



**DREXEL UNIVERSITY  
COLLEGE OF MEDICINE**

**Office of Regulatory Research Compliance**

February 19, 2008

*NMSBZ*

U.S. Nuclear Regulatory Commission  
Region 1  
475 Allendale Road  
King of Prussia, PA 19406

2008 FEB 27 AM 11:12

RECEIVED  
REGION 1

*03012998*

re: License No. 37-07438-15

Dear Sir or Madam:

Please amend the above referenced license to remove St Christopher's Hospital for Children, Erie Avenue at Front Street as a licensed use location. In support of this request, attached is the Final Status Survey Report for the laboratory spaces that were used for licensed activities by Philadelphia Health and Education Corporation, d/b/a Drexel University College of Medicine and its predecessors.

If you have any questions or need any additional information, please feel free to contact Kent Lambert, Radiation Safety Officer, (215-255-7860, [kent.lambert@drexel.edu](mailto:kent.lambert@drexel.edu)). If I can be of assistance, please do not hesitate to contact me.

Sincerely,

*Sreekant Murthy, Ph.D.*

Sreekant Murthy, Ph.D.  
Associate Vice Provost for Research Compliance

cc K. Lambert  
K. Blank  
S. Mancuso

*141905*

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[www.research.drexel.edu](http://www.research.drexel.edu) • [www.drexelmed.edu](http://www.drexelmed.edu)

**In the tradition of Woman's Medical College of Pennsylvania and Hahnemann Medical College®**

Philadelphia Health & Education Corporation d/b/a Drexel University College of Medicine is a separate not-for-profit subsidiary of Drexel University.

**NMSS/RCN1 MATERIALS-002**

# **Final Status Survey Report**

**for**

**St. Christopher's Hospital for Children  
Erie Avenue at Front Street  
Philadelphia, Pennsylvania**

**a use location listed on NRC License No. 37-07438-15  
Philadelphia Health and Education Corporation  
d/b/a  
Drexel University College of Medicine**

Prepared by: Kent Lambert, M.S., CHP

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**A. Executive Summary**

St. Christopher's Hospital for Children is licensed by the U.S. Nuclear Regulatory Commission (37-07438-15) as a use location for Philadelphia Health and Education Corporation, d/b/a Drexel University College of Medicine (DUCoM). St. Christopher's Hospital for Children is also a licensed use location for Tenet Health Systems, St. Christopher's Hospital for Children, LLC d/b/a St. Christopher's Hospital for Children (37-30671-01). Licensed medical use activities conducted under license number 37-30671-01 will continue at this location and are not affected by this action.

St. Christopher's Hospital for Children consists of a single hospital building and some uninvolved support buildings, e.g., a parking garage. Research activities were conducted exclusively in research laboratories on the third floor of the Hospital. The final status survey for DUCoM is limited to these areas.

All research laboratory spaces are included in the final status survey. Licensed activities at this location have been under a broad scope license which permitted the use of tritium and isotopes with atomic numbers between 3 and 83, inclusive. Long lived isotopes (half life >120 days) authorized for use in the biomedical research conducted at this location are listed in Table 1.

**Isotope**

Tritium  
Carbon 14  
Calcium 45  
Chlorine 36  
Sodium 22

**Table 1. Isotopes Authorized for Use at St. Christopher's Hospital for Children**

Screening values are based on those published in the Federal Register, Volume 63, No. 222, Wednesday, November 18, 1998 and, for the case of Calcium 45, as determined by D and D Version 2.1.0 using default values for building occupancy. These values have been reduced by a factor of 10 because comparisons are made only to removable contamination. The adjusted screening values are presented in Table 2.

<b>Radionuclide</b>	<b>Adjusted Screening Values (dpm/100 cm<sup>2</sup>)</b>
Tritium	$1.2 \times 10^7$
Carbon 14	$3.7 \times 10^5$
Calcium 45	$2.7 \times 10^5$
Chlorine 36	$5.0 \times 10^4$
Sodium 22	$9.5 \times 10^2$

**Table 2. Screening Values**

All laboratory areas where radioactive materials were used were surveyed with thin window GM survey meters. Surveys for removable contamination were also performed in these areas. No removable contamination exceeded the screening values; indeed, none were within 1% of the screening values. The maximum activity found on any wipe sample was 104 dpm per 100 cm<sup>2</sup>. No fixed contamination was discovered.

## **B. Background and History**

St. Christopher's Hospital for Children, founded in 1875, is the 6<sup>th</sup> oldest pediatric hospital in the United States. In 1989, the Hospital moved from 5<sup>th</sup> and Lehigh to its current location on Erie Avenue at Front Street. Figure 1 shows an aerial image of St. Christopher's Hospital for Children and the surrounding area.



**Figure 1. St. Christopher Hospital for Children and Neighborhood.**

The Hospital was affiliated with Temple University until the mid 1990's when the Hospital became a part of Allegheny Health, Education and Research Foundation (AHERF). Educational and research activities under AHERF were conducted by Allegheny University of the Health Sciences (AUHS).

On July 22, 1998, AHERF filed for bankruptcy.

On September 29, 1998, the bankruptcy court approved the asset purchase agreement offered by Tenet Health System Philadelphia, Inc. Upon consummation of this agreement on November 10, 1998, the Hospital became a part of Tenet Health System Philadelphia, Inc. and AUHS assigned its assets to Philadelphia Health and Education Corporation (PHEC).

Integral to this transaction was an agreement between PHEC and Drexel University that Drexel would manage the new university. Senior officers of Drexel University, including its President, Provost, and Chief Financial Officer, assumed similar positions at MCP Hahnemann University.

In 2002, the Drexel University Board of Trustees voted in favor of merging MCP Hahnemann University into Drexel. To reflect this change, the name was changed to Philadelphia Health and Education Corporation d.b.a. Drexel University College of Medicine.

In January 2008, DUCoM moved all of its research activities involving radioactive materials from St. Christopher's Hospital for Children to 245 N. 15<sup>th</sup> Street, Philadelphia.

### C. Methods and Materials

Surveys were conducted by the following individuals under the supervision of Kent Lambert, M.S., CHP.

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Andrew Giagnacova, B.S.  
Kendall Berry, M.S.P.H.  
Jennifer Noll, B.S.  
Edward Yeager

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**Table 3. Surveyors**

All laboratories where radioactive materials have been used in research laboratories were surveyed, including laboratories used under licenses held by Temple University and AHERF.

<b>Room Number</b>	<b>Date Performed</b>	<b>Wipe Survey</b>	<b>Instrument Survey</b>
304	10/03/07	✓	✓
3 <sup>rd</sup> Floor Corridor	10/03/07	✓	✓
3 <sup>rd</sup> Floor walk-in Refrigerator	10/03/07	✓	✓
308	10/03/07	✓	✓
310	10/03/07	✓	✓
311	10/03/07	✓	✓
316	10/03/07	✓	✓
317	10/03/07	✓	✓
318	10/03/07	✓	✓
319	10/03/07	✓	✓
320	10/03/07	✓	✓
332	10/03/07	✓	✓
305	02/05/08	✓	✓
303	02/05/08	✓	✓
306	02/05/08	✓	✓
307	02/05/08	✓	✓

**Table 4. Survey Locations and Type**

Wipe samples were taken using dry filter papers and applying moderate pressure to workbenches, floors, and other surfaces. To assess the potential for residual radioactivity in air

Wipe samples were assayed using a liquid scintillation counter. Table 5 indicates the counter used for these assays and its efficiencies.

Make, Model and Serial Number	Efficiencies*
Beckman LS6500, S/N: 7068451	<sup>3</sup> H - 55%; <sup>14</sup> C - 78%

**Table 5. Analytical Equipment Used**

\* When counting for unknowns, an efficiency of 50% is assumed (lowest efficiency of commonly encountered isotopes)

The equipment used to analyze wipe samples was/is capable of detecting a wide range of isotopes in addition to those long-lived isotopes known to have been authorized for use at the facility.

The radiation detection survey instruments indicated in Table 6 were used to detect fixed contamination (excluding tritium).

Ratemeter Make & Model #	Ratemeter Serial #	Probe Model #	Probe Serial #	Date Used	Prior Calibration	<sup>14</sup> C / <sup>36</sup> Cl
						Detection Efficiency*
Victoreen 190	850	489-110D	621	02/05/08	12/20/07	10% / 19 %
Victoreen 190	850	489-110D	621	10/03/07	11/28/06	10% / 19 %
Ludlum 3	48232	44-9	134604	10/03/07	9/10/07	4% / 11%
Ludlum 3	61473	44-7	051416	10/03/07	10/31/06	1% / 4%
Ludlum 14C	134867	44-9	131506	10/03/07	11/01/06	9% / 16%

**Table 6. Survey instruments**

\* Measured 1 cm from window face.

## D. Results

The following pages show the results for each room or area surveyed and includes:

- A map of the room;
- Checklist of closeout activities performed;
- Summary of contamination survey results;
- The locations where wipes were taken;
- Survey meter instrument readings;
- Lower limit of detection;
- Background measurements; and
- Removable contamination levels as measured by liquid scintillation counting.

# Closeout Survey Report

Building & Room No.: St Christopher's Hospital for Children 304		Department: Pediatrics
Contact Person: Sandra Mancuso		Phone Number and Address: (215) 427-8143
Surveyor: N. Noll & K. Berry		Survey Date: 10/3/07

