

Upstate Medical Physics, Inc.

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October 18, 2006

Mr. Bimal Patel  
Robert Packer Hospital  
Guthrie Square  
Sayre, PA 18840

37-61893-01

03003013

**Re: Final Report of Laboratory Surveys – Foundation Building**

Dear Bimal,

I am enclosing a follow-up report of the work completed on October 11, 2006 in the Foundation Research Building at Robert Packer Hospital. This report contains more detail and results of the surveys completed to support decommissioning of the lab space on the 3<sup>rd</sup> and 4<sup>th</sup> levels of the building.

The results of the surveys showed that all surveyed areas were well below regulatory guidelines, and essentially were all at natural background levels. In addition, radioactive material stickers and labels were removed from doors, sinks and equipment.

Please contact us if you need further assistance. We appreciate the opportunity to be of service.

Sincerely,  
Upstate Medical PhysicsJoseph M. Greco,  
Certified Health Physicist

Quality Review by RJP

139623  
NMSS/RGNI MATERIALS-C02

**Robert Packer Hospital  
Foundation Building  
Laboratory Surveys – October 11, 2006**

1. Isotopes Used

Based on interviews of personnel familiar with lab activities, it was determined that unsealed isotopes were limited to primarily H-3, C-14, P-32, and S-35, all beta emitters. Activities used were generally in the microcurie to millicurie range. Because P-32 and S-35 have short half lives relative to H-3 and C-14, our attention was focused on the longer lived H-3 (12.4 yr half life) and C-14 (5700 year half life).

2. Location

Radioisotopes were used in the laboratory space on the third and fourth levels of the Foundation Building at Robert Packer Hospital.

3. Survey for Fixed Contamination

Fixed contamination was assessed with a Victoreen 190 survey meter with a thin-end window Geiger-Mueller tube, calibrated Feb 2006. Because of their low energy, H-3 beta particles cannot be detected with this meter, but C-14 and other more energetic beta emitters can.

Areas and equipment surveyed included benchtops, floors, sinks, refrigerators, hoods, door handles, drawers, and various pieces of equipment (incubators, centrifuges, etc.). Attention was focused on areas of the lab known to be used for isotope work.

4. Survey for Removable Contamination

Removable contamination was assessed by wiping the surface with a moistened piece of filter paper over an area of approximately 100 cm<sup>2</sup>, and subsequent analysis in a liquid scintillation counter. A total of 67 areas were wipe tested, including floors, counters and hoods. Attachments 1 and 2 show wipe locations on the third and fourth levels.

Three energy channels were utilized for analyzing the wipes – 0-18 keV (H-3), 0-167 keV (C-14 and S-35) and open window (P-32 and other higher energy isotopes). Raw data in counts per minute were converted to disintegrations per minute by subtracting background and correcting for the counting efficiency for each energy window. Efficiency was determined by counting a known standard, and comparing decay-corrected results to the expected activity.

