

December 31, 1990

Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011

RE: License: 40-15697-01  
Docket: 030-09603190-01

Dear sirs:

The following response and related attachments are submitted in response to the Notice of Violation issued following the November 7, 1990 inspection of the Huron Regional Medical Center Nuclear Medicine Department by Mr. R. Brown.

A. In regard to the violation cited under 10 CFR 35.27(a) it was our understanding that individuals whose names appeared on the Nuclear Regulatory License could supervise physicians which were not listed as authorized users on our list. Inasmuch as Dr. Huett was on the license still the appointed radiation safety officer, as well as having responsibility for overseeing the operation of the license, it was felt that his presence would be sufficient to supervise said users as pointed out in your document.

Appropriate steps have been taken so that all locum tenens physicians in the future will be in compliance with 10 CFR 35.27.

B. The radiation safety office has now established, collected and implemented in one binder all of the written policies as pointed out in 10 CFR 35.21(b)(2).

C. The minutes of each radiation safety committee meeting have now been implemented such that we are in compliance with 10 CFR 35.22(a)(4). These have previously been kept in administration's control and henceforth will be stored as in compliance with 10 CFR 35.22(a)(4).

D. As pointed out in 10 CFR 35.220, our portable radiation detective instrument was being calibrated by the physicist at the time of inspection. In the future we will be certain that a suitable instrument is retained by us whenever any of the equipment is being calibrated.

As pointed out, suitable surveys and logging per 35.70(a), (h) and (e) are now being duly recorded. During the point of violation it should

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be noted that a new camera was being installed and that basically only p.m. maintenance was performed and no scanning was performed during that time.

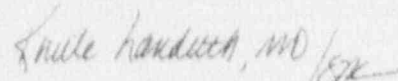
- E. Per 10 CFR 35.60(b) from the point of inspection and, henceforth,
- F. all labeling of syringes to comply with 10 CFR 35.60(b) are being undertaken.

As pointed out in violation for 10 CFR 35.59(g), attached you will find monthly calibration and inventory of sealed sources. We have changed our reporting form from a monthly to a quarterly physical inventory to remain in compliance with 10 CFR 35.59(g).

We hope that the above explanations as well as the suitable documentation for corrective measures falls in compliance with provisions 10 CFR 2.201.

If you have further questions regarding the corrective steps which we have undertaken, please inform us. All of the corrective measures have been undertaken since speaking with Robert A. Brown, Senior Radiation Specialist, on site visit November 7, 1990.

Respectfully,



Knute Landreth, MD  
Chief of Radiology  
Huron Regional Medical Center

KL/jb

# Sealed source inventory and measurement

Date	Cs <sup>137</sup> 220	Co <sup>60</sup> 990	Co <sup>57</sup> 112	Ba <sup>133</sup> 591
1-15-90	146.8 uCi	11.1 uCi	1.29 mCi	124.5 uCi SH
2-16-90	147.9 uCi	11.0 uCi	1.20 mCi	123.0 uCi SH
3-15-90	147.0 uCi	10.8 uCi	1.12 mCi	122.5 uCi SH
4-10-90	146.4 uCi	10.7 uCi	1.04 mCi	121.9 uCi SH
5-2-90	146.4 uCi	10.6 uCi	989 uCi	121.4 uCi SH
6-8-90	146.9 uCi	10.5 uCi	901 uCi	121.0 uCi SH
6-28-90	146.6 uCi	10.5 uCi	855 uCi	120.0 uCi SH
7-26-90	146.6 uCi	10.5 uCi	799 uCi	119.0 uCi SH
8-9-90	145.8 uCi	10.4 uCi	768 uCi	118.8 uCi SH
8-21-90	146.1 uCi	10.4 uCi	744 uCi	118.4 uCi SH
9-20-90	145.4 uCi	10.3 uCi	688 uCi	118.1 uCi SH
10-29-90	144.8 uCi	10.0 uCi	624 uCi	117.2 uCi SH
11-23-90	144.8 uCi	9.9 uCi	586 uCi	117.8 uCi SH