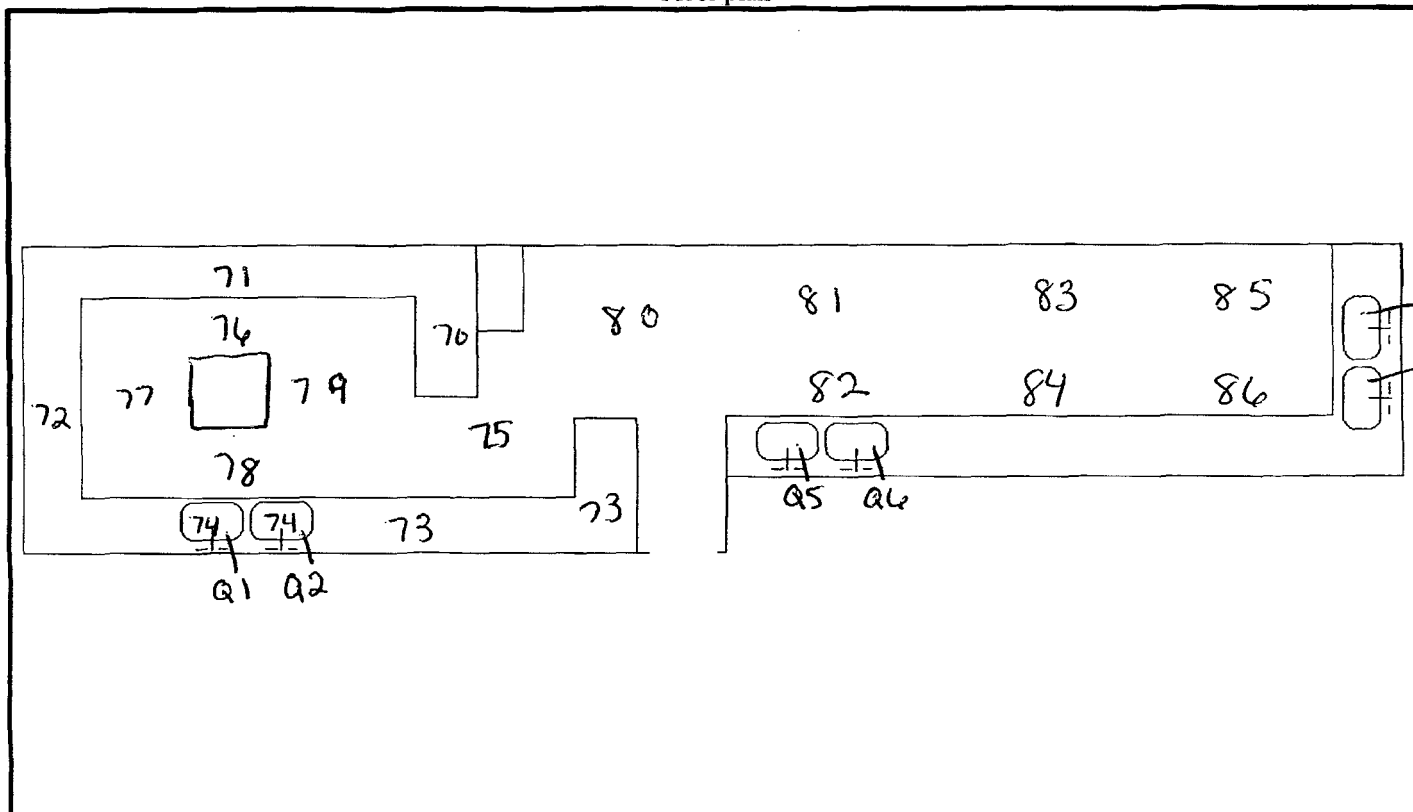
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



70-73: wipe samples of the counter-top, drawers below, and overhead cabinets

74: wipe sample of sinks

RSO Form No. 5.4a (rev. 1/02)

Page 1 of 2

75-86: wipe samples of the floor

Q1-Q6: wipe samples of sink drains



Survey meter used: Mfg & model: Ludlum 3 Serial No.: 48232 Date of Calibration: 9/10/07

Survey meter locations	Survey meter reading (mR/hr)
Background	0.04
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.04

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children	
Efficiency %	50		
Efficiency	0.5		Room
LLD	25		304
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
70	25.0	0	0	1	0
71	35.5	8	15	1	15
72	32.5	5	9	1	9
73	34.5	7	13	1	13
74	30.0	2	4	1	4
75	34.5	7	13	1	13
76	28.5	1	1	1	1
77	34.5	7	13	1	13
78	31.5	4	7	1	7
79	28.5	1	1	1	1
80	27.5	0	0	1	0
81	34.5	7	13	1	13
82	24.5	0	0	1	0
83	37.5	10	19	1	19
84	34.5	7	13	1	13
85	34.5	7	13	1	13
86	24.5	0	0	1	0
QTip 1	32.5	5	9	1	9
QTip 2	34.5	7	13	1	13
QTip 3	25.0	0	0	1	0
QTip 4	32.5	5	9	1	9
QTip 5	34.5	7	13	1	13
QTip 6	38.0	10	20	1	20

# Closeout Survey Report

Building & Room No.: St. Chris Hospital for Children - Corridor		Department: <u>Pediatrics</u>
Contact Person: <u>Sandra Mancuso</u>	Phone Number and Address: <u>(215) 427-8143</u>	
Surveyor: E. Yeager & A. Giagnacova		Survey Date: <u>10/3/07</u>

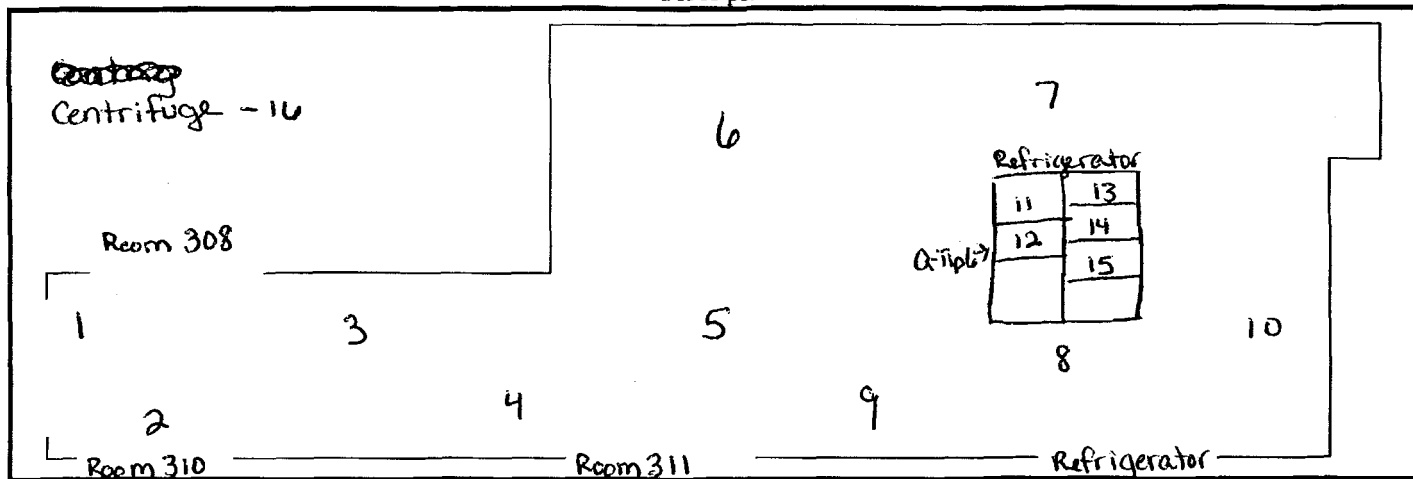
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



1-10: Wipe samples of the floor  
 11-15: Wipe samples of the refrigerator  
 16: Wipe samples of the centrifuge  
 Q-tip 6: Q-tip swab of water pooling in bottom of the refrigerator

Survey meter used: Mfg & model: Victoreen<sup>120</sup> Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	6.017

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children	
Efficiency %	50	Room	
Efficiency	0.5	Corridor	
LLD	25		
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
1	32.0	4	8	1	8
2	31.0	3	6	1	6
3	33.5	6	11	1	11
4	39.5	12	23	1	23
5	36.5	9	17	1	17
6	30.0	2	4	1	4
7	25.5	0	0	1	0
8	39.5	12	23	1	23
9	27.0	0	0	1	0
10	35.5	8	15	1	15
11	27.0	0	0	1	0
12	25.5	0	0	1	0
13	43.0	15	30	1	30
14	31.5	4	7	1	7
15	29.0	1	2	1	2
16	27.0	0	0	1	0
QTip 6	28.5	1	1	1	1

# Closeout Survey Report

Building & Room No.: St. Chris Hospital for Children - Refrigerator		Department: <i>Pediatrics</i>
Contact Person: <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8143</i>	
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

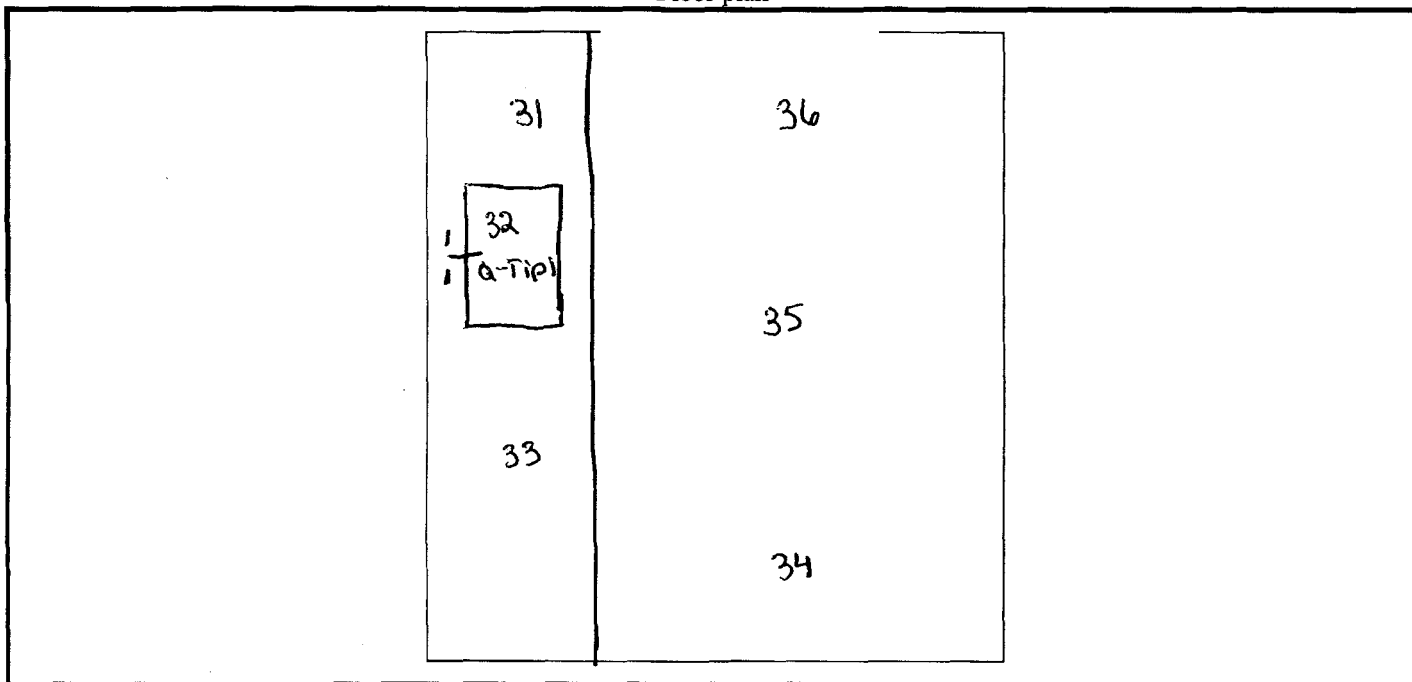
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



*34-36: wipe samples of floor*  
*31+33: wipe samples of counter top*  
*32: wipe samples of sink*  
*Q-tip: Q-tip swab of sink drain*

Survey meter used: Mfg & model: Ludlum 3 Serial No.: 48232 Date of Calibration: 9/10/07

Survey meter locations	Survey meter reading (mR/hr)
Background	0.04
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.04

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout
Counter Used	LSC	St. Christopher's Hospital for Children
Efficiency %	50	Room
Efficiency	0.5	Refrigerator
LLD	25	
Count Time (min)	2	

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
31	25.0	0	0	1	0
32	34.0	6	12	1	12
33	37.5	10	19	1	19
34	31.0	3	6	1	6
35	31.5	4	7	1	7
36	33.5	6	11	1	11
QTip 1	40.0	12	24	1	24



# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 308		Department: <u>Pediatrics</u>
Contact Person: <u>Sandra Mancuso</u>	Phone Number and Address: <u>(215) 427-8143</u>	
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

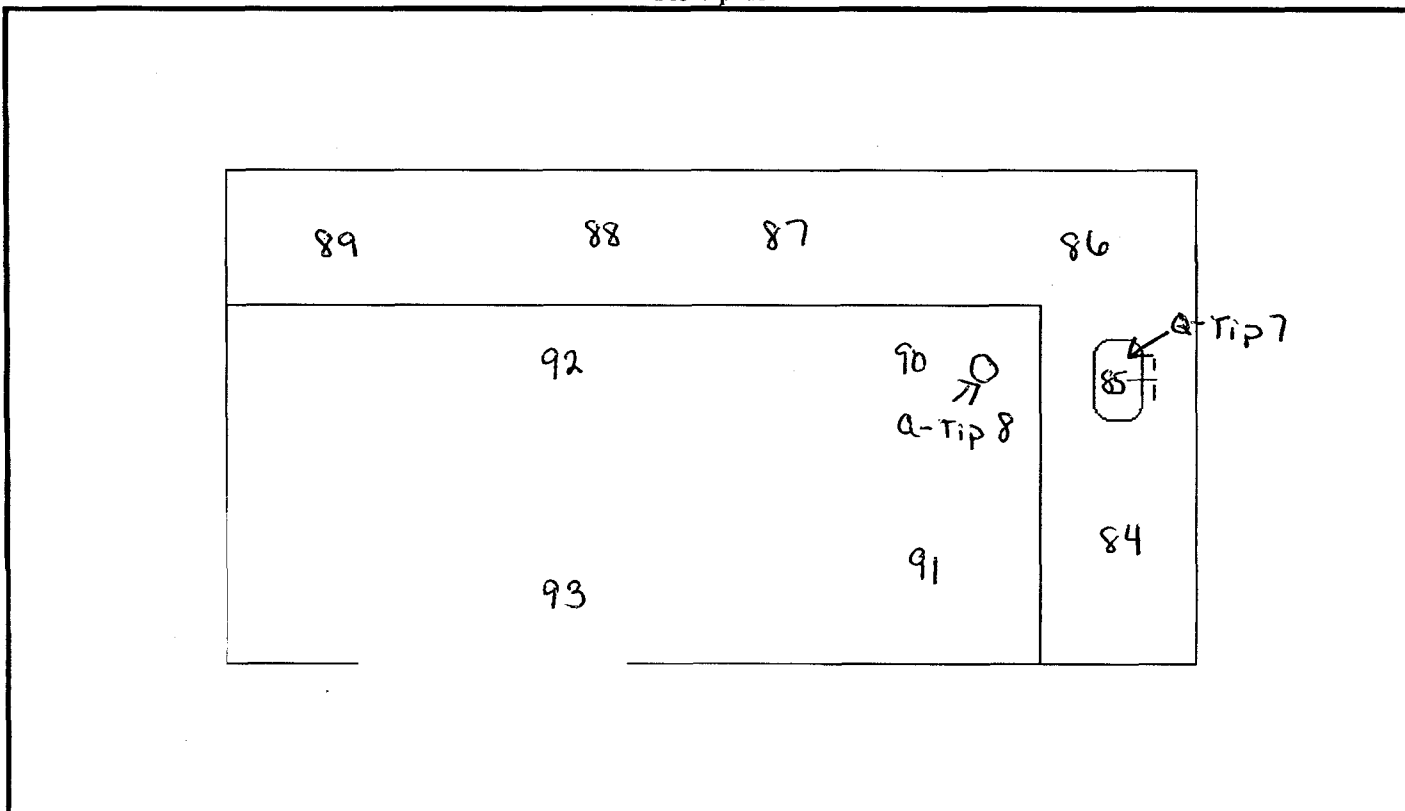
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>
- ☐ Contamination above 200 dpm/100 cm<sup>2</sup>
- ☒ No radiation levels above background found
- ☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



84, 86-89: counter top wipe samples

85: wipe of sink

90-93: wipe samples of the floor

Q-Tip 7: Q-Tip swab of the sink drain

Q-Tip 8: Q-Tip swab of the floor drain

Survey meter used: Mfg & model: Ludlum 3 Serial No.: 61473 Date of Calibration: 10/31/03 <sup>122</sup>

Survey meter locations	Survey meter reading (mR/hr)
Background	0.03
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.03

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/4/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children	
Efficiency %	50		
Efficiency	0.5		Room
LLD	23		308
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	24.5	24.5	NA	NA	NA
84	29.5	5	10	1	10
85	31.5	7	14	1	14
86	29.0	5	9	1	9
87	29.0	5	9	1	9
88	29.5	5	10	1	10
89	28.5	4	8	1	8
90	29.0	5	9	1	9
91	26.0	2	3	1	3
92	33.5	9	18	1	18
93	28.5	4	8	1	8
QTip 7	31.0	7	13	1	13
QTip 8	26.5	2	4	1	4

# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 310		Department: <i>Pediatrics</i>
Contact Person: Sandra Mancuso		Phone Number and Address: (215) 427-8143
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

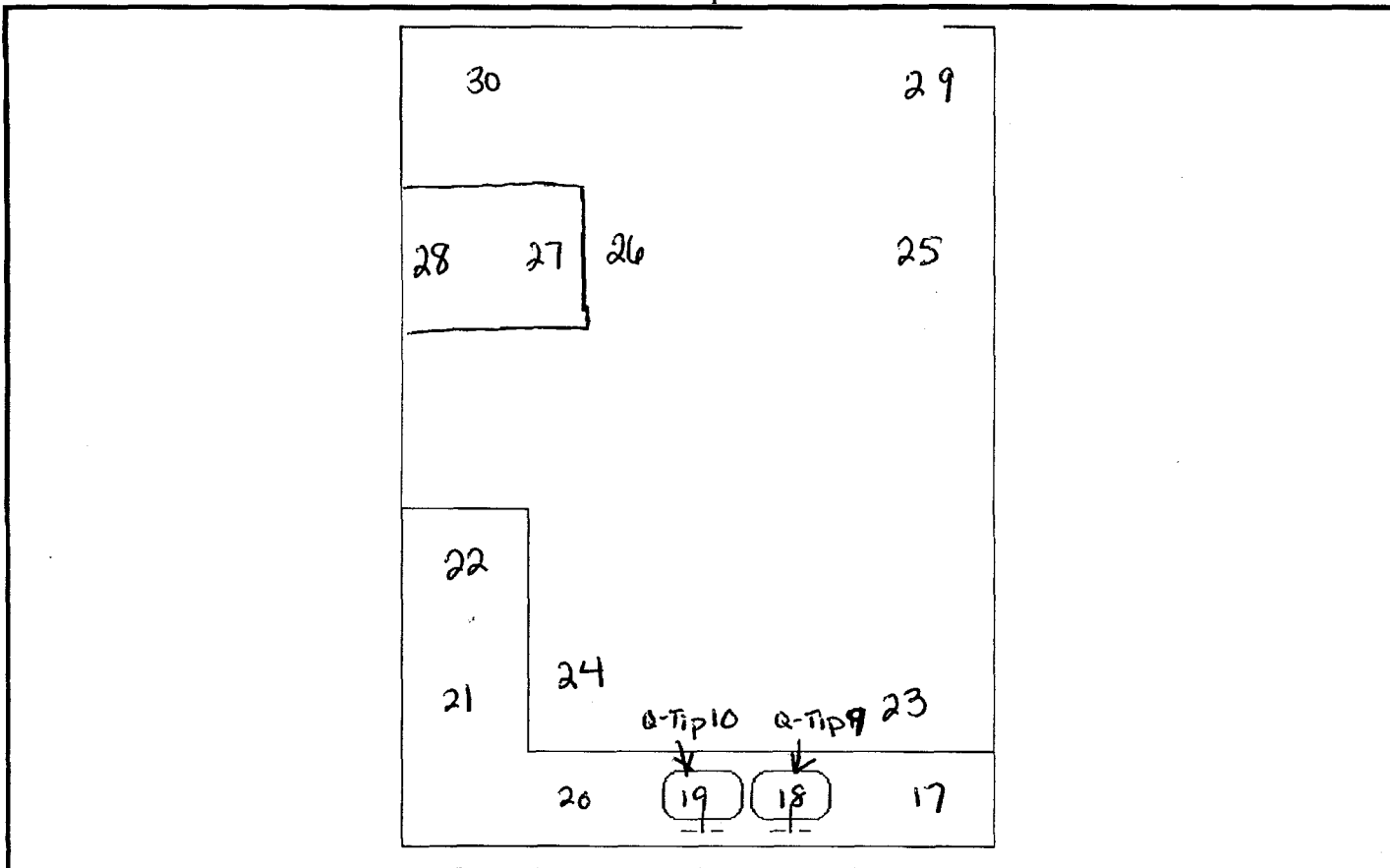
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



Survey meter used: Mfg & model: Victoreen 190 Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.017

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children	
Efficiency %	50	Room	
Efficiency	0.5	310	
LLD	25		
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
17	31.5	4	7	1	7
18	28.0	0	0	1	0
19	36.5	9	17	1	17
20	42.0	14	28	1	28
21	33.0	5	10	1	10
22	26.5	0	0	1	0
23	16.0	0	0	1	0
24	35.5	8	15	1	15
25	34.0	6	12	1	12
26	29.0	1	2	1	2
27	27.5	0	0	1	0
28	31.5	4	7	1	7
29	26.0	0	0	1	0
30	26.5	0	0	1	0
QTip 9	35.0	7	14	1	14
QTip 10	35.5	8	15	1	15

# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 311		Department: <i>Probiotics</i>
Contact Person: Sandra Mancuso		Phone Number and Address: (215) 427-8143
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

