requirements are current. Attached to this Exhibit A are Hospital records supporting this statement. Further, Mr. Emory Larimore or Dr. Joseph Goetz (RSO) may be contacted at the Hospital for further information. The Hospital telephone number is 816/228-5900. Mr. Larimore's telephone number is 913/236-5126.

h. A description of the status of the facility. Specifically, the presence or absence of contamination should be documented. If contamination is present, will decontamination occur before transfer? If not, does the successor company agree to assume full liability for the decontamination of the facility or site?

There is no contamination at the Hospital and St. Mary's Hospital of Blue Springs, Inc. assumes full responsibility for any future decontamination of the Hospital.

i. A description of any decontamination plans, including financial assurance arrangements of the transferee, should be provided as specified in 10 CFR Sections 30.35, 40.36, and 70.25. This should include information about how the transferee and transferor propose to divide the transferor's assets, and responsibility for any cleanup needed at the time of transfer.

There are no financial assurance requirements based on the threshold levels of regulated materials that trigger such a requirement. There is no contamination at the Hospital, therefore, there was no cleanup at the time of transfer.

j. An indication of whether the transferor and transferee agree to the change in ownership or control of the licensed material and activity. If so, documentation stating this should be provided.

The transferor and transferee agree to the change in ownership or control of the licensed material, to the extent that there is a change, and hereby represent through legal counsel such agreement.

k. A commitment by the transferee to abide by all constraints, conditions, requirements, representations, and commitments identified in the existing license. If not, the transferee must provide a description of its program to assure compliance with the license and regulations.

The transferee is committed to the continued compliance with all constraints, conditions, requirements, representations, and commitments identified in the existing license. This transfer will not change Hospital's compliance program and policies and procedures relating to the license will remain the same.

NUCLEAR MEDICINE SERVICES PERFORMED

INSTITUTION: St. Mary's - Blue Springs DATE: 11/4/93
 ADDRESS: 201 R.D. Mize Road, Blue Springs, MO 64105 PHONE #:
 PERSON TO CONTACT: Joseph Goetz, M.D., R.S.O.

I. License Review

A. License #: 24-20274-01

Expiration Date: 7/31/98

B. Authorized Users

Name	Authorized Uses
-----	-----
R.J. Meegan, M.D.	35.100, 35.200, 35.500, 31.11
Richard Morrison, M.D.	35.400
T.J. Fritzen, M.D.	35.100, 35.200, 35.500, Invitro
Suzan Chow, M.D.	" " " " 35.300
T.D. Kennedy, M.D.	" " " " 35.300
W.B. Davis, M.D.	" " " "
D.G. Wood, M.D.	" " " "
R.E. Stevenson, M.D.	" " " " 35.300
J.J. Goetz, M.D.	" " " " 35.300
H. Cloogman, M.D.	" " " "
G.D. Stillie, M.D.	35.400
M.S. LaGuerre, M.D.	35.400

C. Radiation Safety Committee

Name	Specialty
-----	-----
T.D. Kennedy, M.D.	35.100, 35.200, 35.300, 35.500
R.E. Stevenson, M.D.	35.100, 35.200, 35.300, 35.500
J.J. Goetz, M.D.	35.100, 35.200, 35.300, 35.500
H. Cloogman, M.D.	35.100, 35.200, 35.300, 35.500

RSO: Dr. Goetz

D. Equipment

-----	Manufacturer	Model #
-----	-----	-----
1. Survey Meters	Ludlum	3
	Ludlum	14C
2. Gamma Camera(s)	Raytheon	
	Toshiba	GCA-951
3. Computer(s)	Toshiba	
4. Dose Calibrator	Capintec	CRC-5
5. Uptake/Well	Ludlum	261
6. Xe-133 Del/Trap	Atomic Products	Pulmonex
7. Xe-133 Monitor		
8. Area Monitor		
9. Q.C. Analyzer		
10. Miscellaneous		

E. Personnel Dosimetry

Type	Supplier	Change Frequency
Body Film	Landauer	Monthly
Body TLD		
Ring TLD	Landauer	Monthly