Date	C <sup>15</sup> <sub>157</sub> 220	C <sup>10</sup> <sub>60</sub> 990	C <sup>10</sup> <sub>57</sub> 112	D <sup>14</sup> <sub>110</sub> 591
9-19-88	152.4 uCi	13.3 uCi	4.63 mCi	135.9 uCi <sup>2</sup>
10-11-88	152 uCi	13.1 uCi	4.26 mCi	135.3 uCi <sup>2</sup>
11-15-88	150.7 uCi	12.9 uCi	3.89 mCi	134.7 uCi <sup>2</sup>
12-19-88	151.2 uCi	12.9 uCi	3.54 mCi	133.6 uCi <sup>2</sup>
1-23-89	152.0 uCi	12.9 uCi	3.24 mCi	133.4 uCi <sup>2</sup>
2/27/89	150.2 uCi	12.6 uCi	2.95 mCi	132.2 uCi <sup>2</sup>
3/30/89	150.0 uCi	12.5 uCi	2.72 mCi	131.0 uCi <sup>2</sup>
4/24/89	150.0 uCi	12.2 uCi	2.57 mCi	130.7 uCi <sup>2</sup>
5/22/89	150.2 uCi	12.1 uCi	2.45 mCi	130.6 uCi <sup>2</sup>
6/23/89	150.8 uCi	12.0 uCi	2.20 mCi	129.0 uCi <sup>2</sup>
7/19/89	149.9 uCi	11.7 uCi	2.05 mCi	127.6 uCi <sup>2</sup>
8/17/89	149.0 uCi	11.7 uCi	1.90 mCi	127.8 uCi <sup>2</sup>
9/20/89	148.2 uCi	11.3 uCi	1.82 mCi	127.4 uCi <sup>2</sup>
10/23/89	148.4 uCi	11.4 uCi	1.61 mCi	126.2 uCi <sup>2</sup>
11/25/89	148.4 uCi	11.5 uCi	1.47 mCi	125.4 uCi <sup>2</sup>
12/26/89	148.3 uCi	11.2 uCi	1.35 mCi	124.8 uCi <sup>2</sup>
1/15/90	146.8 uCi	11.1 uCi	1.29 mCi	124.5 uCi <sup>2</sup>



DATE: 112 304 CR<sup>137</sup> 220 Co<sup>60</sup> 5.77140 990 Co<sup>57</sup> 270.9 days 11- Ba<sup>133</sup> 591 10.74 yrs

9-25-86	160.0	17.0 uCi	2.36	154.4
10-6-86	159.2 uCi	17.2 uCi	2.31 mCi	154.2 uCi
10-24-86	159.2 uCi	17.1 uCi	2.25 mCi	154.2 uCi
11-4-86	159 uCi	16.9 uCi	2.15 mCi	153.8 uCi
12-8-86	158 uCi	16.8 uCi	1.97 mCi	152.2 uCi
1-15-87	162.3 uCi	16.6 uCi	1.786 mCi	152 uCi
1-26-87	158.8 uCi	16.4 uCi	1.747 mCi	151.2 uCi SH
2-6-87	157.9 uCi	16.0 uCi	1.72 mCi	151.0 uCi SH
2-23-87	157.0 uCi	16.2 uCi	1.62 mCi	150.4 uCi SH
3-26-87	158.0 uCi	16.2 uCi	1.495 mCi	149.0 uCi SH
3-31-87	157.0 uCi	16.3 uCi	1.48 mCi	149.8 uCi SH
4-13-87	158.3 uCi	16.1 uCi	1.43 mCi	148.2 uCi SH
5-13-87	157.5 uCi	15.8 uCi	1.32 mCi	148.0 uCi SH
6-15-87	158.0 uCi	15.6 uCi	1.22 mCi	146.4 uCi SH
7-15-87	156.0 uCi	15.3 uCi	1.130 mCi	146.6 uCi SH
8-11-87	157.8 uCi	15.3 uCi	1.069 mCi	146.2 uCi SH
9-8-87	156.9 uCi	15.0 uCi	982 uCi	145.6 uCi SH
10-15-87	156.0 uCi	14.8 uCi	891 uCi	144.2 uCi SH
11-17-87	155.0 uCi	14.7 uCi	818 uCi	143.3 uCi SH
12-15-87	155.0 uCi	14.5 uCi	748 uCi	142.2 uCi SH
1-18-88	155.0 uCi	14.5 uCi	699 uCi	141.0 uCi SH
2-11-88	154.5 uCi	14.4 uCi	664 uCi	140.0 uCi SH
3-10-88	154.0 uCi	14.2 uCi	616 uCi	139.6 uCi SH
4-21-88	154.8 uCi	13.8 uCi	550 uCi	139.1 uCi SH
5-11-88	154.0 uCi	13.8 uCi	524 uCi	137.3 uCi SH
6-14-88	153.3 uCi	13.7 uCi	480 uCi	137.9 uCi SH
7-15-88	153.4 uCi	13.4 uCi	443 uCi	136.4 uCi SH
8-19-88	153.2 uCi	13.3 uCi	419.91 mCi	136.4 uCi SH