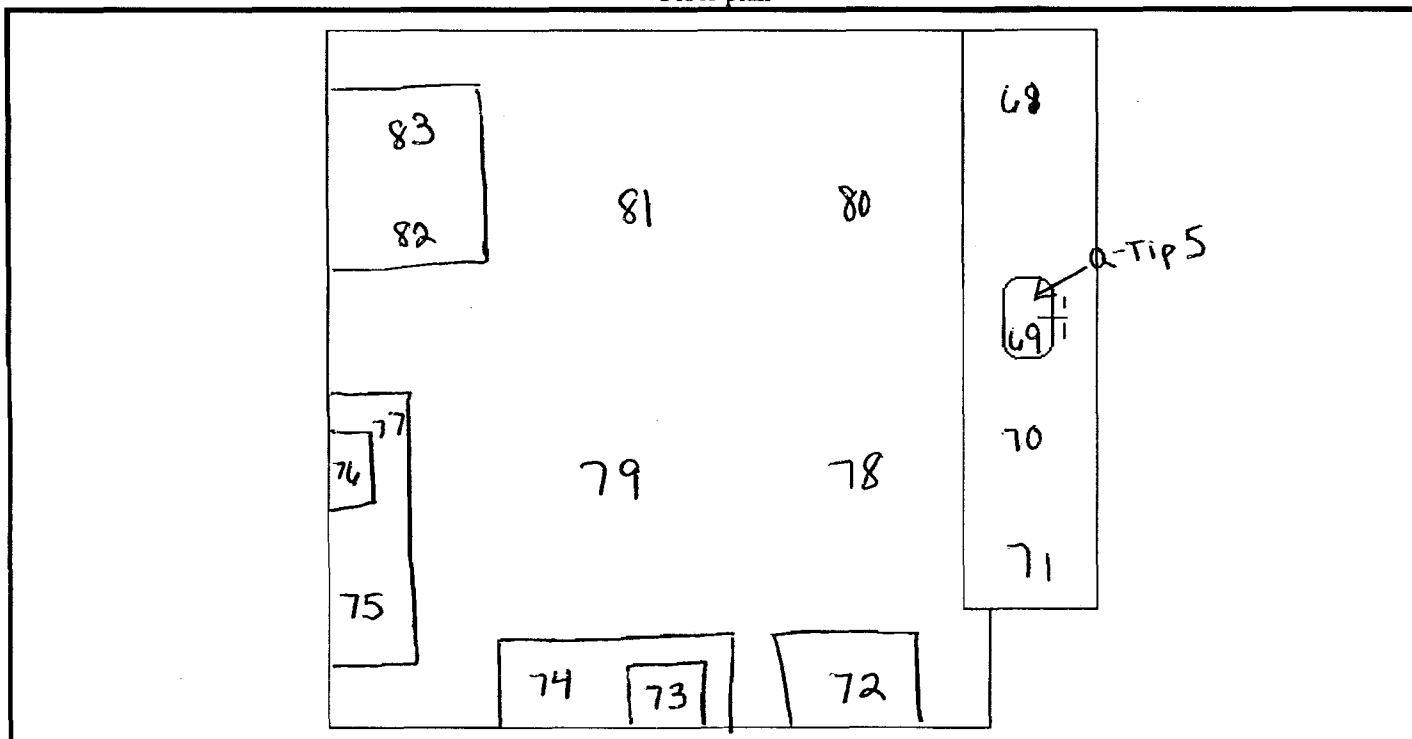
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



*68+70-77+82-83: wipe samples of counter tops*

*69: wipe sample of sink*

*78-81: wipe samples of the floor*

*Q-tip 5: Q-tip swab of sink drain*

Survey meter used: Mfg & model: Victoreen190 Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.017

Survey notes/comments:



Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout
Counter Used	LSC	St. Christopher's Hospital for Children
Efficiency %	50	Room
Efficiency	0.5	311
LLD	25	
Count Time (min)	2	

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
68	39.0	11	22	1	22
69	31.5	4	7	1	7
70	29.5	2	3	1	3
71	37.0	9	18	1	18
72	29.5	2	3	1	3
73	34.5	7	13	1	13
74	34.0	6	12	1	12
75	31.0	3	6	1	6
76	22.0	0	0	1	0
77	30.0	2	4	1	4
78	35.0	7	14	1	14
79	29.5	2	3	1	3
80	29.0	1	2	1	2
81	28.5	1	1	1	1
82	29.0	1	2	1	2
83	31.0	3	6	1	6
QTip 5	36.0	8	16	1	16

# Closeout Survey Report

Building & Room No.: St. Christophers Hospital for Children 316		Department: <i>Pediatrics</i>
Contact Person: <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8143</i>	
Surveyor: N. Noll, K. Berry, & K. Lambert		Survey Date: 10/3/07

Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>
- ☐ Contamination above 200 dpm/100 cm<sup>2</sup>
- ☒ No radiation levels above background found
- ☐ Radiation levels above background found

## Contamination Survey Results

Floor plan

The floor plan diagram shows a rectangular area divided into several sections. The sections are labeled with numbers 51 through 69, and Q1 and Q2. The layout is as follows:

- Top row: 51, 52, 53
- Second row: 62, 60, 58
- Third row: 63, 61, 59
- Bottom row: 57, Q2, Q1, 56, 55
- Left side: 68, 66, 64 (top) and 69, 67, 65 (bottom)
- Right side: 54 (between 58 and 59)

*51-57: counter top, overhead cabinets  
drawers below counter wiped*

*58-69: Wipe samples of the floor*

*Q1+Q2: Q-tip swabs of sink drain*

Survey meter used: Mfg & model: Ludlum 14C Serial No.: 134867 Date of Calibration: 11/1/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.03
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.03

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007		Closeout
Counter Used	LSC	St. Christopher's Hospital for Children Room 316	
Efficiency %	50		
Efficiency	0.5		
LLD	25		
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
51	40.0	12	24	1	24
52	32.5	5	9	1	9
53	28.0	0	0	1	0
54	35.5	8	15	1	15
55	32.0	4	8	1	8
56	31.0	3	6	1	6
57	32.0	4	8	1	8
58	40.0	12	24	1	24
59	23.0	0	0	1	0
60	30.5	3	5	1	5
61	38.5	11	21	1	21
62	33.0	5	10	1	10
63	31.0	3	6	1	6
64	30.5	3	5	1	5
65	38.5	11	21	1	21
66	29.0	1	2	1	2
67	35.5	8	15	1	15
68	36.5	9	17	1	17
69	34.0	6	12	1	12
QTip 1	37.5	10	19	1	19
QTip 2	20.0	0	0	1	0

# Closeout Survey Report

Building & Room No.: St. Christophers Hospital for Children 317		Department: <i>Pediatrics</i>
Contact Person: <del>XXXXXX</del> <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8443</i>	
Surveyor: N. Noll & K. Lambert		Survey Date: 10/3/07

Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan

26	22	18	1	2	Q1	Q2	4	5
					3			
27	23	19	14		14		12	10
								6
28	24	20	17		15		13	11
29	25	21	9		8			7

1-9: counter top, overhead cabinets, and drawers below counter wiped

10-29: Wipe samples of the Floor

Q1+Q2: Q-tip swabs of sink drains

Survey meter used: Mfg & model: Wdium<sup>14C</sup> Serial No.: 134867 Date of Calibration: 11/1/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.03
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.03

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children Room 317	
Efficiency %	50		
Efficiency	0.5		
LLD	25		
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
1	36.5	9	17	1	17
2	31.0	3	6	1	6
3	31.0	3	6	1	6
4	34.5	7	13	1	13
5	35.0	7	14	1	14
6	34.0	6	12	1	12
7	31.5	4	7	1	7
8	27.0	0	0	1	0
9	28.5	1	1	1	1
10	29.5	2	3	1	3
11	28.0	0	0	1	0
12	22.5	0	0	1	0
13	30.0	2	4	1	4
14	23.0	0	0	1	0
15	32.0	4	8	1	8
16	31.5	4	7	1	7
17	35.0	7	14	1	14
18	37.0	9	18	1	18
19	26.0	0	0	1	0
20	33.5	6	11	1	11
21	29.0	1	2	1	2
22	32.0	4	8	1	8
23	22.0	0	0	1	0
24	32.5	5	9	1	9
25	34.5	7	13	1	13
26	21.5	0	0	1	0
27	37.5	10	19	1	19
28	26.5	0	0	1	0
29	27.5	0	0	1	0
QTip 1	26.5	0	0	1	0
QTip 2	32.5	5	9	1	9

# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 318		Department: <u>Pediatrics</u>
Contact Person: <u>Sandra Mancuso</u>		Phone Number and Address: <u>(215) 427-8143</u>
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

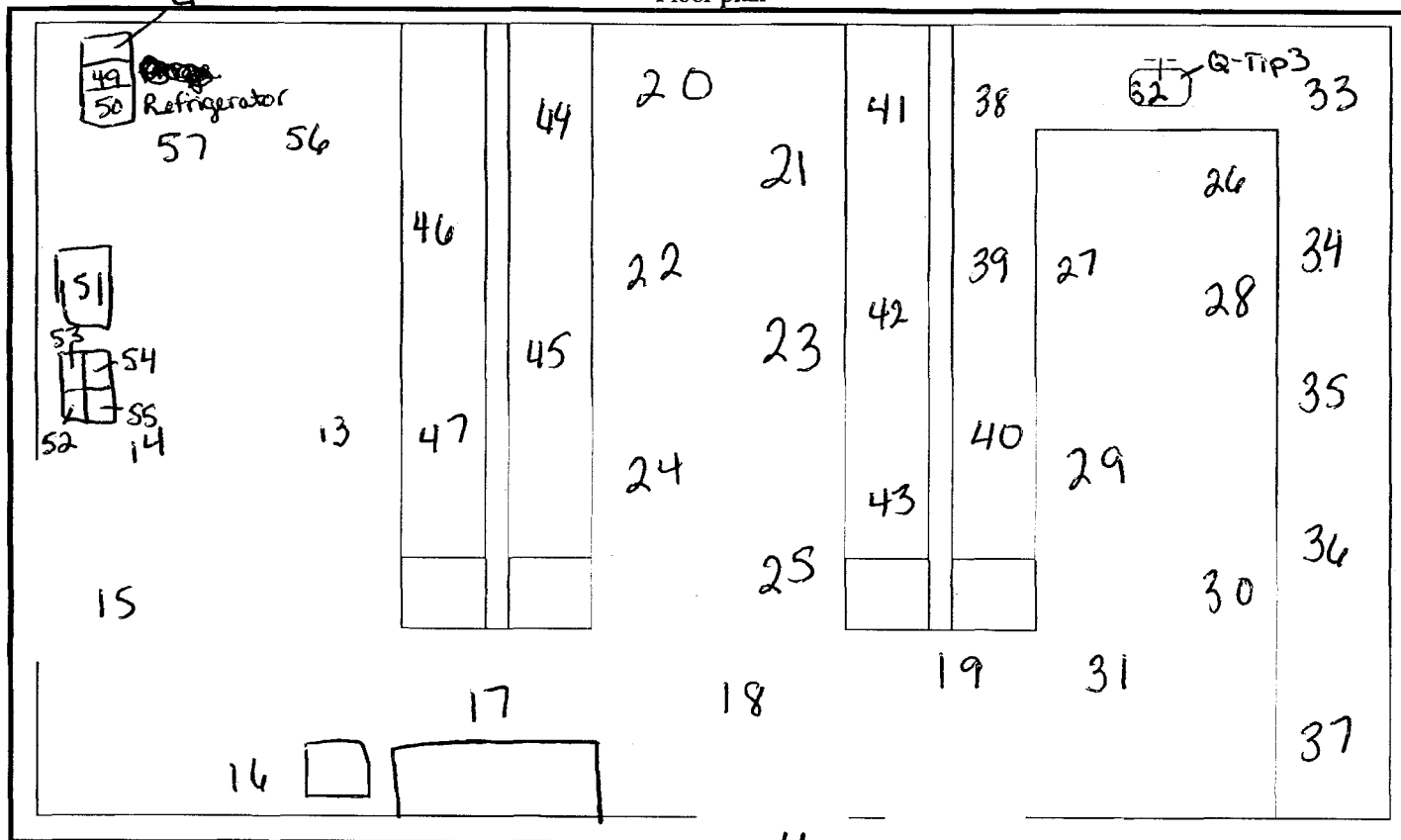
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



