

BORGESS

Medical Center

9 July 2012

UNITED STATES NUCLEAR REGULATORY COMMISSION
Region III, Office of Materials Licensing
Attention: Colleen Casey
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

RE: Change in License Renewal
License number 21-12275-02
Borgess Medical Center

NRC Control numbers:
576074, LMH termination
576077, HCE termination
576076, BMC amendment
575210, BMC renewal

Dear Colleen:

The following are answers to questions in your e-mail of 16 April 2012 that required further attention as requested in our phone conversation on 9 May 2012. These answers are number according to questions in your e-mail.

1. No additional answer needed.
2. No additional answer needed.
3. Information required to delete human research from our license is attached to this letter as Appendix for question 3. Our radiation safety committee meeting minutes and research study data were reviewed to answer these questions. Not all questions could be answered but all available data were included. The preparation area for radioactive materials for human research was the same as for animal research. This was Cardiology Hot Lab-5W. Close-out survey documents (Appendix A-B-C) were previously submitted to the NRC on 7-20-2009 when asked for information pertaining to animal research.

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4. No additional answer needed.
5. No additional answer needed.
6. No additional answer needed.
7. No additional answer needed.
8. No additional answer needed.
9. No additional answer needed.

Since we are no longer doing in vitro clinical or laboratory testing, the use of materials in 10 CFR 31.11 can be deleted from the license.

10. No additional answer needed.
11. No additional answer needed.
12. No additional answer needed.
13. No additional answer needed.
14. No additional answer needed.

Since our last correspondence the Authorized Users List for the Borgess broad-scope license has been amended. This Authorized Users List is attached.

We would like to schedule a conference call with you the week of 7-16-12. I will have my Administrative Secretary call to schedule this. If you have any questions or require additional information, please contact me.

Sincerely,



Tom Mushett
Director of Radiology



Dr. Jursinic
Radiation Safety Officer

Appendix for question 3

A	B	C	D	E	F	G	H	I	J	K
Borgess Medical Center Human Research										
Title of the Human Research Project	Where used	Start date at Borgess	End date at Borgess	Radioactive Isotope used	Activity of Isotope	Physical form of Isotope	Manufacturer of Isotope delivery device	Type of delivery device used	Final deposition of Isotope	Copies of decommissioning surveys for work spaces used in this research
Beta-cath System trial	Borgess Cardiology Hot Lab-5W	11/16/1999	7/9/2003	Sr-90, Y-90	Sr-90 555 MBq, Y-90 555 MBq	Fired in a ceramic bead	Novoste Corp 4350-C International Blvd Norcross, GA 30093	Beads going into a catheter	Returned to manufacturer	The survey is attached
Gamma V, Protocol #P00-5501	Borgess Cardiology Hot Lab-5W	4/21/2000	2/21/2006	Ir-192	unknown	Seeds on a wire	Cordis Corp 14201 N.W. 60th Ave P.O. Box 025700 Miami, FL 33102	Wire	Returned to manufacturer	The survey is attached
BRITE II	Borgess Cardiology Hot Lab-5W	4/25/2001	5/20/2003	Sr-90, Y-90	Sr-90 555 MBq, Y-90 555 MBq	Fired in a ceramic bead	Novoste Corp 4350-C International Blvd Norcross, GA 30093	Beads going into a catheter	Returned to manufacturer	The survey is attached
Start 40/20	Borgess Cardiology Hot Lab-5W	6/22/1999	2/22/2005	Sr-90, Y-90	Sr-90 555 MBq, Y-90 555 MBq	Fired in a ceramic bead	Novoste Corp 4350-C International Blvd Norcross, GA 30093	Beads	Returned to manufacturer	The survey is attached

7-9-12: APPENDIX A

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July 20, 2009

Attachment 2

Close-out Survey

Previous Cardiology Hot Lab-5W
Borgess Medical Center
1521 Gull Road
Kalamazoo, Michigan 49048

Date Performed: May 22, 2009
Performed by: Angela Burandt, BS, CNMT, RT(N)

Visual Check

The area was checked to ensure that all radioactive materials had been removed.

Radiation Level Survey

Surveys were performed using a Ludlum 14C survey meter.

Calibration: August 11, 2008

Range used was 0-0.02 mR/hr.

No area within the room demonstrated radiation levels in excess of the background reading of 0.02 mR/hr.

Removable Contamination

Wipe test results were analyzed with a Capintec Well Counter.

