

WASHINGTON UNIVERSITY  
ST. LOUIS, MISSOURI

DIVISION OF  
RADIATION HAZARDS  
SUITE 307  
4511 FOREST PARK BLVD.  
ST. LOUIS, MO. 63108

December 7, 1982

D. G. Wiedeman, Chief  
Materials Radiation Protection Section 1  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Re: USNRC licenses 24-00167-11, 24-00063-08, 24-00063,10 and 24-00063-11.

Dear Mr. Weideman:

This correspondence is in reply to the letter from you dated November 9, 1982 concerning a notice of violation that had been identified during the routine safety inspection conducted by Mr. R. E. Burgin of your office during the period October 19 - 26, 1982.

The notice of violation specifies several instances in which the frequency criterion of "not to exceed six months" for the testing of sealed sources had not been satisfied. Our reply addresses each specified instance as follows:

- (1) License 24-00063-10. The cobalt-60 teletherapy source at Jewish Hospital was not leak tested between January and September of 1979 (8 months), September 1979 and April 1980 (7 months), nor April and November, 1980 (7 months).

Corrective action and compliance status. This source is leak tested by the Washington University School of Medicine Division of Radiation Oncology (Physics Section) under the supervision of Glenn Glasgow, Ph.D. The frequency criterion has been fulfilled since Dr. Glasgow re-assigned the testing duty in 1980. In addition, Dr. Glasgow has stressed to the individual currently performing the test, Mr. Richard Keys, the importance of fulfilling the license commitment. The licensee has been in compliance with respect to the testing of this sealed source since November 1980.

- (2) License 24-00167-11. The brachytherapy sources at the Mallinckrodt Institute of Radiology were not tested between January and September 1979 (8 months) and the brachytherapy sources at Jewish Hospital were not tested between February and October 1979 (8 months) nor October 1979 and May 1980 (7 months).

Corrective action and compliance status. The duty of testing these sources was assigned to Mr. Mark Haenchen, a health physicist employed in the WU Radiation Safety group, upon his employment in

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Page Two  
John Eichling  
December 7, 1982

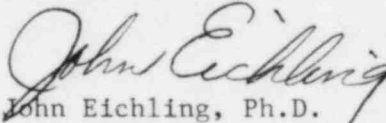
September 1981. Since that date the University has fulfilled the frequency of testing criterion for all of the sources assigned to him. I am enclosing a schedule of the approximately 300 sources that are tested by Mr. Haenchen (refer to attachment #1). In addition, two other members of the WU Radiation Safety staff, Mrs. Schaffner and Mrs. Feldhaus, have been assigned back-up responsibility in the testing program in order to ensure satisfaction of the frequency criterion. Full compliance of this license condition has been achieved for these sources since May 1980.

- (3) License 24-00167-11. A cesium-137 dose calibrator check source at Jewish Hospital was not leak tested between January and July of 1980, 1981 and 1982 (7 months each).

Corrective action and compliance status. This source has been tested in the past by Stan A. Huber Consultants, Inc. of New Lenox, Illinois. Mrs. Janice Baker, CNMT, the Jewish Hospital Nuclear Medicine Supervisor, has agreed to have the WU Radiation Safety group assume the testing responsibility. Two letters dated October 29, 1982 and enclosed as attachment #2 attest to this change. The licensee is currently in compliance.

I am confident that the licensee will avoid further non-compliance in the future with respect to the testing of sealed sources.

Sincerely,

  
John Eichling, Ph.D.  
Radiation Safety Officer

JOE/cc

cc: Glenn Glasgow, Ph.D.  
Associate RSO

Robert Hickok  
Assistant Vice Chancellor of Medical Affairs

M. Kenton King, M.D.  
Dean

Harry Leahey  
Contract and Grant Administrator

Carlos Perez, M.D.  
Chairman, Radiation Hazards Committee

Simon Silver, Ph.D.  
Chairman, Radiological Safety Committee

Enclosures

## Attachment #1

Schedule of Testing of Sealed  
or Plated Sources

## I. Sources tested by WU Radiation Safety

Sources requiring testing at intervals  
not exceeding 6 months

Description of Sealed or Plated Sources Material/Location	No of Sources	Wipe Test to be performed <u>prior to</u>
<sup>137</sup> Cs sources in the Jewish Hospital Irradiator; Rm. B412	2	12/11/82
<sup>60</sup> Co, <sup>90</sup> Sr & <sup>137</sup> Cs brachy- therapy sources of the WU Department of Radiology (Oncology); Cesium Room, West Pavilion	150	12/17/82
WU Radiology (Oncology) <sup>60</sup> Co teletherapy unit; ground floor of MIR	1	12/18/82
<sup>68</sup> Ge (non-by product material) in PETT phantom; 8th floor Rand-Johnson	1	12/28/82
Calibration sources of Jewish Hospital Nuclear Medicine; 2nd floor Jewish Hospital	1	1/12/83
<sup>68</sup> Ge (non-by product material) in PETT phantoms; 612 MIR	2	1/14/83
<sup>63</sup> Ni source in EC Device of Dr. Morrison; 3923 South	1	2/04/83
WU Radiation Safety <sup>137</sup> Cs calibration source; 154 Busch	1	2/16/82
<sup>137</sup> Cs sources in the WU Cancer Biology Irradiator; 4566 Forest Park	2	2/25/83
<sup>3</sup> H target in neutron generator; Hilltop cyclotron	2	3/02/83
<sup>210</sup> Po source in Cahn Electro- balance of Dr. Daughaday; 703 Barnard	1	3/02/83