F. Area/Facility Change Y_____ N___X___

G. License Amendment/Renewal Needed Y_____ N___X___

II. Equipment Checks

A.			C.		
	Freq	Compl		Freq	Compl
Dose calibrator			Cameras		
Linearity	Quart.	Y	Floods	Daily	Y
Accuracy	Quart.	Y	Bars	Weekly	Y
Geometrical var.	Init.	Y	Energy calibration		
Constancy	Daily	Y	Probes/Wells		
Constancy graph	Daily	--	Chi-Square	Quart.	Y
Com. used isotopes	Daily	Y	FWHM	Quart.	Y
Records			Constancy		
Dose cal. manf.		Y	Xe-133 system		
Dose cal. model		Y	Breakdown	Monthly	Y
Dose cal. serial #		Y	Air flows 5/7/93	Semi-An.	Y
Chk. source ID's		Y	Nose clamps		
Date		Y	Emergency proc.		
Measured activities		Y	Evacuation Time Post		Y
			Sealed sources		
Survey meters			Inventory	Quart.	Y
Calibration	Ann.	Y	Leak tests	Semi-An	Y
1/4 Check	Quart.	Y	Src. serial no.		Y
Daily check	Daily	Y	Src. model no.		Y
.1 - 100 mR/hr		Y	Isotope		Y
1.0 - 1000 mR/hr		Y	Initial activity		Y
			Storage location		Y
			RSO signature		Y

III. Surveys

A.			C.		
	Freq	Compl		Freq	Compl
Radiation			Survey		
Elution/kit/injec	Daily	Y	Location		Y
Department	Weekly	Y	mR/Hr-CPM		Y
Low use	Monthly	--	BKG Level		Y
Hands/clothing	Daily	Y	Initial		Y
Surrounding areas	.5mR/Hr	OK	Date		Y
Restricted areas	2 mR/Hr	OK	Cleaning level		OK
Instr. sensitivity	.1 mR/Hr	OK	Equipment used		Y
			Diagram		Y
Wipe tests			Trigger levels		Y
Department	Weekly	Y	DPM		Y
Low use	Monthly	--			
Sensitivity	2000 DPM	Y			

IV. Package Receipt

A.			B.		
	Freq	Compl		Freq	Compl
Date received		Y	Quarterly		Y
Radiation level @ 3'		Y	ALARA		Y
Radiation level @ surf.		Y	Annual review (11/4/93)		Y
Rad. level of pack. mtrl		Y	Exposure review		Y
Wipe test src. container		Y	Physics review		Y
Damaged		OK	Accident/misadmin.	None	
Correct material		--	Notice to workers		
Labels defaced		OK/NA	Investigational levels		

V. Radiation Safety Committee

A.			B.		
	Freq	Compl		Freq	Compl
Quarterly		Y	ALARA		Y
Annual review (11/4/93)		Y	Annual review (11/4/93)		Y
Exposure review		Y	Exposure review		Y
Physics review		Y	Physics review		Y
Accident/misadmin.	None		Accident/misadmin.	None	
Notice to workers			Notice to workers		
Investigational levels			Investigational levels		

VI. General Rules

A. Lab coats	Y
B. Gloves	Y
C. Syringe/vial shields	Y
Radiopharm. name	
Clinical procedure or patient's name	
D. Food/drink/smoking	OK
E. Personnel dosimetry	Y

VII. Training

A. New employee	Tape
B. Annual	Y
C. Tape available	

VIII. Personnel Dosimetry

A. Names	Y
B. SSN/Birthdate	Y
C. All badges returned	Y
D. Levels I, II, III	
E. New employee exposure report on file	

IX. Records

A. Generator		D. Patient	
Elution (mCi)	NA	Name/I.D. #	Y
Volume (ml)		Activity prescribed mCi	Y
Mo-99 (uCi)		Activity admin. mCi	Y
Mo-99uCi/Tc-99mCi		Isotope	Y
Time/date of assay		Date/time of measurement	Y/Y
Generator lot #		Compound	Y
Gen. expiration date		E. Generator return	NA
Initial		Radiation survey	
B. Kit preparation	NA	Surface	
Chem 4M		3'	
Activity in kit		Wipe Test	
Kit volume (ml)		Shipping papers	
Kit lot #		Labels	
Kit expiration date		X. Posting	
Preparer initial		A. Parts 19 & 20/4 & 10(avl)	Y/Y
C. Disposal		B. License/application (avl)	Y/Y
Date to storage	Y	C. Notice to employees	Y
Date disposed of	Y	D. Emergency procedures	Y
Held 10 T1/2	Y	E. Mo-99 procedure	--
Container mR/Hr	Y	F. Signs	
BKG mR/Hr	Y	Radiation area	Y
Isotope	Y	High radiation area	--
Initial	Y	Radiation material	Y
Labels Defaced	OK	Containers	Y
Instrument Used	Y	G. Last inspection date	8/93
		Report on file	Y
		Corrective action on file	Y
		H. Patient Exposure	