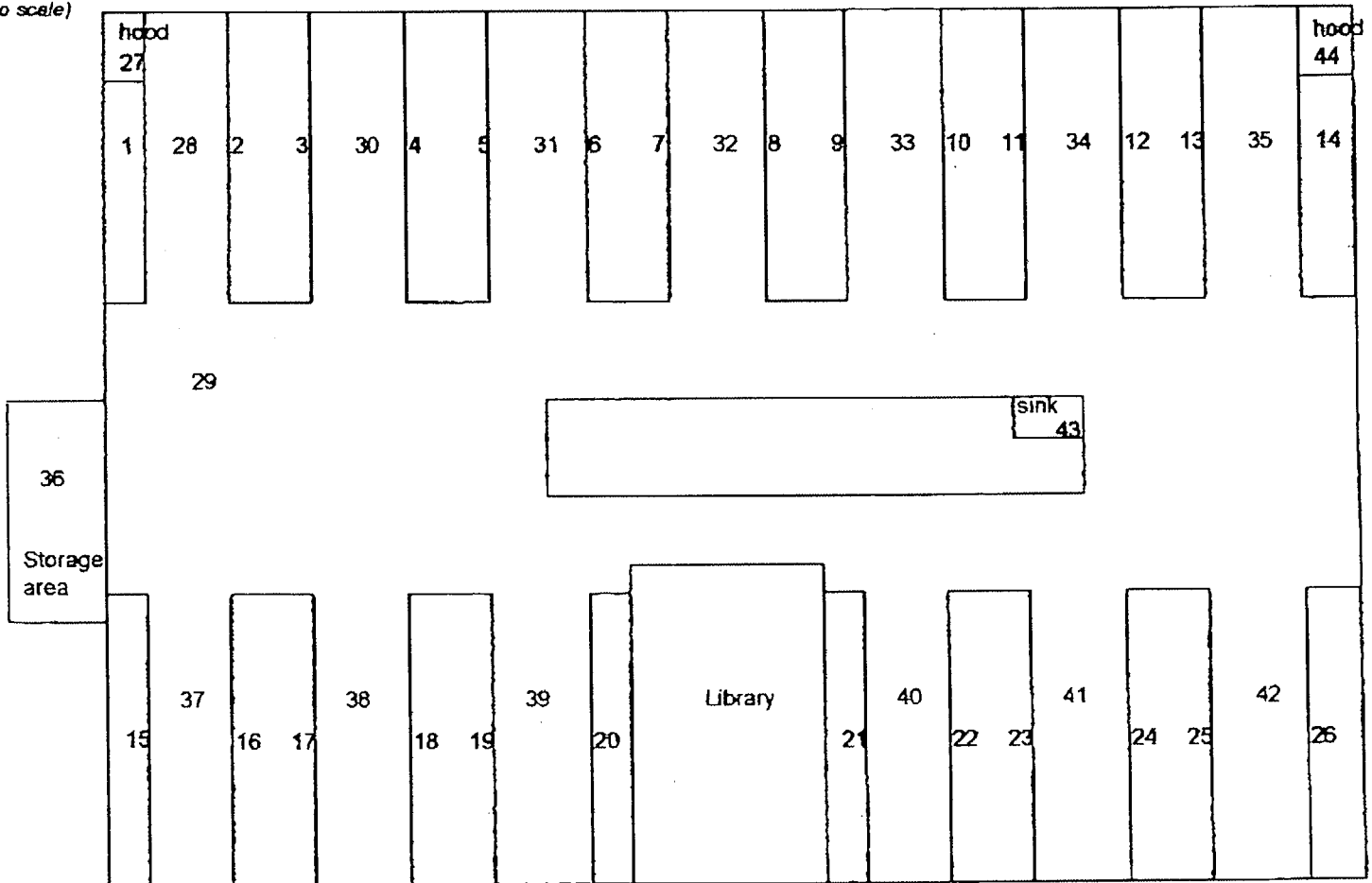
5. Labels

Once results of the surveys were known to be below regulatory guidelines, radioactive material warning labels and signs were removed from labeled equipment and doors