Calibration: May 6, 2009

Minimum detectable activity = 36 dpm

1 minute counts

Background 0 dpm

Wipe test results for all areas show a maximum removable contamination of 98 dpm.

See attached results and diagrams.

Conclusion

No removable contamination is present.

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July 20, 2009

Close-out Survey

Previous Animal Research Lab C
Borgess Medical Center
1521 Gull Road
Kalamazoo, Michigan 49048

Date Performed: May 22, 2009 and July 9, 2009
Performed by: Angela Burandt, BS, CNMT, RT(N)

Visual Check

The area was checked to ensure that all radioactive materials had been removed.

Radiation Level Survey

Surveys were performed using a Ludlum 14C survey meter.

Calibration Date: August 11, 2008

Range used was 0-0.02 mR/hr.

No area within the room demonstrated radiation levels in excess of the background reading of 0.02 mR/hr.

Removable Contamination

Wipe tests were analyzed with a Capintec Well Counter.

Calibration Date: May 6, 2009

Minimum detectable activity = 36 dpm

1 minute counts

Background 0 dpm

Wipe test results for all areas show a maximum removable contamination of 162 dpm.

See attached results and diagrams.

Conclusion

No removable contamination is present.

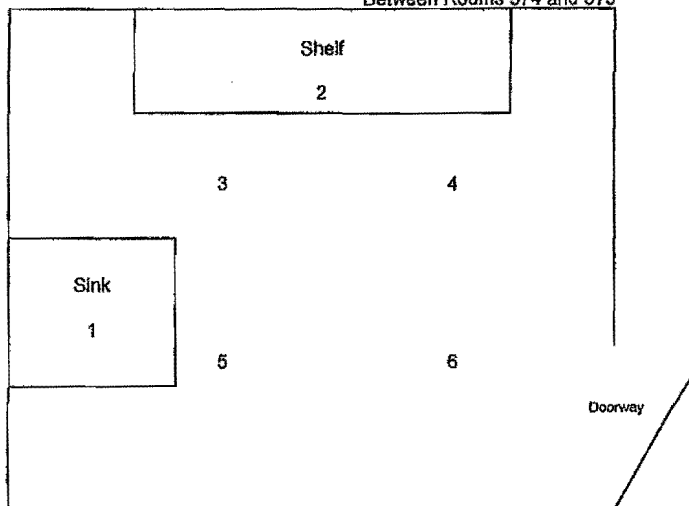
7-9-12: APPENDIX C

July 20, 2009

Close-out Survey

Borgess Medical Center
1521 Gull Road
Kalamazoo, Michigan 49048

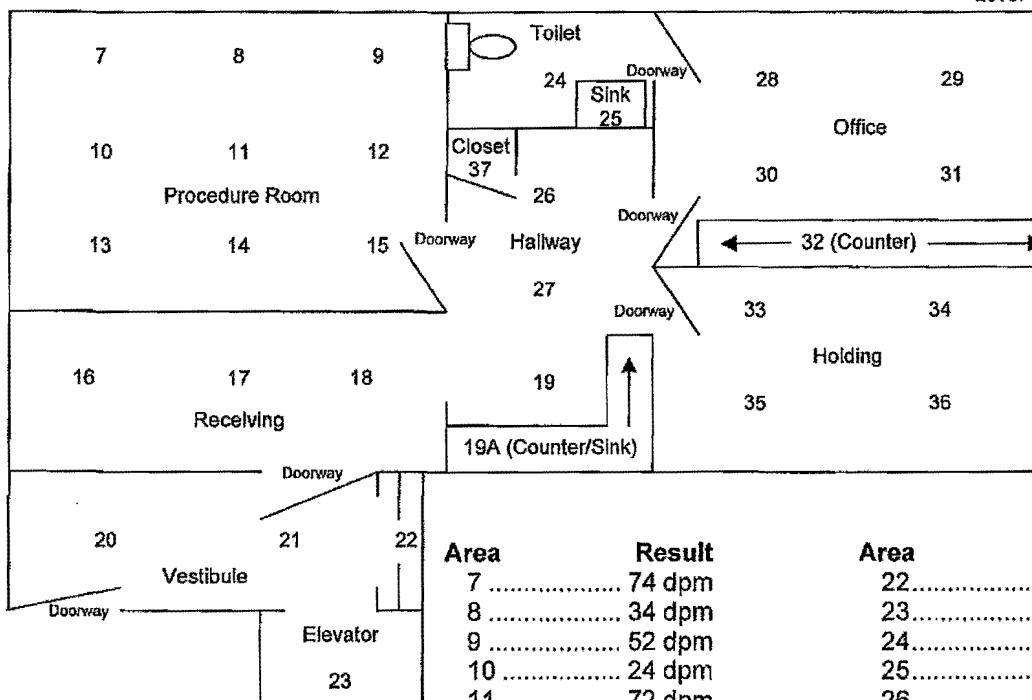
Cardiology Hot Lab
Fifth Floor West
Between Rooms 574 and 575