XI. Groups IV & V

A. Capsule/liquid	C	G. Visitor control posted	
B. Hood used	NA	H. Rad. survey (initial)	
C. Bio-assay		Restricted areas	
Thyroid burden	Y	Unrestricted areas	
Date	Y	Time/date	
Participant's name	Y	Diagram	
Initial of person making measurement	Y	mR/Hr @ sev. points	
Performed within 3 days	Y	Instrument used	
D. Instruction to workers	--	Initials	
Patient control		I. Waste collected	
Visitor control		J. Patient instruction for family safety	
Contamination control		K. Rad. survey-dismissal	
Waste control		Patient's room	
Notification of RSO		Sanitary facility	
E. Private room		<200 DPM removable	
F. Rad. matrl. posted on door			

XII. Brachytherapy

Comp.

A. Isotopes			G. Inventory		
Cs-137			Immediately after removal		
Co-60			Names of individuals		
Au-198			permitted to handle		
Sr-90			H. Use (Removal from storage)		
I-125			Number & activity removed		
Ir-192			Patient's name & room #		
Ra-226			Time/date removed		
B. Safety instruction			Number/activity in storage		
Size/appearance of srcs			after removal		
Safe handling			Initial of person removing		
Patient control			sources		
Visitor control			I. Use (return)		
Notification of RSO			Number & activity returned		
C. Private room			Patient's name & room #		
D. Radio. mat. sign posted			Time & date returned		
E. Visitor control on door			# & activity in storage		
or chart			after return		
F. Radiation survey (init.)			Initial of person returning		
Restricted areas			sources		
Unrestricted areas			J. Radiation survey of area		
Date/time			After Implanting		
Diagram			K. Radiation survey of patient		
mR/Hr @ several points			After source removal		
Instrument used			Date		
Initials			Patient name		
Patient instruction for			mR/Hr of patient @ 1 mtr.		
family safety			Instrument used		
.1 - 100 mR instrument			Initials		
& 1 - 1000 mR/Hr instr					

PHYSICIST

Engelmann

RADIATION SAFETY OFFICER

Joseph J. [unclear] 11/26/93

PHYSICIST REVIEW

INSTITUTION: St. Mary's Hospital

ADDRESS: R.D. Mize Road

DATE: 11/4/93

ITEM	PERFORMANCE DATE			
Dose Calibrator Accuracy	8/3/88	11/8/88	2/14/89	5/3/89
	8/28/89	11/15/89	2/1/90	5/2/90
	8/9/90	11/1/90	2/5/91	5/13/91
	8/2/91	11/28/91	2/12/92	5/26/92
	8/3/92	11/9/92	2/11/93	5/7/93
	8/31/93	11/4/93		
	Dose Calibrator Linearity	8/3/88	11/8/88	2/14/89
8/89		11/89	2/90	5/2/90
8/9/90		11/1/90	2/5/91	5/13/91
8/2/91		11/28/91	2/12/92	5/ /92
8/3/92		11/9/92	2/11/93	5/7/93
8/31/93		11/4/93		
Dose Calibrator Geometrical		2/ /90		
Sealed Source Inventory	8/3/88	11/8/88	2/14/89	5/3/89
	8/28/89	11/15/89	2/1/90	5/2/90
	8/9/90	11/1/90	2/5/91	5/13/91
	8/2/91	11/28/91	2/11/92	5/26/92
	8/3/92	11/9/92	2/11/93	5/7/93
	8/31/93	11/4/93		
	Sealed Source Leak Test	5/5/88	11/8/88	5/3/89
5/2/90		11/1/90	5/13/91	11/28/91
5/26/92		11/9/92	5/7/93	11/4/93