Calibration sources of WU		
Nuclear Medicine 9th Floor Barnes West Pavilion	7	3/23/83
Calibration sources of WU		
Nuclear Medicine Research 7th Floor MIR	3	3/23/83
<sup>137</sup> Cs sources in the Barnes Hospital Irradiator; Blood Bank	2	4/27/83
<sup>63</sup> Ni source in EC Device of Dr. Eli Robbins; 513 Renard	1	4/28/83
<sup>90</sup> Sr sources of Dr. Robert Walker; Compton Building/ Hilltop	6	5/15/83
<sup>239</sup> Pu sources of Dr. Wahl; Hilltop cyclotron	5	5/15/83
<sup>63</sup> Ni source in EC Device of Dr. Dodson; 555 SLCH	1	5/19/83
<sup>137</sup> Cs brachytherapy sources of Jewish Hospital Radiation Therapy; 2881 Schoenberg	30	5/22/83

Sources requiring testing at intervals  
not exceeding 3 months

<sup>241</sup> Am sources of Dr. Israel; 164 & 255 Compton Building	50	1/28/83
<sup>241</sup> Am sources of Dr. Lowry; 332 MSB, 3605 CRB & 3949 South	19	2/10/83
<sup>241</sup> Am & <sup>1242</sup> Cm sources of Dr. Walker; Compton Building	8	2/15/83
<sup>241</sup> Am & <sup>243</sup> Cm Sources of Dr. Macias; 104 McMillan, Hilltop	2	3/26/83

GRAND TOTAL

297

II. Source tested by the WU Department of Radiology (Division of Radiation Oncology) under the supervision of Dr. Glenn Glasgow

Source requiring testing at intervals  
not exceeding 6 months

Description of Sealed Source/Location	No. of Sources	Wipe Test to be performed <u>prior to</u>
Jewish Hospital Radiation Therapy $^{60}\text{Co}$ teletherapy unit; 216 S. Kingshighway	1	5/17/83

III. Sources in storage

Description of Sealed Sources/Location	No. of Sources
WU Radiation Safety $^{60}\text{Co}$ calibration source; 154 Busch	1
$^{63}\text{Ni}$ source in EC device of Dr. Baenziger; 4712 West Building	1
$^{63}\text{Ni}$ source in EC device (#2) of Dr. Dodson; 561 SLCH	1
$^{153}\text{Gd}$ source in BMA; Jewish Hospital Nuclear Medicine	1

The  
Jewish  
Hospital  
of St. Louis



Washington  
University  
Medical  
Center

Attachment #2

October 29, 1982

Stan A. Huber Consultants, Inc.  
235 Essex Lane  
New Lenox, Illinois 60451

Dear Mr. Huber:

On October 26, 1982, Jewish Hospital was inspected by the United States Nuclear Regulatory Commission. The inspector noted that our leak tests of sealed sources were not performed exactly every six months. The dates of our wipes are: 7-9-79, 1-31-80, 7-14-80, 12-19-80, 7-29-81, 1-8-82 and 7-12-82. Our license indicates that we will wipe our sealed sources every six months. We are in non-compliance by delaying the procedure by even one day.

As a result of the findings by the NRC inspector, I have asked that the Department of Radiation Safety of Washington University wipe our sealed sources. Their proximity facilitates control of the leak test dates.

I will continue to use your service to calibrate our instruments. I would like to emphasize the importance of a yearly calibration. As our last calibration date was July 12, 1982, I ask that you set up an appointment to calibrate our instruments on or before July 12, 1983.

Thank you for your attention.

Sincerely,

Janice Baker, CNMT  
Supervisor, Nuclear Medicine

CC: John Eichling,  
Radiation Safety,  
Washington University

jb/lis

WASHINGTON UNIVERSITY



SCHOOL OF MEDICINE  
ST. LOUIS, MISSOURI 63110

DIVISION OF  
RADIATION HAZARDS  
BOX 8131

October 29, 1982

To: File

From: Mark Haenchen  
Health Physicist *M.H.*

Re: Sealed sources, Dept. of Nuclear Medicine, Jewish Hospital.

Per telephone conversation with Jan Baker on October 28, 1982, the Division of Radiation Hazards has agreed to wipe test all sealed sources in the possession of Jewish Hospital Dept. of Nuclear Medicine, as required by U.S. NRC Materials License No: 24-00167-11 (broad license).

This measure is being taken as a corrective action to prevent reoccurrence of violation cited on above license during recent NRC audit.

cc: John Eichling  
Jan Baker  
Fran Schaffner