DATE	Cs <sup>137</sup> 220	Co <sup>60</sup> 990	Co <sup>57</sup> 112	Ba <sup>133</sup> 591
-3-84	169.7 uCi	21.6 uCi	1.96 mCi	185.3 uCi DR
-30-84	171.0 uCi	24.6 uCi	1.834 mCi	194.5 uCi RT
3-5-84	170.0 uCi	24.1 uCi	1.679 mCi	184.0 uCi RT
3-30-84	169.0 uCi	23.9 uCi	1.575 mCi	183.4 uCi RT
4-22-84	168.8 uCi	23.3 uCi	1.480 mCi	182.1 uCi DR
5-14-84	169.0 uCi	23.6 uCi	1.404 mCi	181 uCi RT
6-1-84	168.7 uCi	23.6 uCi	1.35 mCi	180.7 uCi RT
6-18-84	168.9 uCi	23.3 uCi	1.29 mCi	180.2 uCi
8-17-84	167.8 uCi	22.7 uCi	1.103 mCi	179.3 uCi
9-17-84	167.4 uCi	22.4 uCi	1.10 mCi	179.1 uCi
10-10-84	167.4 uCi	22.3 uCi	.961 mCi	177.4 uCi
12-3-84	166.6 uCi	21.7 uCi	.835 mCi	174.4 uCi
1-9-85	165.6 uCi	21.6 uCi	759 uCi	173.5 uCi
2-21-85	165.0 uCi	21.2 uCi	682 uCi	172.0 uCi
3-28-85	165.4 uCi	20.9 uCi	626 uCi	171.0 uCi
4-29-85	164.6 uCi	20.8 uCi	574 uCi	170.2 uCi
5-29-85	164.3 uCi	20.5 uCi	525 uCi	169 uCi
6-25-85	165.2 uCi	20.5 uCi	498 uCi	168 uCi
7-2-85	164.2 uCi	20.0 uCi	456 uCi	167.5 uCi
8-10-85	163.8 uCi	19.6 uCi	409 uCi	166.1 uCi DR
9-22-85	163. uCi	19.4 uCi	366 uCi	164 uCi
10-2-85	162.5 uCi	19.2 uCi	New source 5.05 mCi	163.6 uCi
11-6-86	162.7 uCi	19.0 uCi	4.65 mCi	162.5 uCi
12-10-86	162.0 uCi	18.8 uCi	4.25 mCi	161.0 uCi
1-20-86	162.0 uCi	18.4 uCi	3.84 mCi	159.7 uCi
2-17-86	164.0 uCi	18.5 uCi	3.57 mCi	159.4 uCi
3-29-86	161.0 uCi	17.7 uCi	3.23 mCi	159.0 uCi
4-26-86	164.0 uCi	17.6 uCi	2.94 mCi	154 uCi
5-22-86	160.0 uCi	17.5 uCi	2.80 mCi	156.6 uCi
6-4-86	159.6 uCi	17.5 uCi	2.76 mCi	156.0 uCi
6-21-86	160.2 uCi	17.4 uCi	2.60 mCi	155.4 uCi