FWHM/Chi Square

8/3/88	11/8/88	2/14/89	5/3/89
8/28/89	11/15/89	2/1/90	5/2/90
8/9/90	11/1/90	2/5/91	5/13/91
8/1/91	11/28/91	2/11/92	5/26/92
8/3/92	11/9/92	2/11/93	5/7/93
8/31/93	11/4/93		

Efficiency

8/31/93			

Air Flows

6/3/88	12/5/88	6/2/89	12/5/89
8/29/90	10/30/90	1/30/91	5/13/91
11/28/91	7/10/92	1/5/93	8/31/93

RSC Meetings

9/30/89	1/13/89	4/24/89	6/30/89
9/89	12/27/89	3/1/90	
8/9/90	11/1/90	2/5/91	5/13/91
11/28/91	5/26/92	11/24/92	3/3/93
5/20/93		11/4/93	

Policy & Procedure Review

8/3/88	5/3/89	5/2/90	5/13/91
5/26/92	8/31/93		

Annual ALARA Review

3/1/90	11/28/91	11/24/92	11/4/93

Survey Meter Check

8/3/88	11/8/88	2/14/89	5/3/89
8/28/89	11/15/89	2/1/90	5/2/90
8/9/90	11/1/90	2/5/91	5/13/91
8/2/91	11/28/91	2/12/92	5/26/92
8/3/92	11/9/92	2/11/93	5/7/93
8/31/93	11/4/93		

