Cardinal Health Nuclear Pharmacy Services 7000 Cardinal Place Dublin, OH 43017 614.757.5000 tel



www.cardinalhealth.com

July 21, 2006

Re:

United States Nuclear Regulatory Commission, Region III 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352

To Whom It May Concern:

Written report of unplanned damage to licensed material on June 25, 2006, radioactive material license number 34-29200-01MD, Seaford, DE.

This letter is a 30 day written report of an unplanned incident damaging licensed material. This occurred on June 25, 2006. This report is prepared pursuant to 10 CFR 30.50(c)(2) after a telephone report pursuant to 10 CFR 30.50(b)(4). The event was a flood, and it is assumed that the intent of 10 CFR 30.50(b)(4) is to notify regulatory agencies in the event of an unplanned disaster that could potentially release contamination into the environment. All times listed below are best estimate approximations.

## **Description of Event**

On the weekend of June 24 - 25, 2006, storms in the eastern portion of the United States dropped several inches of rainfall in areas of Delaware and other states within a few hours. This caused major flooding in these areas. The Cardinal Health nuclear pharmacy located at 6102 Stein HWY, Seaford, DE 19973 is located in one of the affected areas.

On June 25, 2006 at approximately 10:00 AM, pharmacy manager John Miller was informed by the security monitoring service used that a window alarm was activated. The pharmacy had had previous problems with false alarms, and Mr. Miller assumed this was the case. At 10:30 AM, one of Cardinal Health's delivery drivers who was returning to the pharmacy after a delivery discovered that the road to the pharmacy was closed due to flooding. Later at 12:30 PM the same driver was able to get close enough to the pharmacy after the flood waters receded to see that the front door (which is made of glass) was gone. Craig Schury, R.Ph., who is the Radiation Safety Officer was then notified.

At 7:30 PM, flood waters receded enough to enter the pharmacy for inspection by Mr. Schury and the building landlord. Quality & Regulatory and Paul Gotti, BCNP, Corporate RSO were notified of the pharmacy condition. An assessment of the damage was as follows: The glass front door and several windows had been washed away. All access (doors and windows) into the restricted area was still intact, and all RAM sources appeared to be still secured in their lead shielding. All inventory appeared to be present in the restricted area. Area surveys could not be made due to destroyed equipment. The Corporate RSO believed criteria for reporting requirements of 10 CFR 30.50 (a) were not met, so no report filed with NRC Operations Center. Until the next day.

The next day, on Monday, June 26, 2006, John Madera, Chief of Materials Inspection Branch for NRC Region III and Delaware Department of Health were notified of the flooding.

Both were informed that all inventory appeared to be present However, all RAM was damaged enough to be rendered useless for human use. Later that day at 1:53 PM, a phone Report was filed with NRC Operations Center (Event Notification Number #42665) at the recommendation of Mr. Madera. The report was filed under 10 CFR 30.50 (b)(4) for information purposes only.

On Tuesday, June 27, 2006, an inventory was completed on RAM at facility. All RAM was accounted for. An area survey was performed with a survey meter from another facility. No excessive radiation levels were detected. Staff was still unable to perform wipes due to damage to well counters. Arrangements were made to transport sealed sources to the Sharon Hill, PA facility. Unsealed material was packaged in DOT spec tested boxes once undamaged boxes were acquired, or was shipped LQS or LSA on Thursday, June 29, 2006. On July 3, 2006, wipes were performed in the unrestricted area and confirmed the absence of removable contamination. Please see the attached wipe survey.

From these results, it can be assumed that there was no detectable release of radioactive material into the environment. All material was either sealed sources or liquid contained in vials, with the exception of the shielded molybdenum-99 generators. It would be virtually impossible for any floodwater to potentially passed through the generator column. Should this remote possibility happen, it would have removed only nanocurie to microcurie activities of Tc-99 and Tc-99m. These would have become sufficiently diluted with the floodwaters so as to be indistinguishable from background.

If you have any questions regarding this report, please contact Dave Breuning at 614.757.3116.

Sincerely,

Willie Regits, Ph.D.

Senior Manager, Health Physics Nuclear Pharmacy Services

Cc:

NRC License File (6) Loc 128 License File (6) Craig Schury, RSO, Loc 128 Freda Fischer Tyler

> Delaware Department of Health and Social Services Division of Public Health Office of Radiation Control 417 Federal Street Dover, DE 19903

## Wipe Survey

## SEAFORD WIPE TESTS

All wipes performed on 7/3/2006 by Mark from the Seaford pharmacy

All wipes counted on 7/4/2006 at the Sharon Hill, PA pharmacy

MCA

SN#315

Co-57 effic

90.10%

Count time

60 sec 168 cpm

Bkg MDA

67 dpm

FLOOR PLAN						BLOOD ROOM	
				<b>[</b>	114	115	116
					111	112	113
				ŀ	110	109	108
LAE	AREA				105	106	107
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	98	97
55	56	57	58	59	60	100	99
61	62	63	64	65	66	101	102
72	71	70	67	68	69	103	104_
74	75	76	77	78	79	GENERATOR ROOM	vI
80	81	82	83	84	85		
86	87	88	89	90	91		
96	95	94	73	93	92		

