



The Commonwealth of Massachusetts

Southeastern Massachusetts University

North Dartmouth, Massachusetts 02747

College of Arts and Sciences

Biology Department

9 February 1981

John D. Kinneman, Chief
United States Nuclear Regulatory Commission
Region I
Materials Radiological Protection Section
631 Park Avenue
King of Prussia PA 19506

Dear Mr. Kinneman:

The infractions (calibration of survey meters and proper leak testing and reporting of sealed sources) states in your letter (Docket #30-17058) dated 10 November 1980, have been corrected. The results of our corrective measures are given below.

I. Calibration of survey meters was performed by:

Jasins and Sayles Associates, Inc.
15 Mercer Rd.
Natick MA 01760

- A. Eberline model SK-1: calibrated 17 December 1980 (see attached sheet)
- B. Victoreen model 493: calibrated 31 December 1980 (see attached sheet).

II. Leak tests of sealed sources.

A. Results of leak tests

Radioactive material

Leak test results (in microcuries)

Cesium-137

12 items numbered 28-A8, and 57 with
activity of 10 microcuries per item

less than 0.0015 microcuries per
item

Thalium-204

- a. 3 items numbered 35, 36, 64 with
activity of 50 microcuries per item

less than 3×10^{-4} microcuries per
item

- b. Item numbered 49, activity of 10
microcuries

Measurements of individual items were recorded in our files. In no case was the total activities above 0.005 microcuries.

. . . 2

8104030 440

J.D. Kinneman
Page 2
9 February 1981

Instrument used to measure radioactivity: Nuclear Chicago Detector, Model 1043.

Standard: Cesium-137, New England Nuclear, cat. #NES-255. As of 16 January 1981, the calculated activity was 0.0508 microcuries.

B. Nickel-63 in Hewlett-Packard model 7638A detector cell. This item has been crated and stored.

I believe the results of these actions meet satisfactorily the requirements of our license.

Sincerely,



Yukio Asato

/s
Enc.

Certification of Calibration for Survey Instrument

Instrument Data

Customer Southeastern Mass Univ. Manufacturer Victoreen
 Model No. 493 Serial No. 1413
 Detector Type G.M. Battery Replaced: Yes No

Calibration Source

Source 1. Cs-137 155 mci + 5" 7/24/78 Serial No. S-302
 Source 2. _____ Serial No. _____
 Source 3. _____ Serial No. _____

Detector Geometry

Beta Shield: Open Closed Radiation Field: Parallel Perpendicular

Calibration Data

Max. Range	Calculated Dose-Rate	Meter Reading	Source Number
1. <u>x 1</u>	<u>0.1 mR/hr</u> <u>0.4 mR/hr</u>	<u>0.1-0.2 mR/hr</u> <u>0.4 mR/hr</u>	<u>1</u>
2. <u>x 10</u>	<u>1.0 mR/hr</u> <u>4.0 mR/hr</u>	<u>1.1 mR/hr</u> <u>3.8 mR/hr</u>	<u>1</u>
3. <u>x 100</u>	<u>10 mR/hr</u> <u>40 mR/hr</u>	<u>11 mR/hr</u> <u>38 mR/hr</u>	<u>1</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Remarks

Check source reads 1.1 mR/hr at contact with probe, cap off.

Certification Data

The above calibration was performed to manufacturers' specifications when known.
 Date of Calibration 12/31/80 Next Calibration Due 1/1/82

j&s

JASINS & SAYLES ASSOCIATES, INC.
 15 Mercer Road, Natick, MA 01760
 (617) 655-4931

Calibrated by [Signature]

NRC License #20-16852-01
 Expires August 31, 1981

Certification of Calibration for Survey Instrument

Instrument Data

Customer: Southeastern Mass. Univ. Manufacturer: Eberline
 Model No. 1-120 Serial No. 2140
 Detector Type: _____ Battery Replaced: Yes No

Calibration Source

Source 1. Cs-137 155 mci ± 5% 7/24/78 Serial No. S-302
 Source 2. _____ Serial No. _____
 Source 3. _____ Serial No. _____

Detector Geometry

Beta Shield: Open Closed Radiation Field: Parallel Perpendicular

Calibration Data

Max. Range	Calculated Dose-Rate	Meter Reading	Source Number
1. <u>x 0.1</u>	<u>0.1 mR/hr</u> <u>0.4 mR/hr</u>	<u>0.1 mR/hr</u> <u>0.4 mR/hr</u>	<u>1</u>
2. <u>x 1</u>	<u>1.0 mR/hr</u> <u>4.0 mR/hr</u>	<u>1.1 mR/hr</u> <u>3.9 mR/hr</u>	<u>1</u>
3. <u>x 10</u>	<u>10 mR/hr</u> <u>40 mR/hr</u>	<u>10 mR/hr</u> <u>39 mR/hr</u>	<u>1</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Remarks

Certification Data

The above calibration was performed to manufacturers' specifications when known.

Date of Calibration 12/17/80 Next Calibration Due 12/18/81

J&S

JASINS & SAYLES ASSOCIATES, INC.
 15 Mercer Road, Natick, MA 01760
 (617) 655-4931

Calibrated by *David P. [Signature]*

NRC License #20-16852-01
 Expires August 31, 1981