



2910 Fortune Circle West, Suite E
Indianapolis, IN 46241

February 7, 2012

United States Nuclear Regulatory Commission
Region III
Materials Control, ISFSI, and Decommissioning Branch
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Attn: Peter J. Lee, Ph.D., CHP

Subject: Biostorage Technologies, Inc. License No. 13-32622-01 Amendment
Request- Additional Information

Mail Control No. 576564

Dear Doctor Lee:

This letter includes additional information relating to our amendment request for the removal from our license of the address of prior use at 2655 Fortune Circle West, Suites A-B, Indianapolis, IN 46241.

Extensive surface wipe samples were taken and analyzed on March 7, 2011 for all former areas of use at this address. However, one group of the wipes, taken in two different rooms of the former facility, exhibited an overall, consistent elevation of count rate in the lower energy window using liquid scintillation analysis. It is suspected that these 35 wipes exhibited spurious counts due to photoluminescence, as the counts all occurred consistently and solely in the low energy (H-3) window. In addition, only frozen C-14 samples, and *no* tritiated samples, had been present in these particular areas. The areas of the building originally wiped for these samples were thus re-wiped and re-assayed on January 24, 2012. Each wipe covered approximately 400-600 square centimeters.

The samples were counted on a Beckman® LS6000IC liquid scintillation counter, serial no. 221755. Current calibration showed an unquenched efficiency of 78.1% for C-14, and a C-14 quench-corrected efficiency for the group of assayed wipes of roughly 50%. The results showed all areas to be not significantly above background at all energies. The Beckman "H" number (*quench monitoring coefficient*) ranged from 340-400, indicating a low quench for the group of samples counted. A copy of the results is attached.

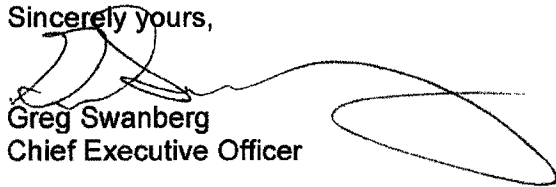
These results provide conclusive evidence that the counting results for the original group of wipes for this area were anomalous. We feel it provides

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conclusive evidence that the former facility address meets the criteria for unrestricted use.

We hope this additional information proves useful in your assessment. If you have any questions or concerns, please contact our radiation safety officer, Thomas A. Schumacher, MS, CHP at (317) 902-9868.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Greg Swanberg', with a large, sweeping flourish extending to the right.

Greg Swanberg
Chief Executive Officer

Attachments:

Close-Out Removable Contamination Survey Results
Instrument Calibration and Efficiency Information



**Removable Contamination
Close-Out
Resurvey Locations**

January 24, 2012

BioStorage Technologies, Inc.
License No. 13-32622-01

**2655 Fortune Circle West,
Suites A-B, Indianapolis, IN
46241**



**receipt and processing
area**



receiving dock



Biostorage Technologies • Receiving Dock
 • Receipt & Processing Area

ID: SWIPE TEST

24 JAN 2012 10:01

USER: 2 COMMENT: PLEASE DO NOT CHANGE PGRM

FRESET TIME : 1.00
 DATA CALC : CPM HH : YES SAMPLE REPEATS: 1 PRINTER : STD
 COUNT BLANK : YES ICH : NO REPLICATES : 1 RS232 : OFF
 TWO PHASE : NO AGC : YES CYCLE REPEATS : 1
 SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 50
 LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

Re-wipes

ISOTOPE 1: 3H %ERROR: 2.00 FACTOR: 1.0000 BKG. SUB: 0
 ISOTOPE 2: 14C %ERROR: 2.00 FACTOR: 1.0000 BKG. SUB: 0
 ISOTOPE 3: 32P %ERROR: 2.00 FACTOR: 1.0000 BKG. SUB: 0

SAM NO	POS	TIME MIN	HH	3H		14C		32P		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR		
B1	**-1	0.15	343.5	0.00	0.00	13.33	141.42	13.33	141.42	66.92	0.72