Ludlum 14C

8/88	8/89	11/90	11/91
11/92	11/93		

Survey Meter Calibration

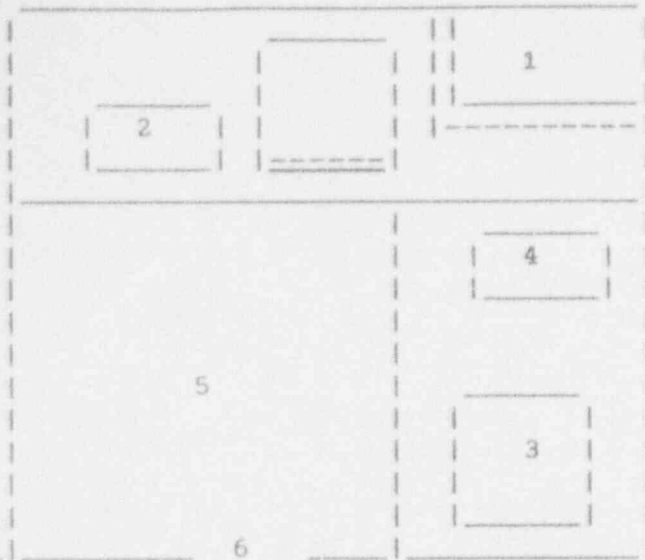
Ludlum 3

9/90	8/91	8/92	8/93

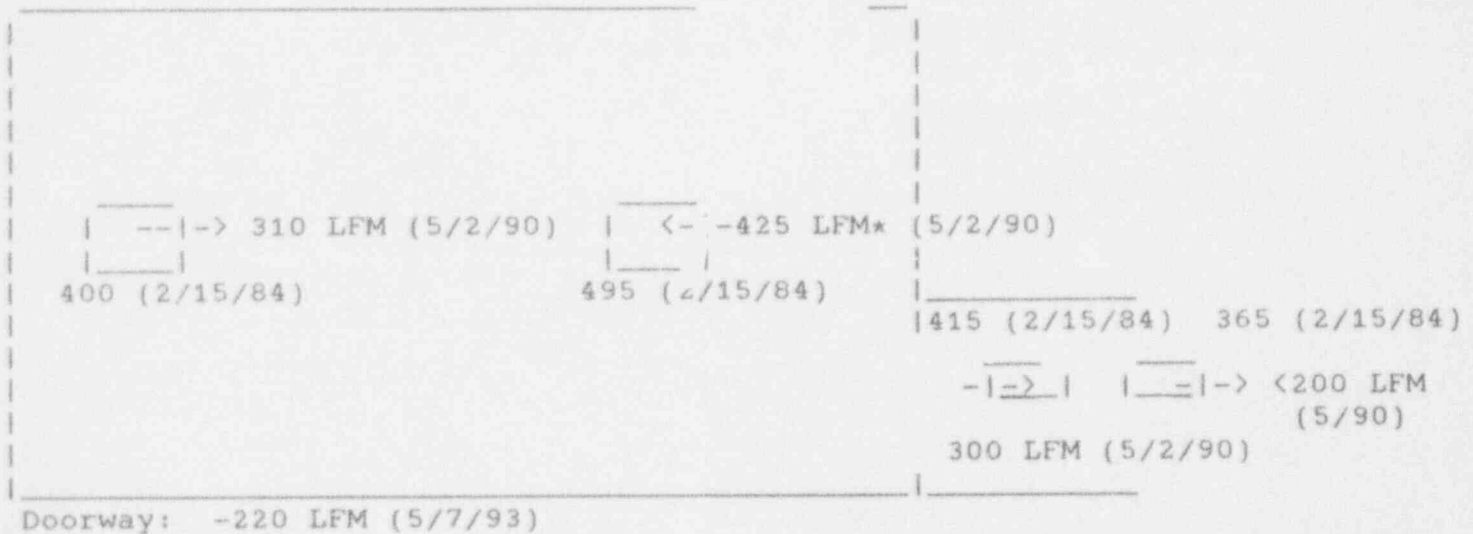
PHYSICIST REPORT

St. Mary's Hospital of Blue Springs

I. Radiation Survey



- 1. Storage .20
- 2. Work Area <.05
- 3. Sink <.05
- 4. Dose Calibrator <.05
- 5. Ambient <.05
- 6. Entrance <.05
- 7. Background <.05



*measured @ center

Negative pressure determined with smoke test

II. Probe Efficiency (8/31/93)

STD CPM: 196207 Eff = 18.9%
 BKG CPM: 262
 Net STD CPM: 195945
 STD: 7.1 uCi Co-57 (10/5/90) Cleaning Level = 2000 DPM = Net CPM x 5.3
 STD DPM: 1.034 x 10⁶

PHYSICIST *Clayton*
 DATE: 11/4/93

PHYSICIST REPORT

FACILITY: St. Mary's Hospital of Blue Springs
 CALIBRATOR MANUFACTURER: Capentec
 MODEL # CRC-5
 SERIAL #51432
 DATE: 11/4/93

DOSE CALIBRATOR ACCURACY CHECK

SOURCE I.D.	STRENGTH UCI	CALIBR. FACTOR	BKG UCI	CALCU ACTI.	MEAS. ACTI.	% VARIA.
137-CS-NES #3560180A-49 CALIBRATED 1/25/80	201 uCi	220	0.0	146.2 uCi	153.0 uCi	4.6%
57-CO #8221009-01 CALIBRATED 11/8/90	5.01mCi	112	0.0	.306 mCi	.310 mCi	1.1%
133-BA-NES-358 #2580180A-11 CALIBRATED 1/24/80	260 uCi	591	0.0	uCi	uCi	%

ACCURACY CHECK WITH LONG-LIVED SOURCE

SOURCE I.D.	CALIBRATION FACTOR	ACTIVITY	% CHANGE FROM LAST VISIT
Cs-137-NES-356 calibrated 1/26/81 (219 uCi)	Tc-99 I-131 Xe-133 Ga-67 In-111 Tl-201 Test	309 uCi 218 uCi 189 uCi 273 uCi 134 uCi 178 uCi 154.4	0.3 0.4 0.5 0.7 0.7 0.0

DAILY CALIBRATION CHECK

STANDARD	STRENGTH	CALIBR. FACTOR	BKG UCI	CALCU ACTIV.	MEAS. ACTIV.	% VARIA.
Cs-137-NES-356 calibrated 1/26/81 #3560181A-46	219 uCi	220	0.0	163.0 uCi	168.0uCi	3.0%
Ba-133 NES-358 calibrated 2/2/91 #358009-043	282 uCi	591	0.0	235.9 uCi	232.0 uCi	1.7%

PHYSICIST

[Signature]