WASTE ROOM

## **RESULTS**

Area	Counts	Bkg	Effic	DPM
1	147	129	0.901	16
2	137	129	0.901	7
3	137	129	0.901	7
4	137	129	0.901	7
5	163	129	0.901	31
6	140	129	0.901	10
7	134	129	0.901	5
8	126	129	0.901	0
9	146	129	0.901	15
10	151	129	0.901	20

Area	Counts	Bkg	Effic	DPM
11	139	129	0.901	9
12	167	129	0.901	34
13	135	129	0.901	5
14	132	129	0.901	3
15	135	129	0.901	5
16	132	129	0.901	3
17	142	129	0.901	12
18	142	129	0.901	12
19	124	129	0.901	0
20	151	129	0.901	20
21	156	129	0.901	24
22	128	129	0.901	0
23	147	129	0.901	16
24	143	129	0.901	13
25	138	129	0.901	8
26	117	129	0.901	0
27	134	129	0.901	5
28	153	129	0.901	22
29	155	129	0.901	23
30	140	129	0.901	10
31	128	129	0.901	0
32	128	129	0.901	0
33	130	129	0.901	1
_34	149	129	0.901	18
35	155	129	0.901	23
36	149	129	0.901	18
37	135	129	0.901	5
38	128	129	0.901	0
39	149	129	0.901	18
40	151	129	0.901	20
41	136	129	0.901	6
42	141	129	0.901	11
_43	138	129	0.901	8
44	136	129	0.901	6
45	123	129	0.901	0
46	127	129	0.901	0
47	155	129	0.901	23
48	146	129	0.901	15

Area	Counts	Bkg	Effic	DPM
49	130	129	0.901	1
50	143	129	0.901	13
51	140	129	0.901	10
52	128	129	0.901	0
53	144	129	0.901	14
54	168	129	0.901	35
55	140	129	0.901	10
56	162	129	0.901	30
57	135	129	0.901	5
58	148	129	0.901	17
59	123	129	0.901	0
60	303	129	0.901	157
61	158	129	0.901	26
62	160	129	0.901	28
63	159	129	0.901	27
64	166	129	0.901	33
65	155	129	0.901	23
66	157	129	0.901	25
67	134	129	0.901	5
68	154	129	0.901	23
69	147_	129	0.901	16
70	130	129	0.901	1
71	144	129	0.901	14
72	125	129	0.901	0
73	145	129	0.901	14
74	147	129	0.901	16
75	136	129	0.901	6
76	127	129	0.901	0
77	121	129	0.901	0
78	148	129	0.901	17
79	133	129	0.901	4
80	149	129	0.901	18
81	162	129	0.901	30
82	146	129	0.901	15
83	152	129	0.901	21
84	163	129	0.901	31
85	160_	129	0.901	28
86	136	129	0.901	6

Area	Counts	Bkg	Effic	DPM
87	145	129	0.901	14
88	127	129	0.901	0
89	138	129	0.901	8
90	126	129	0.901	0
91	136	129	0.901	6
92	148	129	0.901	17
93	142	129	0.901	12
94	146	129	0.901	15
95	141	129	0.901	11
96	156	129	0.901	24
97	152	129	0.901	21
98	152	129	0.901	21
99	142	129	0.901	12
100	154	129	0.901	23
101	135	129	0.901	5
102	146	129	0.901	15
103	128	129	0.901	0
104	145_	129	0.901	14
105	131	129	0.901	2
106	138	129	0.901	8
107	143	129	0.901	13
108	139	129	0.901	9
109	152	129	0.901	21
110	136	129	0.901	6
111	161	129	0.901	29
112	137	129	0.901	7
113	154	129	0.901	23
114	147	129	0.901	16
115	130	129	0.901	1
116	131	129	0.901	2
Persantine Hood	165	129	0.901	32
Work counter Blood room	157	129	0.901	25
Centrifuge	148	129	0.901	17
Blood hood	133	129	0.901	4
generator box	134	129	0.901	5
fume hood	148	129	0.901	17
heating box	140	129	0.901	10
hood 1	140	129	0.901	10

Area	Counts	Bkg	Effic	DPM
hood 2	141	129	0.901	11
work counter by hood 1	147	129	0.901	16
table for vial shields	147	129	0.901	16
wrap counter	129	129	0.901	0
storage shelves DOT	156	129	0.901	24
fridge	156	129	0.901	24
storage shelves QC	139	129	0.901	9
Storage shelves vial s/u	154	129	0.901	23
Storage shelves wrap area	162	129	0.901	30

TRACYREEDY (614) 757-3124 CARDINAL HEALTH 7000 CARDINAL PL DUBLIN OH 43017

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SHIP TO:

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