COUNT TERMINATED: COUNT RATE TOO LOW

Blank Average CPM for 3H 0.00 COEF. OF VAR: 0.000
 Blank Average CPM for 14C 13.33 COEF. OF VAR: 0.000
 Blank Average CPM for 32P 13.33 COEF. OF VAR: 0.000

1	**-3	1.00	360.4	14.00	53.45	43.67	55.32	-6.33	1.E+06	85.72	2.40
2	**-4	1.00	362.6	23.00	41.70	68.67	38.08	-0.33	1.E+06	70.08	4.06
3	**-5	1.00	358.6	27.00	38.49	53.67	46.53	-3.33	1.E+06	81.59	5.77
4	**-6	1.00	358.8	13.00	55.47	39.67	60.06	0.67	3043.0	81.64	7.43
5	**-7	1.00	359.1	15.00	51.64	32.67	71.11	-3.33	1.E+06	93.51	9.12
6	**-8	1.00	363.6	21.00	43.64	41.67	57.58	-9.33	1.E+06	92.23	10.78
7	**-9	1.00	362.0	14.00	53.45	51.67	48.02	-5.33	1.E+06	81.92	12.46
8	**-10	1.00	364.8	16.00	50.00	58.67	43.24	-4.33	1.E+06	77.65	14.15
9	**-11	1.00	369.5	18.00	47.14	81.67	33.21	-0.33	1.E+06	73.75	15.74
10	**-12	1.00	362.1	31.00	35.92	64.67	39.95	-1.33	1.E+06	70.59	17.41
11	**-13	1.00	361.7	28.00	37.80	63.67	40.46	8.67	243.01	63.72	19.13
12	**-14	1.00	362.2	25.00	40.00	69.67	37.64	-3.33	1.E+06	76.51	20.80
MISSING SAMPLE											
14	**-16	1.00	360.7	19.00	45.88	60.67	42.08	-1.33	1.E+06	72.87	22.39
15	**-17	1.00	363.6	17.00	48.51	57.67	43.85	-4.33	1.E+06	77.58	24.08
16	**-18	1.00	362.5	18.00	47.14	77.67	34.54	-0.33	1.E+06	69.86	25.79
17	**-1	1.00	363.5	14.00	53.45	49.67	49.63	-9.33	1.E+06	67.50	27.56
18	**-2	1.00	362.9	21.00	43.64	45.67	53.26	-0.33	1.E+06	67.90	29.26
19	**-3	1.00	365.0	16.00	50.00	41.67	57.58	3.67	561.29	73.86	30.94
20	**-4	1.00	363.8	16.00	50.00	65.67	39.46	-6.33	1.E+06	78.91	32.64
21	**-5	1.00	359.9	13.00	55.47	41.67	57.58	1.67	1223.1	78.00	34.32
22	**-6	0.15	361.2	6.67	200.00	6.67	447.21	-13.33	0.00	100.00	35.12
COUNT TERMINATED: COUNT RATE TOO LOW											
23	**-7	1.00	363.6	19.00	45.88	60.67	42.08	-6.33	1.E+06	67.15	36.81
24	**-8	0.15	349.7	0.00	0.00	6.67	447.21	0.00	1.E+06	57.72	37.58
COUNT TERMINATED: COUNT RATE TOO LOW											
25	**-9	0.15	343.8	0.00	0.00	6.67	447.21	0.00	1.E+06	85.54	38.38
COUNT TERMINATED: COUNT RATE TOO LOW											
26	**-10	0.25	346.9	4.00	200.00	14.67	193.28	-9.33	1.E+06	56.87	39.26
COUNT TERMINATED: COUNT RATE TOO LOW											
27	**-11	0.15	350.4	0.00	0.00	20.00	176.38	-6.67	1.E+06	67.39	40.03
COUNT TERMINATED: COUNT RATE TOO LOW											
28	**-12	0.15	347.6	0.00	0.00	26.67	141.42	-13.33	0.00	84.73	40.82
COUNT TERMINATED: COUNT RATE TOO LOW											
29	**-13	0.15	343.3	6.67	200.00	0.00	1.E+06	6.67	447.21	57.30	41.61
COUNT TERMINATED: COUNT RATE TOO LOW											
30	**-14	0.15	346.7	6.67	200.00	13.33	244.95	-6.67	1.E+06	78.62	42.38
COUNT TERMINATED: COUNT RATE TOO LOW											