Eppendorf Centrifuge 5413 - 58

Q-tip 3 - Q-tip seal  
of disin  
Page 1 of 2



Survey meter used: Mfg & model: Vickrean 190 Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.017

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout
Counter Used	LSC	St. Christopher's Hospital for Children
Efficiency %	50	Room
Efficiency	0.5	318
LLD	25	
Count Time (min)	2	

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
13	34.5	7	13	1	13
14	35.0	7	14	1	14
15	27.0	0	0	1	0
16	29.0	1	2	1	2
17	37.5	10	19	1	19
18	30.0	2	4	1	4
19	25.0	0	0	1	0
20	25.5	0	0	1	0
21	30.0	2	4	1	4
22	25.5	0	0	1	0
23	33.5	6	11	1	11
24	25.0	0	0	1	0
25	29.5	2	3	1	3
26	31.0	3	6	1	6
27	34.0	6	12	1	12
28	27.5	0	0	1	0
29	28.0	0	0	1	0
30	31.5	4	7	1	7
31	28.5	1	1	1	1
32	35.0	7	14	1	14
33	38.5	11	21	1	21
34	28.5	1	1	1	1
35	27.5	0	0	1	0
36	30.5	3	5	1	5
37	32.5	5	9	1	9
38	30.5	3	5	1	5
39	30.0	2	4	1	4
40	34.5	7	13	1	13
41	32.5	5	9	1	9
42	29.0	1	2	1	2
43	25.0	0	0	1	0
44	32.0	4	8	1	8
45	31.5	4	7	1	7
46	35.0	7	14	1	14
47	27.5	0	0	1	0
48	32.0	4	8	1	8
49	35.5	8	15	1	15
50	29.0	1	2	1	2
51	29.5	2	3	1	3
52	37.5	10	19	1	19
53	22.0	0	0	1	0
54	29.0	1	2	1	2
55	25.0	0	0	1	0
56	30.5	3	5	1	5
57	29.0	1	2	1	2
58	35.5	8	15	1	15
QTip 3	26.5	0	0	1	0

# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 319	Department: <i>Pediatrics</i>
Contact Person: <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8143</i>
Surveyor: E. Yeager & A. Giagnacova	Survey Date: <del>10/4/07</del> <i>10/31/07/22</i>

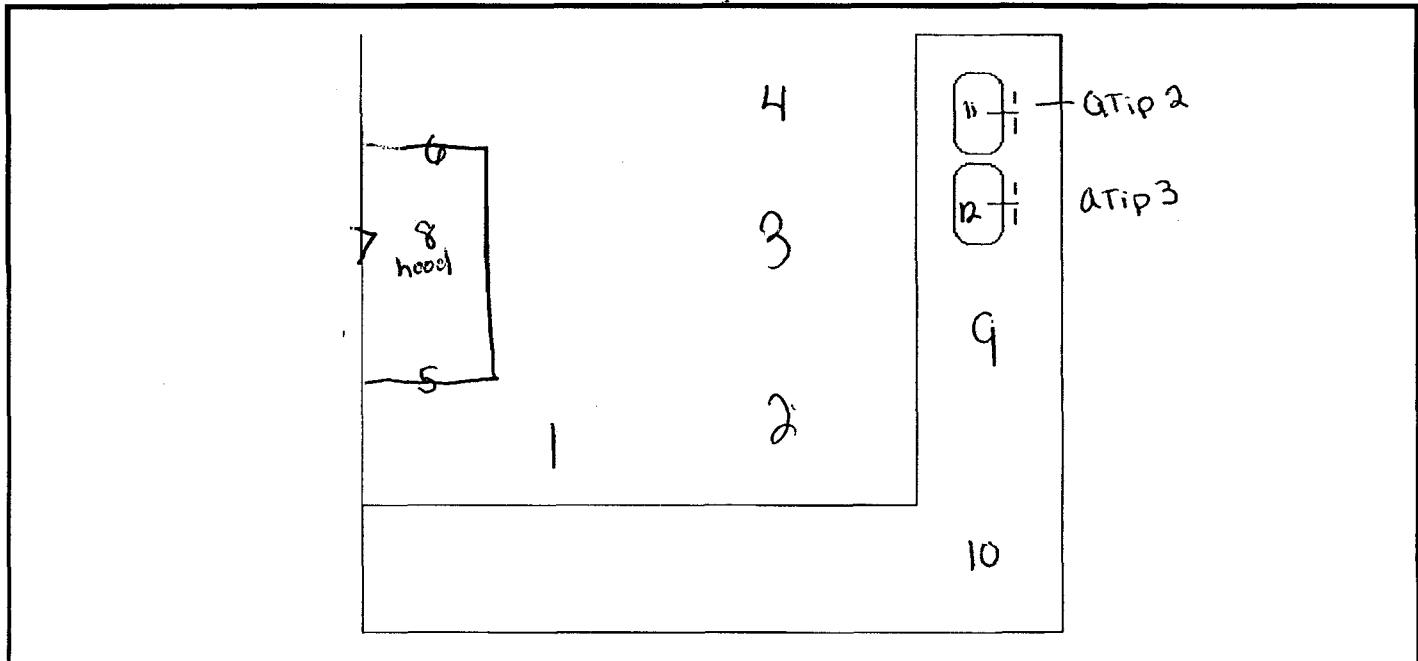
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



1-4: Wipe samples of the Floor  
 5-7: Wipe samples of some hood walls  
 8: Wipe sample of some hood floor  
 9-10: counter top wipes  
 11-12: wipes of sinks  
 Q-tip 2+3: Q-tip swabs of sink drains

Survey meter used: Mfg & model: Victoreen 190 Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.017

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout
Counter Used	LSC	St. Christopher's Hospital for Children
Efficiency %	50	Room
Efficiency	0.5	319
LLD	25	
Count Time (min)	2	

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
1	32.0	4	8	1	8
2	27.0	0	0	1	0
3	26.0	0	0	1	0
4	27.5	0	0	1	0
5	28.0	0	0	1	0
6	29.0	1	2	1	2
7	33.5	6	11	1	11
8	30.5	3	5	1	5
9	31.5	4	7	1	7
10	29.0	1	2	1	2
11	34.0	6	12	1	12
12	37.5	10	19	1	19
QTip 1	28.5	1	1	1	1
QTip 3	25.5	0	0	1	0

# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 320		Department: <i>Pediatrics</i>
Contact Person: <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8143</i>	
Surveyor: E. Yeager & A. Giagnacova		Survey Date: 10/3/07

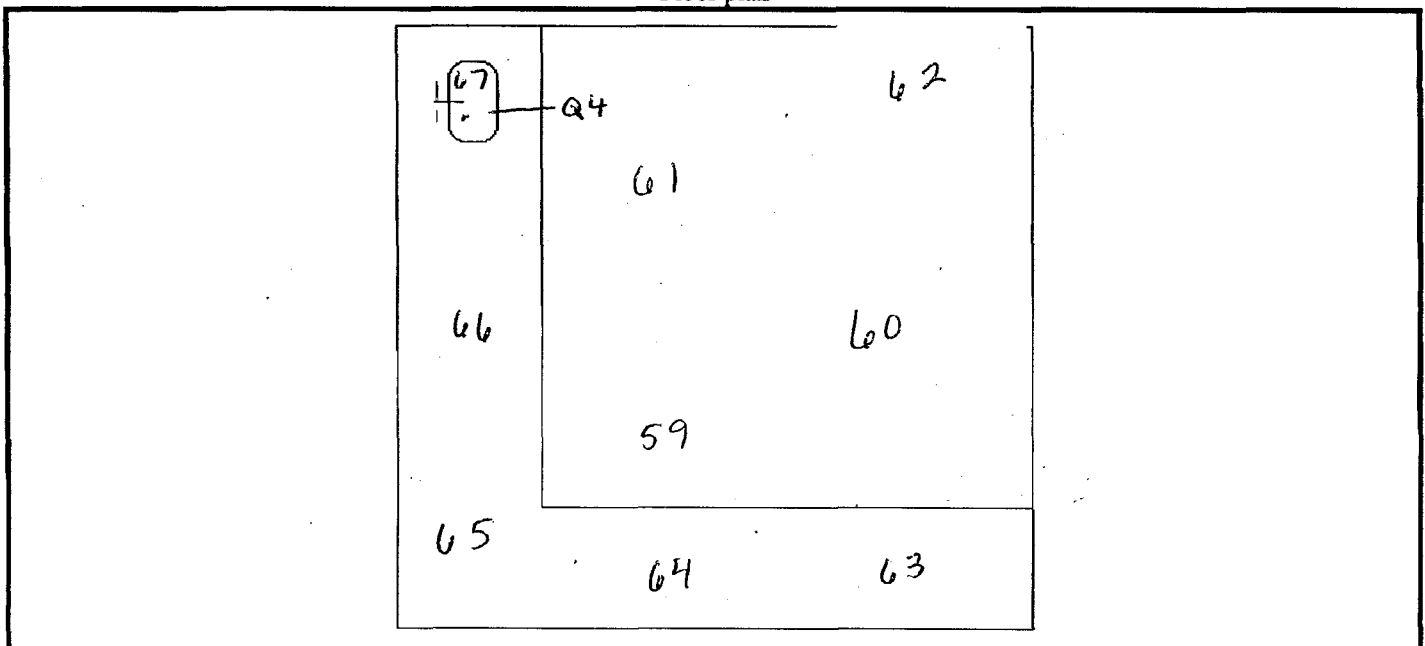
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



*59-62: wipe samples of the floor*

*63-66: wipe samples of the counter top*

*67: wipe sample of the sink*

*Q4: Q-tip swab of sink drain*

Survey meter used: Mfg & model: Victoreen 190 Serial No.: 850 Date of Calibration: 11/28/06

Survey meter locations	Survey meter reading (mR/hr)
Background	0.017
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.017

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 10/3/2007  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 25  
Count Time  
(min) 2

Closeout  
St. Christopher's Hospital for Children  
Room  
320

Wipe Number	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	NA	NA	NA	NA
59	30.0	2	4	1	4
60	30.5	3	5	1	5
61	30.0	2	4	1	4
62	34.5	7	13	1	13
63	25.0	0	0	1	0
64	24.5	0	0	1	0
65	36.0	8	16	1	16
66	29.5	2	3	1	3
67	38.0	10	20	1	20
Q4	29.0	1	2	1	2



# Closeout Survey Report

Building & Room No.: St. Christopher's Hospital for Children 332		Department: <i>Pediatrics</i>
Contact Person: <i>Sandra Mancuso</i>	Phone Number and Address: <i>(215) 427-8143</i>	
Surveyor: N. Noll & K. Berry		Survey Date: 10/3/07

