



BROKEN ARROW
MEDICAL CENTER
AFFILIATED WITH SAINT FRANCIS HOSPITAL

February 8, 1990

Mr. A. Bill Beach, Director
United States Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive Suite 1000
Arlington, Texas 76011

RE: License 35-17414-01
Docket 30-12713/90-01

Dear Mr. Beach:

This is in response to your letter and notice of violation dated February 2, 1990.

1. The reason for the violation was misinterpretation of Item 3.d of Appendix C.
2. We are now utilizing our $Cs-137$ source to check the technetium-99m and iodine-131 settings of the dose calibrator routinely for consistency. See attached forms.
3. This procedure has been incorporated into our routine and all technologists involved have been inserviced on this additional check of the dose calibrator.
4. It is our understanding that these changes in procedure bring us in full compliance with Appendix C of Regulatory Guide 10.8, Revision 2, Item 3.d.

If I can be of further assistance or provide you with additional information, please contact me at your convenience.

Sincerely,

BROKEN ARROW MEDICAL CENTER, INC.

Bruce Switzer

Bruce Switzer
Administrator

9002260209 900209
REG4 LIC30
35-17414-01 PNU

IC-90-052

3000 SOUTH ELM PLACE / BROKEN ARROW, OKLAHOMA 74012 / (918) 455-3535

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BROKEN ARROW MEDICAL CENTER

Cesium-137 Dose Calibrator Check Source: $t (\frac{1}{2}) = 30$ years
 Calibrated 03/01/83 @ 276.1 uCi

1990	+	JANUARY	-	+	FEBRUARY	-	+	MARCH	-	+	APRIL	-
1		247.57	223.99	247.10	<u>241</u>	223.56	246.62	223.14	246.14	222.70		
2		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
3		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
4		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
5		247.57	223.99	247.10	<u>242</u>	223.56	246.62	223.14	246.14	222.70		
6		247.57	223.99	247.10	<u>241</u>	223.56	246.62	223.14	246.14	222.70		
7		247.57	223.99	247.10	<u>242</u>	223.56	246.62	223.14	246.14	222.70		
8		247.57	223.99	247.10	<u>242</u>	223.56	246.62	223.14	246.14	222.70		
9		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
10		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
11		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
12		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
13		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
14		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
15		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
16		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
17		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
18		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
19		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
20		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
21		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
22		247.57	<u>242</u>	223.99	247.10		223.56	246.62	223.14	246.14	222.70	
23		247.57	<u>242</u>	223.99	247.10		223.56	246.62	223.14	246.14	222.70	
24		247.57	<u>242</u>	223.99	247.10		223.56	246.62	223.14	246.14	222.70	
25		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
26		247.57	<u>242</u>	223.99	247.10		223.56	246.62	223.14	246.14	222.70	
27		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
28		247.57	223.99	247.10		223.56	246.62	223.14	246.14	222.70		
29		247.57	<u>242</u>	223.99			246.62	223.14	246.14	222.70		
30		247.57	223.99				246.62	223.14	246.14	222.70		
31		247.57	223.99				246.62	223.14	246.14	222.70		

NOTE:

Calibration checks done each day used.
 If no studies are done equipment checks
 are not done.

BROKEN ARROW MEDICAL CENTER

Cesium-137 Dose Calibrator Check Source: $t(\frac{1}{2}) = 30$ Years
 Calibrated 03/01/83 @ 276.1 uCi

1990	+	MAY	-	+	JUNE	-	+	JULY	-	+	AUGUST	-
1	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
2	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
3	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
4	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
5	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
6	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
7	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
8	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
9	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
10	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
11	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
12	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
13	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
14	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
15	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
16	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
17	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
18	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
19	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
20	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
21	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
22	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
23	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
24	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
25	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
26	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
27	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
28	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
29	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
30	245.67	_____	222.20	245.21	_____	221.85	244.70	_____	221.43	244.26	_____	221.00
31	245.67	_____	222.20				244.70	_____	221.43	244.26	_____	221.00

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Cesium-137 Dose Calibrator Check Source: $t (\frac{1}{2}) = 30$ years
 Calibrated 03/01/83 @ 276.1 uCi

1990	+	SEPTEMBER	-	+	OCTOBER	-	+	NOVEMBER	-	+	DECEMBER	-
1	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
2	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
3	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
4	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
5	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
6	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
7	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
8	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
9	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
10	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
11	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
12	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
13	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
14	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
15	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
16	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
17	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
18	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
19	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
20	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
21	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
22	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
23	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
24	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
25	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
26	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
27	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
28	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
29	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
30	243.79	_____	220.50	243.33	_____	220.15	242.85	_____	219.70	242.39	_____	219.30
31				243.33	_____	220.15				242.39	_____	219.30