SAM NO	POS	TIME MIN	HH	3H		14C		32P		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR		
31	**15	0.15	347.5	0.00	0.00	13.33	244.95	-6.67	1.E+06	85.38	43.18
				COUNT TERMINATED: COUNT RATE TOO LOW							
32	**16	0.20	350.5	0.00	0.00	21.67	149.95	-3.33	1.E+06	82.11	44.03
				COUNT TERMINATED: COUNT RATE TOO LOW							
33	**17	1.00	361.7	12.00	57.74	45.67	53.26	0.67	3043.0	77.75	45.71
34	**18	0.15	344.8	0.00	0.00	-13.33	0.00	-6.67	1.E+06	100.00	46.49
				COUNT TERMINATED: COUNT RATE TOO LOW							
35	**1	0.40	347.5	5.00	141.42	24.17	111.84	-10.83	1.E+06	53.83	47.62
				COUNT TERMINATED: COUNT RATE TOO LOW							
36	**2	0.55	344.5	7.27	100.00	17.58	137.07	-6.06	1.E+06	51.34	48.84
				COUNT TERMINATED: COUNT RATE TOO LOW							
37	**3	0.15	348.0	6.67	200.00	13.33	244.95	-13.33	0.00	88.24	49.61
				COUNT TERMINATED: COUNT RATE TOO LOW							
38	**4	1.00	349.6	5.00	89.44	18.67	117.80	0.67	3043.0	57.30	51.26
39	**5	0.20	348.1	5.00	200.00	21.67	149.95	-8.33	1.E+06	68.85	52.12
				COUNT TERMINATED: COUNT RATE TOO LOW							
40	**6	1.00	348.5	12.00	57.74	33.67	69.25	-5.33	1.E+06	49.24	53.79
41	**7	0.15	341.5	13.33	141.42	-6.67	1.E+06	13.33	244.95	50.37	54.56
				COUNT TERMINATED: COUNT RATE TOO LOW							
42	**8	0.15	343.7	13.33	141.42	20.00	176.38	-13.33	0.00	46.83	55.34
				COUNT TERMINATED: COUNT RATE TOO LOW							
43	**9	1.00	348.8	10.00	63.25	26.67	85.15	-5.33	1.E+06	60.59	57.02
44	**10	0.15	346.8	13.33	141.42	0.00	1.E+06	0.00	1.E+06	100.00	57.78
				COUNT TERMINATED: COUNT RATE TOO LOW							
45	**11	0.15	341.2	0.00	0.00	6.67	447.21	0.00	1.E+06	62.41	58.59
				COUNT TERMINATED: COUNT RATE TOO LOW							
46	**12	0.25	344.5	8.00	141.42	2.67	927.36	2.67	927.36	47.97	59.35
				COUNT TERMINATED: COUNT RATE TOO LOW							
47	**13	1.00	373.2	16.00	50.00	102.67	27.88	-0.33	1.E+06	89.65	61.05

14C efficiency ≈ 50% at this H number. All results < 200 dpm

INSTRUMENT CALIBRATION: Mini 24 JAN 2012 09:49
 Calibration successful

Calibrating Auto DPM
 Counting Standard for 14C
 Calibration Complete: 14C
 Counting Standard for 3H
 Calibration Complete: 3H
 Calibration Successful

Beckman LS6000IC #n 221755

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JOB: 500101E TEST          9 FEB 2012 08:51
USER: 2                     COMMENT: PLEASE DO NOT CHANGE FORM
PRESET TIME :              1.00
DATA CALC   :              CPM  HH   :YES  SAMPLE REPEATS:  1  PRINTER   : STD
COUNT BLANK :             YES  ICW  : NO   REPLICATES   :  1  RS232    : OFF
TWO PHASE   :             NO   ABC  :YES  CYCLE REPEATS :  1
SCINTILLATOR: LIQUID  LUNEX: NO   LOW SAMPLE REQ: 25
LOW LEVEL   :             NO   HALF LIFE CORRECTION DATE: none