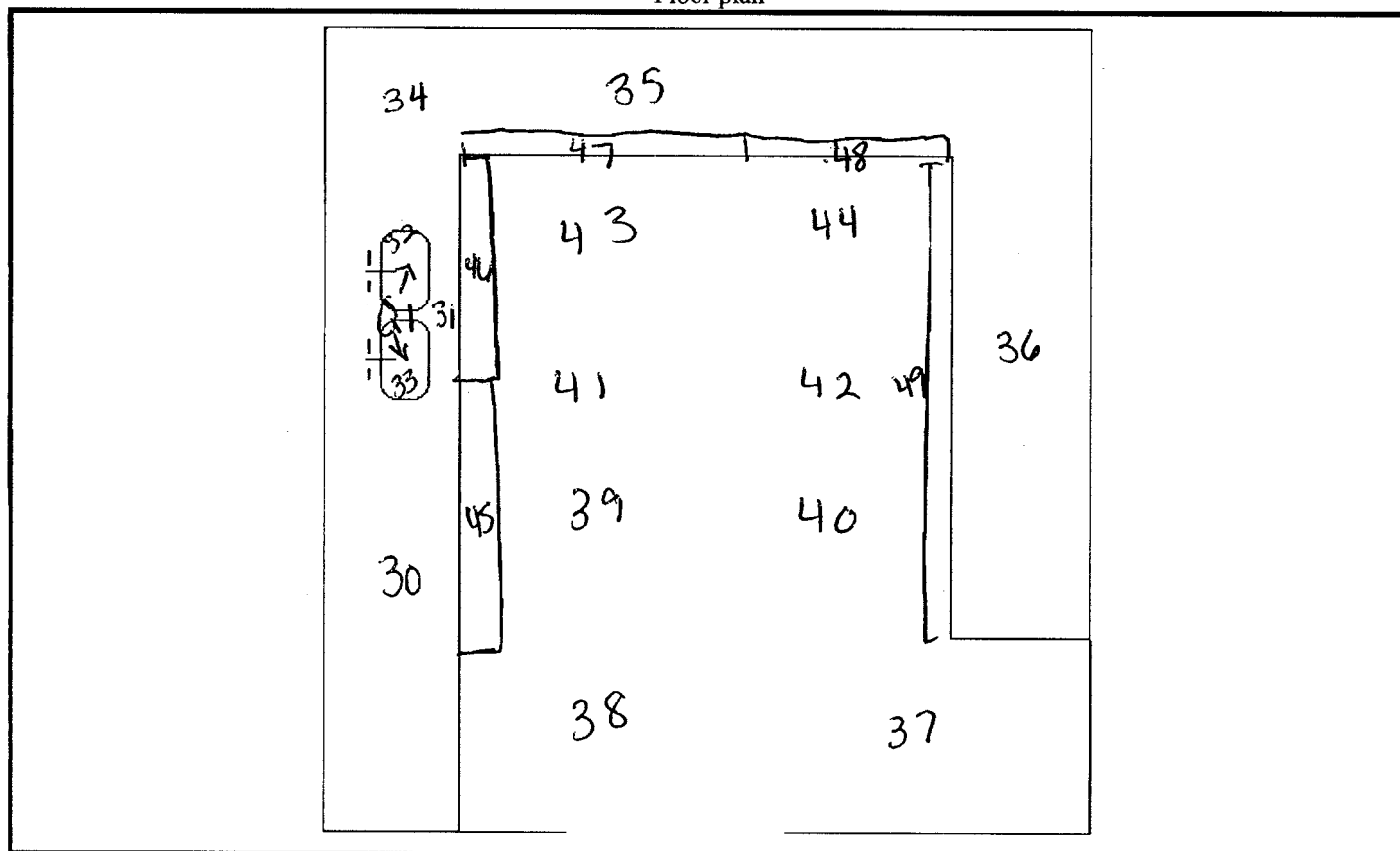
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>
- ☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



50: syringe shield

45-49: wipe samples of drawers below the counter-top  
 31: 2-10 swab of sink drain

30+31+34-36: wipe samples of counter top and overhead shelves  
 32+33: wipe samples of sinks  
 37-38: wipe samples of floor

Survey meter used: Mfg & model: Ludlum 3 Serial No.: 48232 Date of Calibration: 9/10/07

Survey meter locations	Survey meter reading (mR/hr)
Background	0.03
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	0.03

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted	10/3/2007	Closeout	
Counter Used	LSC	St. Christopher's Hospital for Children	
Efficiency %	50	Room	
Efficiency	0.5	332	
LLD	25		
Count Time (min)	2		

Wipe Number	Total cpm	net cpm (total cpm for background)	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	28.0	28	NA	NA	NA
30	28.5	1	1	1	1
31	30.0	2	4	1	4
32	30.0	2	4	1	4
33	37.0	9	18	1	18
34	28.5	1	1	1	1
35	36.5	9	17	1	17
36	27.0	0	0	1	0
37	29.0	1	2	1	2
38	24.0	0	0	1	0
39	35.0	7	14	1	14
40	33.0	5	10	1	10
41	27.5	0	0	1	0
42	36.5	9	17	1	17
43	31.0	3	6	1	6
44	24.5	0	0	1	0
45	21.5	0	0	1	0
46	28.0	0	0	1	0
47	28.5	1	1	1	1
48	29.5	2	3	1	3
49	31.0	3	6	1	6
50	31.5	4	7	1	7
QTip 1	25.5	0	0	1	0

# Closeout Survey Report

Building & Room No.: St Christopher's Hospital Room 303		Department: N/A
Contact Person:	Phone Number and Address:	
Surveyor: Nikki Noll, Andrew Giagnacova, Ed Yeager		Survey Date: February 5, 2008

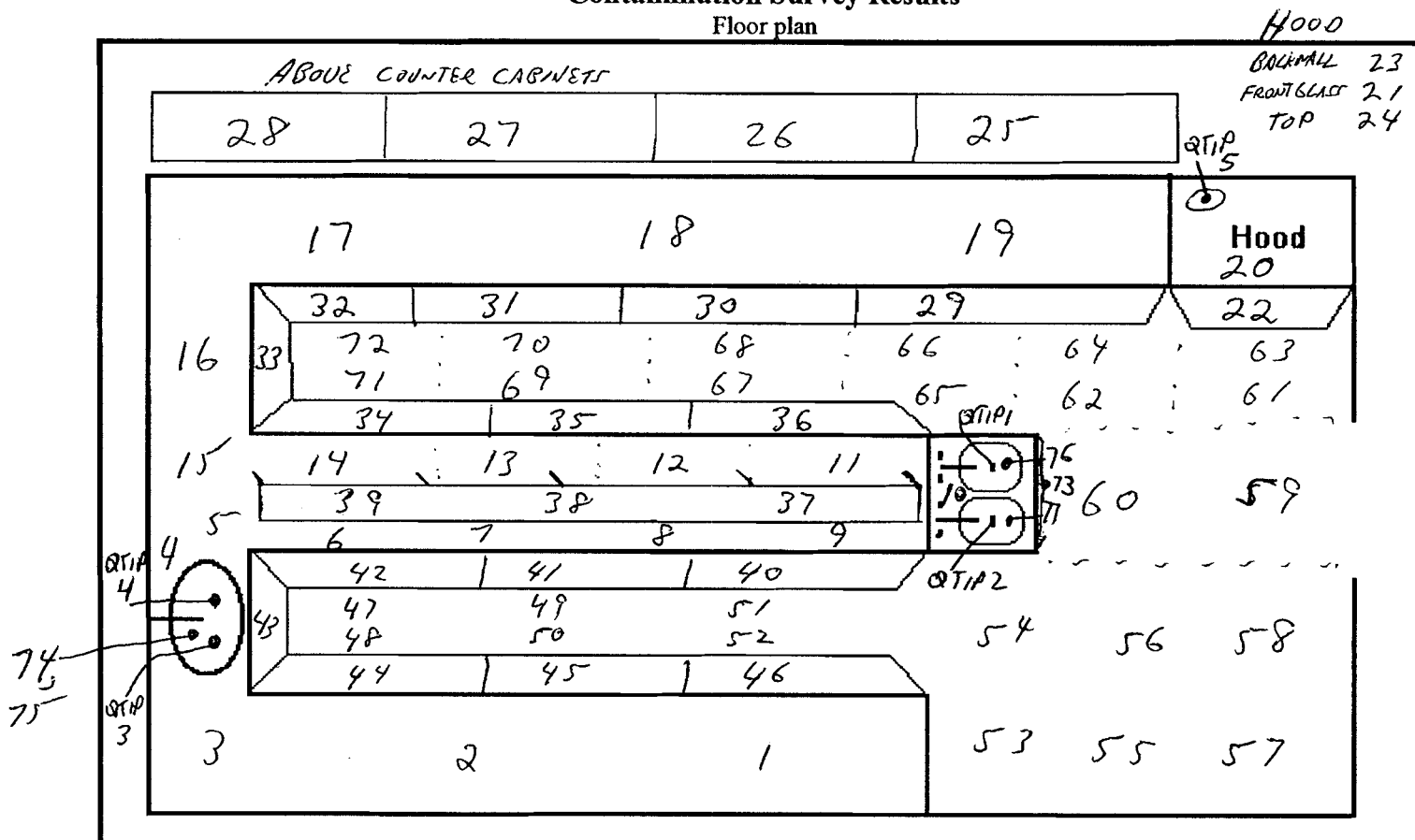
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>
- ☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

## Floor plan



Survey meter used: Mfg & model: Victoreen model 190\_\_\_\_ Serial No.: 850 Date of Calibration: 12/20/2007

Survey meter locations	Survey meter reading (mR/hr)
Background	0.020
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	Highest reading in sink 0.035 All other reading background

Survey notes/comments:

**Drexel University Radiation Safety Office  
Wipe Test Results**

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 28  
Count Time  
(min) 2

303 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	42-1	37.0	NA	NA	NA	NA
1	42-4	39.0	2	4	1	4
2	42-5	78.0	41	82	1	82
3	42-6	40.0	3	6	1	6
4	42-7	89.0	52	104	1	104
5	42-8	49.0	12	24	1	24
6	42-9	38.0	1	2	1	2
7	42-10	34.0	0	0	1	0
8	42-11	30.0	0	0	1	0
9	42-12	40.0	3	6	1	6
10	42-13	42.0	5	10	1	10
11	42-14	40.0	3	6	1	6
12	42-15	28.0	0	0	1	0
13	42-16	36.0	0	0	1	0
14	42-17	41.0	4	8	1	8
15	42-18	32.0	0	0	1	0
16	11-1	31.0	0	0	1	0
17	11-2	37.0	0	0	1	0
18	11-3	38.0	1	2	1	2
19	11-4	39.0	2	4	1	4
20	11-5	40.0	3	6	1	6
21	11-6	38.0	1	2	1	2
22	11-7	33.0	0	0	1	0
23	11-8	31.0	0	0	1	0
24	11-9	32.0	0	0	1	0
25	11-10	44.0	7	14	1	14
26	11-11	40.0	3	6	1	6
27	11-12	32.0	0	0	1	0
28	11-13	30.0	0	0	1	0
29	11-14	35.0	0	0	1	0
30	11-15	39.0	2	4	1	4
31	11-16	36.0	0	0	1	0
32	11-17	34.0	0	0	1	0
33	11-18	38.0	1	2	1	2
34	29-1	34.0	0	0	1	0
35	29-2	36.0	0	0	1	0
36	29-3	30.0	0	0	1	0
37	29-4	28.0	0	0	1	0
38	29-5	39.0	2	4	1	4
39	29-6	28.0	0	0	1	0