RADIATION SAFETY OFFICER

Joseph Goffy 11/26/93

PHYSICIST REPORT

Dose Calibrator Linearity Check

FACILITY: St. Mary's Hospital of Blue Springs
 DOSE CALIBRATOR MANUFACTURER: Capintec
 MODEL #: CRC-5
 SERIAL #:
 DATE: 11/4/93

DATE	TIME	ELAPSED TIME	MEASURED ACTIVITY mCi	CALCULATED ACTIVITY mCi	% VARIATION
11/2/93	7:35	24.08	54.6	53.4	2.2
	12:30	19.17	30.9	30.3	1.8
	3:30	16.17	21.7	21.5	1.0
11/3/93	7:40	0.0	3.34	3.34	0.0
	3:55	8.25	1.25	1.29	3.3
11/4/93	7:40	24.0	.211	.211	0.0
	10:32	26.86	.154	.152	1.9

PHYSICIST *Clawson*
 RADIATION SAFETY OFFICER *Joseph J. [unclear] 11/26/93*

PHYSICIST REPORT

Chi-Square Determination

INSTRUMENT: Ludlum
 SERIAL #: Model 2600
 CHECK SOURCE #: Cs-137
 DATE: 11/4/93

CHI-SQUARE TEST

X_i	$(X_i - \bar{X})$	$(X_i - \bar{X})^2$
1. 10340	-56.1	3147
2. 10441	44.9	2016
3. 10421	24.9	620
4. 10274	-122.1	14908
5. 10374	-22.1	488
6. 10209	-187.1	35006
7. 10370	-26.1	681
8. 10505	108.9	11859
9. 10530	133.9	17929
10. 10497	100.9	10181

$E = 103961$

$\bar{X} = 10396.1$

$N \sum (X_i - \bar{X})^2$

$\chi^2 = E \frac{\sum (X_i - \bar{X})^2}{E}$

$i = \bar{X}$

$E = 96837$

$\chi^2 = 9.3 = .41$

NUMBER OF MEASUREMENTS

P*

	0.99	0.95	0.90	0.50	0.10	0.05	0.01
10	2.088	3.325	4.168	8.343	14.684	16.919	21.666
20	7.633	10.117	11.651	18.338	27.204	30.144	36.191

*P VALUE MUST FALL BETWEEN 0.1 AND 0.9

PHYSICIST

E. Lamin

PHYSICIST REPORT

St. Mary's Hospital of Blue Springs
Blue Springs, MO

I. Quarterly Survey Meter Check

Ludlum Model 3 1.1 mR/Hr with dedicated check source
Serial #77881 Battery: 1.8
Annual Due: 8/94

Ludlum 14C/44-7 0.8 mR/hr with dedicated check source
Serial #51325 Battery: 1.9
Annual calibration due: 11/93

II. Sealed Source Wipe Test

Source	Sample #	BKG CPM	Sample CPM	STD CPM	uCi Removed	Date
Ba-133; NES-358 282 uCi on 2/2/91 #358009-043	1	280	259	25914	<.005	11/4/93
Cs-137-NES-356 291 uCi on 1/26/81	0181A-46 1	280	268	2633	<.005	"
Co-57: 156/539 391 MBq on 2/5/93	1					

III. Full Width Half Maximum - Ludlum Model 2600 Spectrometer - Cs-137

Energy Level	Cts	Energy Level	Cts	
600	28	60	776	HV: 344
10	56	70	908	Wind: 338
20	88	80	872	Thresh: 80
30	183	90	662	Time: 100
40	377	700	339	
50	611	10	168	

FWHM = 8.1%

IV. Quarterly Sealed Source Inventory

Source	Initial Activity	I.D.#	Location	Date
Cs-137	.219 uCi	3560181A-46	Nuclear Medicine	11/4/93
Co-57	5.2 mCi	2060481B-14	Nuclear Medicine	"
Co-57	7.39 mCi	CTC.VI 4976 MA	Nuclear Medicine	"
Co-57	5.21 mCi	212002 Lot 688853	Nuclear Medicine	"
Ba-133	282 uCi	358009-043	Nuclear Medicine	"
Co-57	391 MBq	156/539	Nuclear Medicine	"

PHYSICIST *[Signature]*

RADIATION SAFETY OFFICER *[Signature]*
DATE: 11/4/93