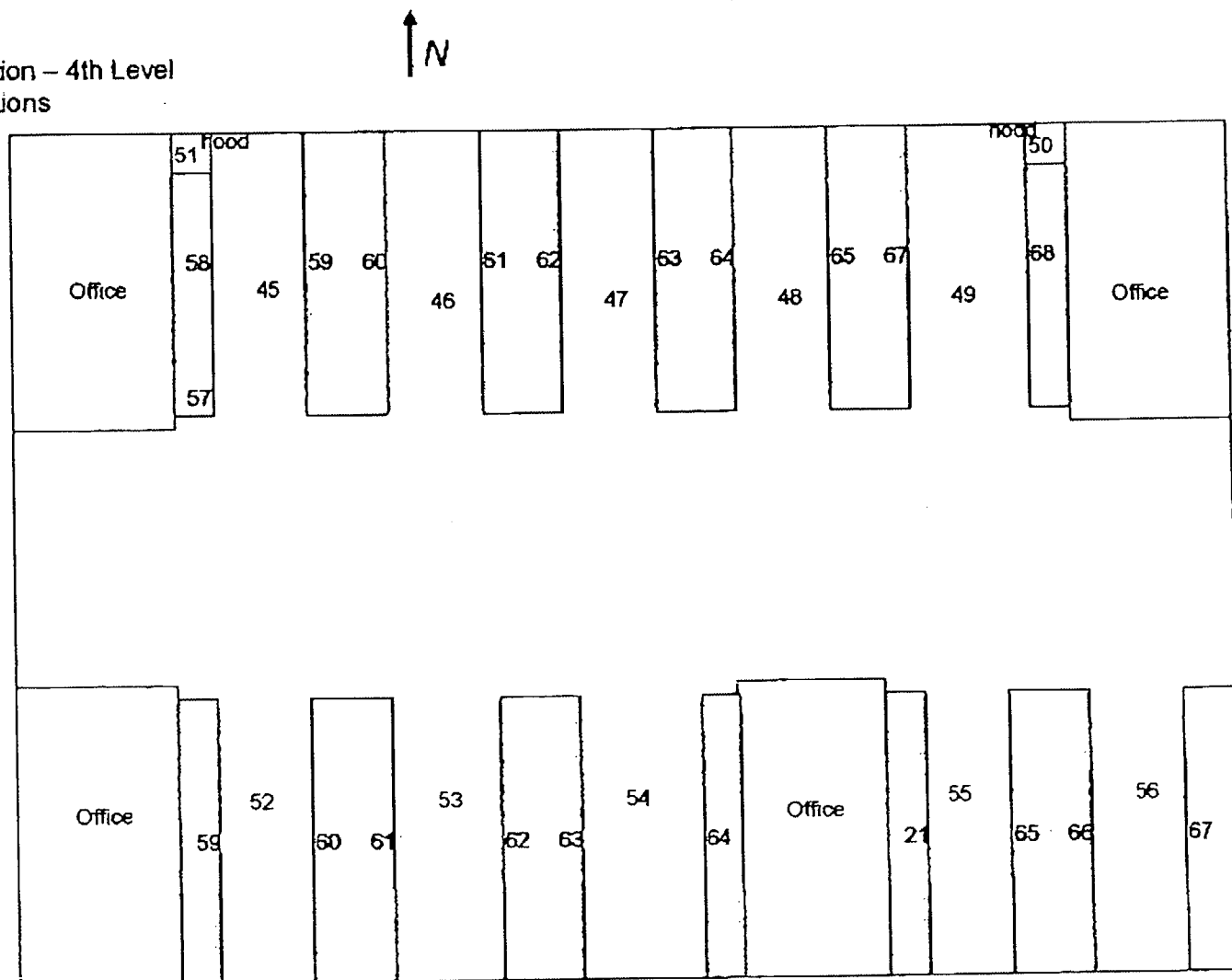
6. Results

All areas surveyed for fixed contamination were consistent with natural background levels (0.01 to 0.02 mR/hr). Wipe test results show that all areas wipe tested were well below the NRC limits for removable contamination (1000 dpm/100 cm<sup>2</sup>). Wipe test results are listed in Attachment 3.

Attachment 1  
Guthrie Foundation – 3<sup>rd</sup> Level  
Wipe Test Locations  
(note: not to scale)



Attachment 2  
Guthrie Foundation – 4th Level  
Wipe Test Locations  
(note: not to scale)



## Attachment 3 - Wipe Test Results

Wipe Location	Removable Contamination (dpm/100 cm2)		
	H-3	C-14/S-35	P-32
1	7	3	4
2	Not Detectable	Not Detectable	Not Detectable
3	Not Detectable	Not Detectable	Not Detectable
4	Not Detectable	Not Detectable	4
5	Not Detectable	Not Detectable	3
6	Not Detectable	Not Detectable	1
7	Not Detectable	Not Detectable	3
8	7	3	6
9	2	Not Detectable	1
10	Not Detectable	Not Detectable	Not Detectable
11	Not Detectable	Not Detectable	6
12	5	Not Detectable	5
13	Not Detectable	Not Detectable	Not Detectable
14	Not Detectable	Not Detectable	1
15	2	Not Detectable	1
16	Not Detectable	Not Detectable	4
17	2	Not Detectable	1
18	4	Not Detectable	6
19	2	Not Detectable	1
20	Not Detectable	Not Detectable	5
21	Not Detectable	Not Detectable	3
22	Not Detectable	Not Detectable	4
23	Not Detectable	Not Detectable	3
24	Not Detectable	Not Detectable	1
25	4	Not Detectable	3
26	0	Not Detectable	6
27	Not Detectable	0	Not Detectable
28	9	Not Detectable	3
29	Not Detectable	Not Detectable	3
30	Not Detectable	Not Detectable	3
31	Not Detectable	Not Detectable	1
32	Not Detectable	Not Detectable	4
33	9	Not Detectable	Not Detectable
34	4	Not Detectable	4
35	Not Detectable	0	3
36	Not Detectable	Not Detectable	4
37	Not Detectable	Not Detectable	1
38	Not Detectable	1	3
39	Not Detectable	Not Detectable	3
40	Not Detectable	Not Detectable	Not Detectable
41	4	Not Detectable	6
42	0	0	3
43	Not Detectable	Not Detectable	1
44	4	Not Detectable	4
45	4	Not Detectable	5
46	7	Not Detectable	1
47	Not Detectable	Not Detectable	4

Prepared by Upstate Medical Physics

### Attachment 3 - Wipe Test Results

Wipe Location	Removable Contamination (dpm/100 cm2)		
	H-3	C-14/S-35	P-32
48	Not Detectable	Not Detectable	3
49	0	Not Detectable	Not Detectable
50	4	Not Detectable	4
51	Not Detectable	Not Detectable	3
52	Not Detectable	Not Detectable	4
53	Not Detectable	Not Detectable	1
54	7	Not Detectable	3
55	Not Detectable	Not Detectable	5
56	Not Detectable	Not Detectable	3
57	5	3	4
58	Not Detectable	Not Detectable	4
59	Not Detectable	Not Detectable	3
60	Not Detectable	Not Detectable	1
61	7	Not Detectable	1
62	0	6	3
63	2	Not Detectable	3
64	2	Not Detectable	9
65	Not Detectable	Not Detectable	1
66	7	Not Detectable	1
67	Not Detectable	Not Detectable	6

This is to acknowledge the receipt of your letter/application dated

10/26/2006, and to inform you that the initial processing which includes an administrative review has been performed.

☒ Amendment 37-01893-01 There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 139623.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.