**Drexel University Radiation Safety Office  
Wipe Test Results**

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 28  
Count Time  
(min) 2

303 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	42-1	37.0	NA	NA	NA	NA
40	29-7	33.0	0	0	1	0
41	29-8	36.0	0	0	1	0
42	29-9	32.0	0	0	1	0
43	29-10	38.0	1	2	1	2
44	29-11	36.0	0	0	1	0
45	29-12	34.0	0	0	1	0
46	29-13	35.0	0	0	1	0
47	29-14	41.0	4	8	1	8
48	29-15	31.0	0	0	1	0
49	29-16	30.0	0	0	1	0
50	29-17	30.0	0	0	1	0
51	29-18	30.0	0	0	1	0
52	29-1	32.0	0	0	1	0
53	29-2	34.0	0	0	1	0
54	29-3	33.0	0	0	1	0
55	29-4	43.0	6	12	1	12
56	29-5	41.0	4	8	1	8
57	29-6	37.0	0	0	1	0
58	29-7	28.0	0	0	1	0
59	29-8	35.0	0	0	1	0
60	29-9	39.0	2	4	1	4
61	29-10	31.0	0	0	1	0
62	29-11	36.0	0	0	1	0
63	29-12	37.0	0	0	1	0
64	29-13	35.0	0	0	1	0
65	29-14	30.0	0	0	1	0
66	29-15	39.0	2	4	1	4
67	29-16	36.0	0	0	1	0
68	29-17	32.0	0	0	1	0
69	29-18	31.0	0	0	1	0
70	26-1	30.0	0	0	1	0
71	26-2	35.0	0	0	1	0
72	26-3	31.0	0	0	1	0
73	26-4	31.0	0	0	1	0
74	26-5	43.0	6	12	1	12
75	26-6	31.0	0	0	1	0
76	26-7	35.0	0	0	1	0
77	26-8	35.0	0	0	1	0

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 25  
Count Time  
(min) 2

303 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	42-2	28.0	NA	NA	NA	NA
Qtip #1	26-9	35.0	7	14	1	14
Qtip #2	26-10	32.0	4	8	1	8
Qtip #3	26-11	33.0	5	10	1	10
Qtip #4	26-12	55.0	27	54	1	54
Qtip #5	26-13	33.0	5	10	1	10

## Closeout Survey Report

Building & Room No.: St Christophers Hospital Room 305		Department:
Contact Person:		Phone Number and Address:
Surveyor: Nikki Noll, Andrew Giagnacova, Ed Yeager		Survey Date: February 5, 2008

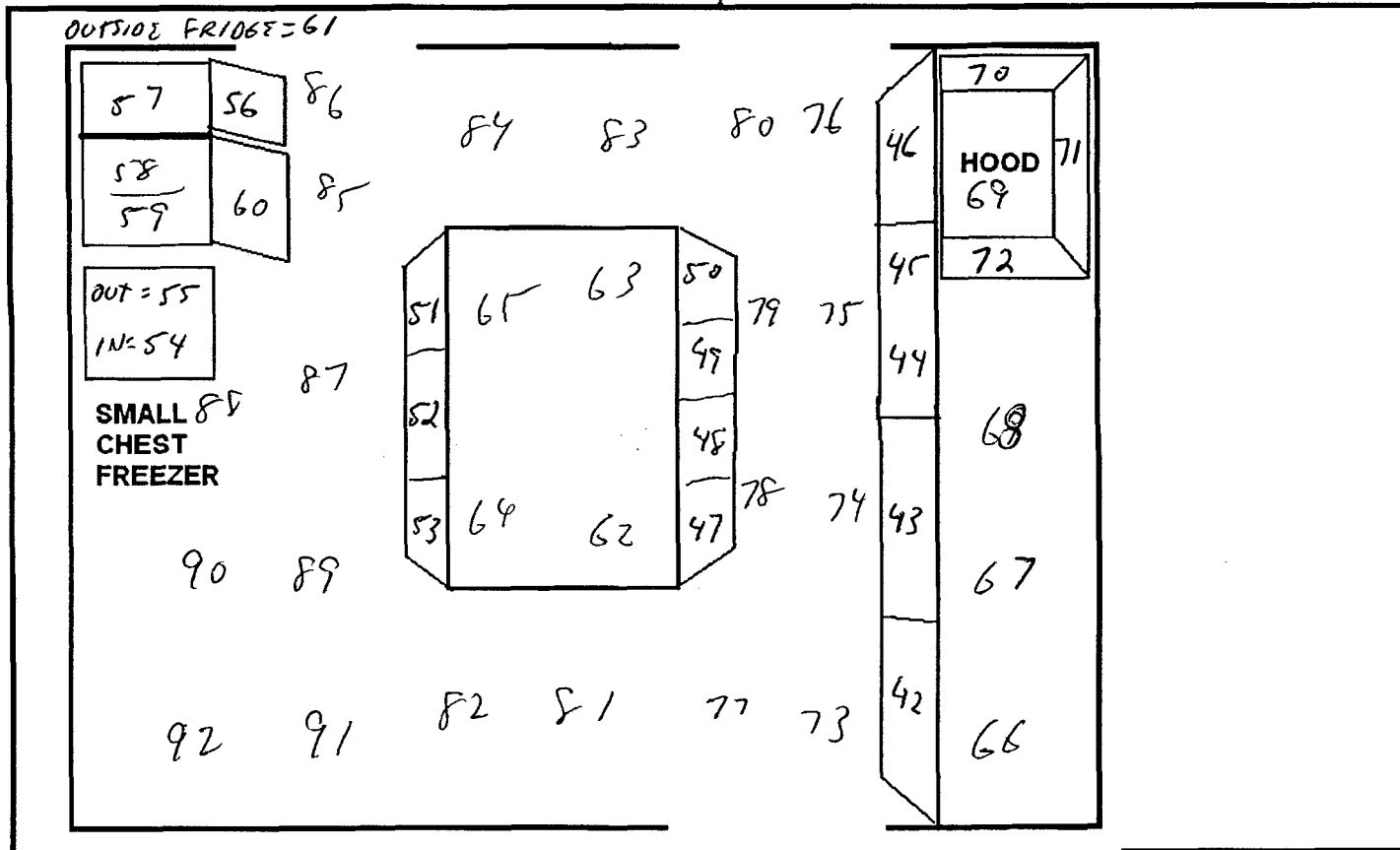
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and /or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

### Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>
- ☐ Contamination above 200 dpm/100 cm<sup>2</sup>
  
- ☒ No radiation levels above background found
- ☐ Radiation levels above background found

### Contamination Survey Results

Floor plan





Survey meter used: Mfg & model: Victoreen model 190 Serial No.: 850 Date of Calibration: Dec 20, 2007

Survey meter locations	Survey meter reading (mR/hr)
Background	0.020
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	No readings above background

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 26  
Count Time  
(min) 2

305 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 26  
Count Time  
(min) 2

305 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	38-1	30.0	NA	NA	NA	NA
42	38-3	29.0	0	0	1	0
43	38-4	31.0	1	2	1	2
44	38-5	33.0	3	6	1	6
45	38-6	39.0	9	18	1	18
46	38-7	33.0	3	6	1	6
47	38-8	32.0	2	4	1	4
48	38-9	34.0	4	8	1	8
49	38-10	34.0	4	8	1	8
50	38-11	29.0	0	0	1	0
51	38-12	33.0	3	6	1	6
52	38-13	35.0	5	10	1	10
53	38-14	30.0	0	0	1	0
54	38-15	38.0	8	16	1	16
55	38-16	33.0	3	6	1	6
56	38-17	35.0	5	10	1	10
57	38-18	35.0	5	10	1	10
58	1-1	29.0	0	0	1	0
59	1-2	30.0	0	0	1	0
60	1-3	30.0	0	0	1	0
61	1-4	27.0	0	0	1	0
62	1-5	29.0	0	0	1	0
63	1-6	34.0	4	8	1	8
64	1-7	36.0	6	12	1	12
65	1-8	33.0	3	6	1	6
66	1-9	33.0	3	6	1	6
67	1-10	37.0	7	14	1	14

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	38-1	30.0	NA	NA	NA	NA
68	1-11	25.0	0	0	1	0
69	1-12	33.0	3	6	1	6
70	1-13	28.0	0	0	1	0
71	1-14	34.0	4	8	1	8
72	1-15	33.0	3	6	1	6
73	1-16	30.0	0	0	1	0
74	1-17	29.0	0	0	1	0
75	1-18	32.0	2	4	1	4
76	28-1	33.0	3	6	1	6
77	28-2	36.0	6	12	1	12
78	28-3	35.0	5	10	1	10
79	28-4	31.0	1	2	1	2
80	28-5	32.0	2	4	1	4
81	28-6	32.0	2	4	1	4
82	28-7	32.0	2	4	1	4
83	28-8	32.0	2	4	1	4
84	28-9	30.0	0	0	1	0
85	28-10	32.0	2	4	1	4
86	28-11	36.0	6	12	1	12
87	28-12	32.0	2	4	1	4
88	28-13	32.0	2	4	1	4
89	28-14	31.0	1	2	1	2
90	28-15	34.0	4	8	1	8
91	28-16	30.0	0	0	1	0
92	28-17	36.0	6	12	1	12

# Closeout Survey Report

Building & Room No.: St Christophers Hospital Room 306		Department:
Contact Person:	Phone Number and Address:	
Surveyor: Nikki Noll, Andrew Giagnacova, Ed Yeager		Survey Date: February 5, 2008