Area Result

1.....	40 dpm
2.....	54 dpm
3.....	40 dpm
4.....	98 dpm
5.....	16 dpm
6.....	50 dpm

Animal Research Lab
Level C



Area Result

7	74 dpm
8	34 dpm
9	52 dpm
10	24 dpm
11	72 dpm
12	2 dpm
13	88 dpm
14	18 dpm
15	68 dpm
16	46 dpm
17	50 dpm
18	20 dpm
19	118 dpm
19A	154 dpm
20	96 dpm
21	162 dpm

Area Result

22	84 dpm (floor and shelves)
23	70 dpm
24	116 dpm
25	44 dpm
26	60 dpm
27	92 dpm
28	42 dpm
29	30 dpm
30	28 dpm
31	26 dpm
32	56 dpm
33	66 dpm
34	78 dpm
35	138 dpm
36	66 dpm
37	26 dpm

Borgess license current authorized users list:

Please note that all authorized users have been approved by the Radiation Safety Committee under our current broad scope license.

<i>Authorized Users</i>	<i>Materials</i>
Daniel Bozarth, M.D.	10 CFR 35.100, 35.200 and 35.300
Stephen Brown, M.D.	10 CFR 35.100, 35.200 and 35.300
Stanley E. Caines, M.D.	10 CFR 35.100 and 35.200 (limited to cardiovascular clinical procedures)
William B. Campbell, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Marcio Curvelo, M.D.	10 CFR 35.100 and 35.200
Philip Dawson, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Umakant S. Doctor, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Brett Eliuk, M.D.	10 CFR 35.100 and 35.200
Janos Gellert, M.D.	10 CFR 35.100 and 35.200 (limited to cardiovascular clinical procedures)
Linda Grossheim, M.D.	10 CFR 35.300 (limited to Sr-89 and Sm-153, excludes I-131), and 35.400
John Gustafson, M.D.	10 CFR 35.100 and 35.200
Marshall Hay, M.D.	10 CFR 35.100, 35.200 and 35.300
Thomas A. Keller, M.D.	10 CFR 35.100 and 35.200
Anthony King, M.D.	10 CFR 35.100 and 35.200 (limited to cardiovascular clinical procedures)
Robert J. LaPenna, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)

William LaPenna, M.D.	10 CFR 35.100 and 35.200
Soundos Moualla, M.D.	10 CFR 35.100 and 35.200
Tammam Nehme, M.D.	10 CFR 35.100 and 35.200
Michael Pack, M.D.	10 CFR 35.100 and 35.200 (limited to cardiovascular clinical procedures)
Michael S. Pawlik, D.O.	10 CFR 35.100 and 35.200
Stephen L. Peck, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Benjamin A. Perry, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Ramon Raneses, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Joel H. Reinoehl, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Christopher Rogers, D.O.	10 CFR 35.100 and 35.200
John F. Schonder, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Mark Shaman, M.D.	10 CFR 35.100, 35.200 and 35.300 (limited to NaI-131 for less than or equal to 33 mCi)
Gregorio U. Tan, M.D.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Brandon Tominna, M.D.	10 CFR 35.200 and 35.300
Terrence Wilkin, M.D.	10 CFR 35.100 and 35.200
Alicia Williams, D.O.	10 CFR 35.200 (limited to cardiovascular clinical procedures)
Robert A. Williams, D.O.	10 CFR 35.100 and 35.200

Douglas J. Wunderly, M.D.

10 CFR 35.200 (limited to cardiovascular
clinical procedures)

FedEx

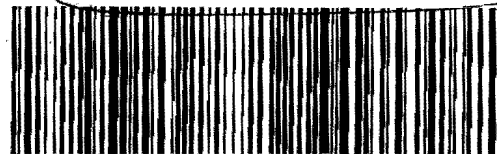
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