ISOTOPE 1:   3H  %ERROR: 2.00 FACTOR:1.0000 BKG. SUB:    0
ISOTOPE 2:  14C  %ERROR: 2.00 FACTOR:1.0000 BKG. SUB:    0
ISOTOPE 3:  32P  %ERROR: 2.00 FACTOR:1.0000 BKG. SUB:    0
    
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SAM NO	POS	TIME MIN	HH	3H		14C		32P		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR		
B1	**1	0.20	-23.7	15.00	115.47	0.00	0.00	5.00	200.00	1.88	0.84
COUNT TERMINATED: COUNT RATE TOO LOW											
B2	**2	1.00	-19.9	46300.00	0.93	1036.00	6.21	9.00	66.67	0.00	2.57
B3	**3	1.00	-25.4	7698.00	2.28	33873.00	1.09	270.00	12.17	0.00	4.19
				Blank Average CPM for 3H		18004.33		COEF. OF VAR: 137.767			
				Blank Average CPM for 14C		11636.33		COEF. OF VAR: 165.555			
				Blank Average CPM for 32P		94.67		COEF. OF VAR: 160.412			

MISSING SAMPLE

```

10 **14 INVALID SAMPLE COUNT:   HH ABORT: COUNT RATE TOO LOW
11 **15 INVALID SAMPLE COUNT:   HH ABORT: COUNT RATE TOO LOW
    
```

(Unquenched)

³ H standard	95000 dpm on 6/4/08	<i>current activity (2/9/12)</i> 77208 dpm
¹⁴ C standard	43400 " " "	43381 dpm

Efficiency H-3 : 60.1%
C-14 : 78.1%

Quench

PAGE: 1

IID: SWIPE TEST 9 FEB 2012 08:34
USER: 2 COMMENT: PLEASE DO NOT CHANGE PRGM
PRESET TIME : 1.00
DATA CALC : CPM HW : YES SAMPLE REPEATS: 1 PRINTER : STD
COUNT BLANK : YES ICH : NO REPLICATES : 1 RS232 : OFF
TWO PHASE : NO AOC : YES CYCLE REPEATS : 1
SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 25
LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

ISOTOPE 1: 3H %ERROR: 2.00 FACTOR:1.0000 BKG. SUB: 0
ISOTOPE 2: 14C %ERROR: 2.00 FACTOR:1.0000 BKG. SUB: 0
ISOTOPE 3: 32P %ERROR: 2.00 FACTOR:1.0000 BKG. SUB: 0

SAM NO	POS	TIME MIN	HW	3H		14C		32P		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR		
B1	**1	1.00	-27.4	38792.00	1.02	504.00	8.91	20.00	44.72	0.00	1.49
B2	**2	1.00	1.8	35175.00	1.07	752.00	7.29	10.00	63.25	0.00	3.03
B3	**3	1.00	25.4	31746.00	1.12	700.00	7.56	20.00	44.72	0.00	4.57
B4	**4	1.00	62.8	25976.00	1.24	760.00	7.25	9.00	66.67	0.00	6.10
B5	**5	1.00	92.9	21185.00	1.37	764.00	7.24	14.00	53.45	0.00	7.64
B6	**6	1.00	123.3	16458.00	1.56	863.00	6.81	19.00	45.88	0.00	9.18
B7	**7	1.00	156.8	11845.00	1.84	909.00	6.63	11.00	60.30	0.00	10.72
B8	**8	1.00	188.8	8229.00	2.20	1002.00	6.32	16.00	50.00	0.00	12.24
B9	**9	1.00	215.3	5944.00	2.59	1069.00	6.12	18.00	47.14	0.01	13.79
B10	**10	1.00	241.7	3953.00	3.18	1156.00	5.88	13.00	55.47	0.01	15.31
				Blank Average CPM for	3H	19930.30	COEF. OF VAR:	63.271			
				Blank Average CPM for	14C	847.90	COEF. OF VAR:	22.775			
				Blank Average CPM for	32P	15.00	COEF. OF VAR:	27.933			

³H Quenched Standards
Activity 256300 on 4/5/88
current activity: 66864 on 2/9/2012

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16 FEB 2012 PM 5 L



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