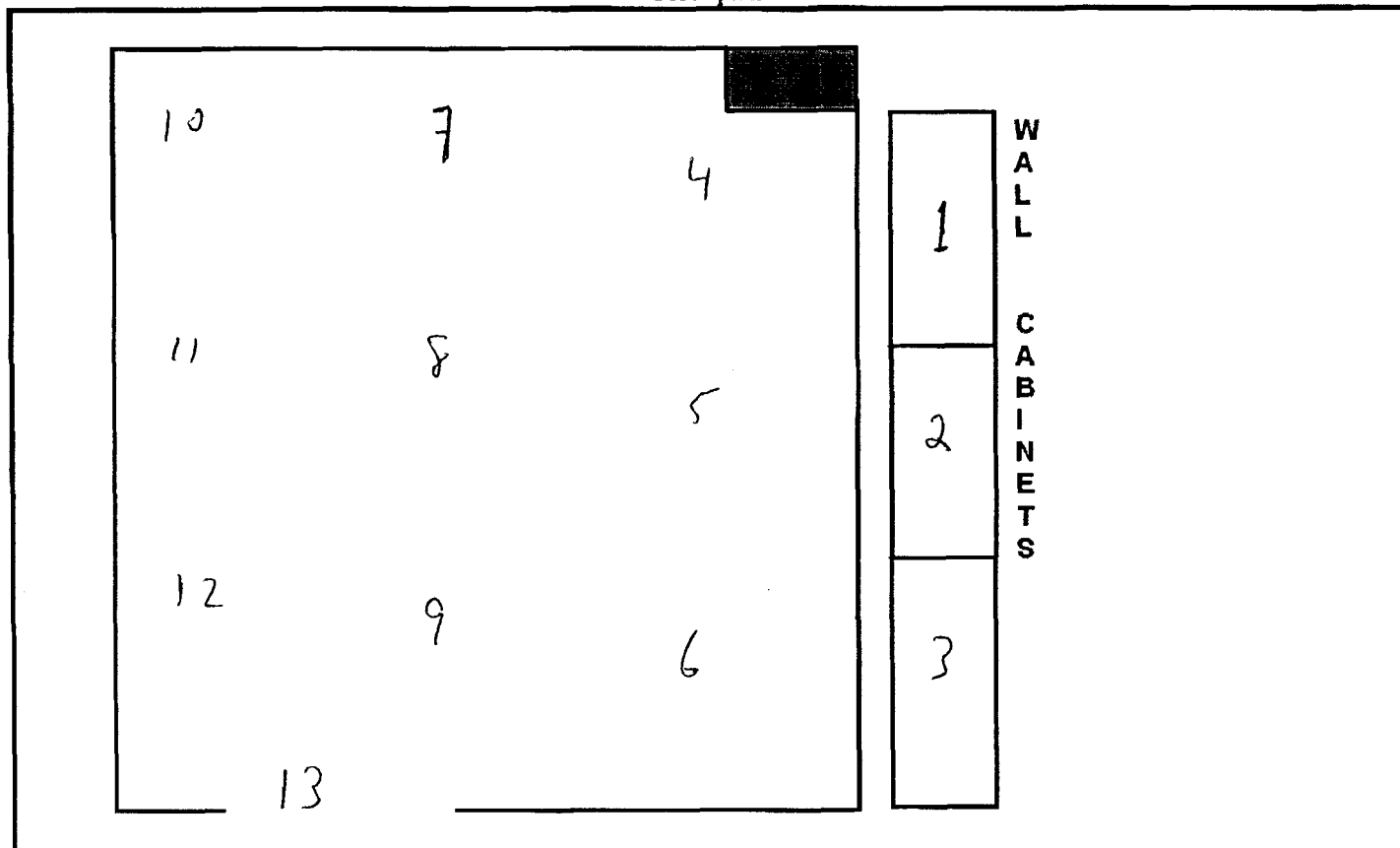
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

## Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>  
☐ Contamination above 200 dpm/100 cm<sup>2</sup>  
☒ No radiation levels above background found  
☐ Radiation levels above background found

## Contamination Survey Results

Floor plan



Survey meter used: Mfg & model: Victoreen model 190 Serial No.: 850 Date of Calibration: Dec 20, 2007

Survey meter locations	Survey meter reading (mR/hr)
Background	0.020
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	No readings above background

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 27  
Count Time  
(min) 2

306 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	5-1	34.0	NA	NA	NA	NA
1	5-3	29.0	0	0	1	0
2	5-4	32.0	0	0	1	0
3	5-5	29.0	0	0	1	0
4	5-6	33.0	0	0	1	0
5	5-7	37.0	3	6	1	6
6	5-8	44.0	10	20	1	20
7	5-9	35.0	1	2	1	2
8	5-10	29.0	0	0	1	0
9	5-11	39.0	5	10	1	10
10	5-12	31.0	0	0	1	0
11	5-13	31.0	0	0	1	0
12	5-14	36.0	2	4	1	4
13	7-15	40.0	6	12	1	12

## Closeout Survey Report

Building & Room No.: St Christophers Hospital Room 307		Department:
Contact Person:		Phone Number and Address:
Surveyor: Nikki Noll, Andrew Giagnacova, Ed Yeager		Survey Date: February 5, 2008

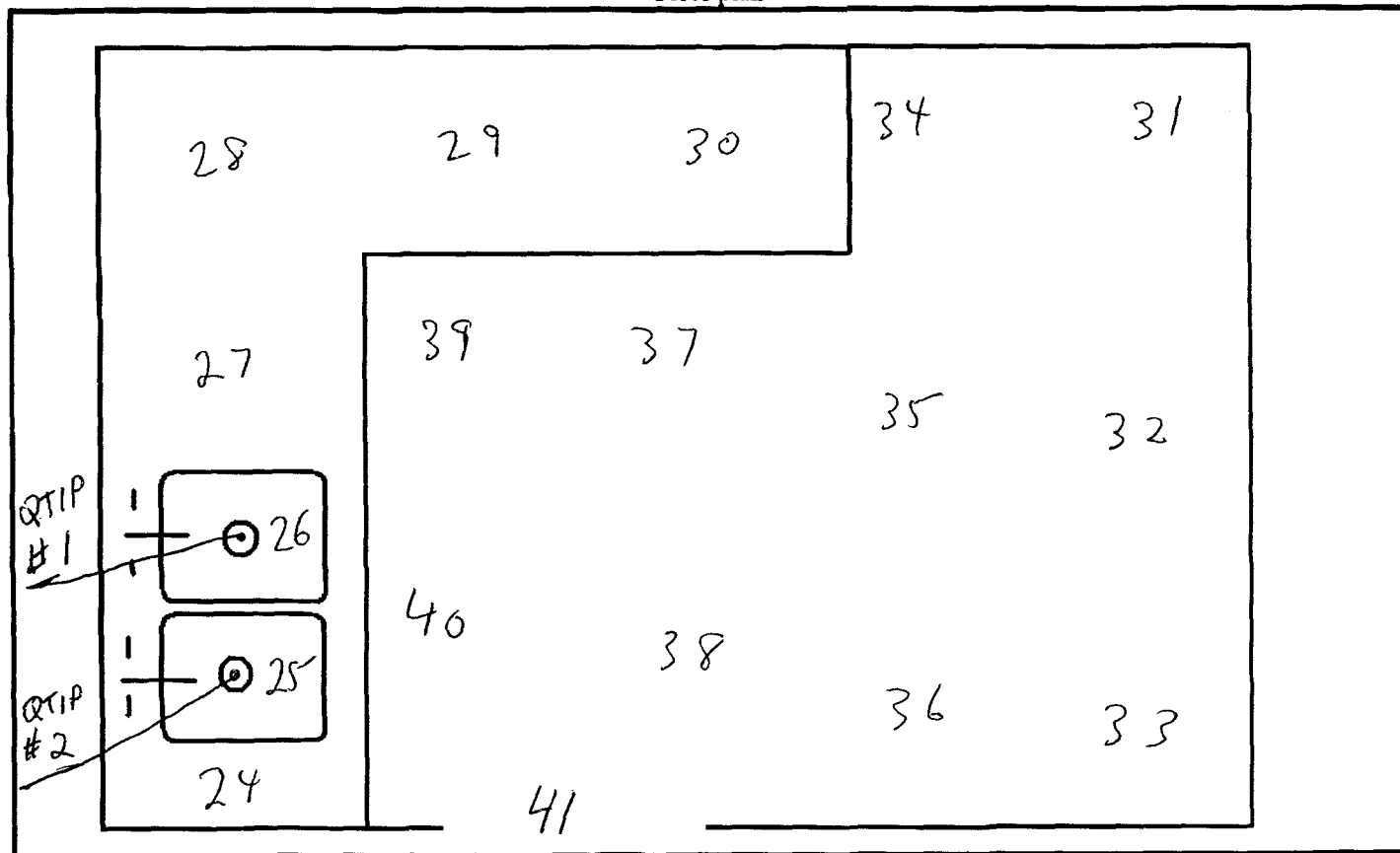
Completed	Not Completed	Not Applicable	Closeout Checklist
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive material removed. Cabinets, freezers, refrigerators, drawers, etc. checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Thorough contamination survey performed for fixed and removable contamination throughout facility, including workbenches, floors, remaining equipment, glassware, pigs, refrigerators, freezers, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contaminated items decontaminated or disposed as radioactive waste
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive waste removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation labels removed/obliterated from radioactive material containers, pigs, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation warning signs removed from doors, hoods, work areas, equipment, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radioactive sources removed from equipment such as gamma and/or beta counters
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Department notified

### Closeout Contamination Survey Results Summary

- ☒ No contamination above 200 dpm/100 cm<sup>2</sup>
- ☐ Contamination above 200 dpm/100 cm<sup>2</sup>
  
- ☒ No radiation levels above background found
- ☐ Radiation levels above background found

### Contamination Survey Results

Floor plan



Survey meter used: Mfg & model: Victoreen model 190 Serial No.: 850 Date of Calibration: Dec 20, 2007

Survey meter locations	Survey meter reading (mR/hr)
Background	0.020
Thorough readings taken throughout the laboratory (including floors, shelves, cabinets, etc.)	No readings above background

Survey notes/comments:

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 26  
Count Time  
(min) 2

307 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Drexel University Radiation Safety Office  
Wipe Test Results

Date Counted 2/5/2008  
Counter Used LSC  
Efficiency % 50  
Efficiency 0.5  
LLD 26  
Count Time  
(min) 2

307 St Christophers Hospital  
CLOSEOUT  
Dr. DeLuca's labs

Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>	Wipe Number	Beta Wipe #	Total cpm	net cpm	dpm	total area wiped (x100cm <sup>2</sup> )	dpm/100cm <sup>2</sup>
Background	7-1	31.0	NA	NA	NA	NA	Background	7-1	31.0	NA	NA	NA	NA
14	7-3	33.0	2	4	1	4	29	7-18	33.0	2	4	1	4
15	7-4	35.0	4	8	1	8	30	9-1	36.0	5	10	1	10
16	7-5	32.0	1	2	1	2	31	9-2	24.0	0	0	1	0
17	7-6	35.0	4	8	1	8	32	9-3	27.0	0	0	1	0
18	7-7	37.0	6	12	1	12	33	9-4	28.0	0	0	1	0
19	7-8	29.0	0	0	1	0	34	9-5	24.0	0	0	1	0
20	7-9	31.0	0	0	1	0	35	9-6	29.0	0	0	1	0
21	7-10	35.0	4	8	1	8	36	9-7	33.0	2	4	1	4
22	7-11	30.0	0	0	1	0	37	9-8	40.0	9	18	1	18
23	7-12	36.0	5	10	1	10	38	9-9	33.0	2	4	1	4
24	7-13	28.0	0	0	1	0	39	9-10	36.0	5	10	1	10
25	7-14	26.0	0	0	1	0	40	9-11	31.0	0	0	1	0
26	7-15	33.0	2	4	1	4	41	9-12	28.0	0	0	1	0
27	7-16	34.0	3	6	1	6	Qtip# 1	9-14	28.0	0	0	1	0
28	7-17	30.0	0	0	1	0	Qtip# 2	9-15	48.0	17	34	1	34