THE OCEANIC INSTITUTE

March 11, 1987

Nuclear Materials Safety Section
Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Attn: Beth A. Riedlinger
Health Physicist (Licensing)

Ref: Mail Control No. 70520
Docket No. 030-08015
License No. 53-14163-01

Dear Dr. Riedlinger:

This letter responds to your request dated February 23, 1987 for additional information to complete the review of our license renewal application.

1. Our survey meter is an Eberline Model E-140. The lowest range of the instrument is 0.02-0.5 mr/hr.

2. The firm which calibrates the instrument is MidPacific Medical Physics, 1301 Punchbowl St., Suite 307, Honolulu, HI 96813. The meter is calibrated annually. Their NRC license number is 53-23207-01. We enclose for your reference a copy of their license.

3. A description of our survey procedures is enclosed in duplicate together with two copies of the Oceanic Institute radiation safety manual in the event you require more information.

If I can be of further assistance in this review, please let me know.

Sincerely,

P. Bienfang

Paul K. Bienfang, Ph.D
Vice President
Radiation Safety Officer

PKB/ea

Enclosures

70520

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AREA SURVEY PROCEDURES: RADIOACTIVE MATERIALS

1. During on-going research, the radioisotope preparation area, waste storage area and isotope storage area will be surveyed daily with an appropriate low-range survey meter and decontaminated if necessary.

2. During those periods when no isotope work is being conducted, the waste storage area and isotope storage area will be surveyed monthly.

3. The daily surveys will consist of:

   a. A measurement of radiation levels with a survey meter sufficiently sensitive to detect 0.1 mr/hr.

   b. A series of wipe tests to measure contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect 200 dpm per 100 cm^2 for the contaminant involved.

4. The monthly surveys will consist of a measurement of radiation levels with a survey meter sufficiently sensitive to detect 0.1 mr/hr.

5. A permanent record will be kept of all survey results, including negative results, and will include:

   a. Location, date and identification of equipment used, including the serial number and counting efficiencies.

   b. Name of person conducting the survey.

   c. A coded drawing of surveyed areas, identifying preparation, storage and waste storage locations.

   d. Measured exposure rates keyed to the coded survey areas.

   e. Detected contamination levels, keyed to the coded survey areas.

   f. Corrective action taken in the case of contamination of excessive exposure rates, reduced contamination levels or exposure rates after corrective action, and any appropriate comments.

5. Area will be cleaned if the contamination level exceeds 200 dpm/100 cm^2.

MATERIALS LICENSE

Amendment No. 4

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Mid-Pacific Medical Physics	In accordance with letter dated August 6, 1985
2. 1301 Punchbowl Street, #307 Honolulu, Hawaii 96813	3. License number 53-23207-01 is amended in its entirety to read as follows:
	4. Expiration date February 28, 1989
	5. Docket or Reference No. 030-20364

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Strontium 90, Americium 241, or any gamma-emitting byproduct material	A. Analytical samples	A. See Item 9.A.
B. Cesium 137	B. Sealed sources (approved brachy-therapy sources)	B. 160 millicuries
C. Any byproduct material with Atomic Nos. 1 - 83, inclusive	C. Sealed sources	C. Not to exceed 3 millicuries per source
D. Cesium 137	D. Sealed sources	D. Not to exceed 9 microcuries per source
E. Cesium 137	E. Sealed sources (Technical Operations Model 72602)	E. Not to exceed 100 millicuries per source

9. Authorized use

A. Possession incident to the performance of wipe testing of customer's sealed sources.

B. and C. For use in instrument calibration.

D. For use in Nuclear Associates Multi-Dosimeter calibrators.

E. For use in a Technical Operations Model 681 calibrator unit for calibration of instruments.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
53-23207-01

Docket or Reference number
030-20364

Amendment No. 4

CONDITIONS

10. Licensed material may be used at The Queen's Medical Center; 1301 Punchbowl Street; Honolulu, Hawaii and at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.

11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation".

12. Licensed material listed in Item 6 above is authorized for use by the following individual(s) for the materials and uses indicated:

A. Licensed material described in Items A., C., D., and E. may be used by, or under the supervision and in the physical presence of, Don Tolbert, Ph.D., Scott Dube', or Elizabeth Rodenbeck.

B. Licensed material described in Item B. may be used by, or under the supervision and in the physical presence of, Don Tolbert, Ph.D., or Scott Dube'.

13. A. (1) Each sealed source containing licensed material, other than hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.

(2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.

B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.

C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region V, Office of the Regional Administrator, 1450 Maria Lane, Suite 210, Walnut Creek, California 94596, describing the equipment involved, the test results, and the corrective action taken.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

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Amendment No. 4

CONDITIONS

(continued)

D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

14. Sealed sources containing licensed material shall not be opened.

15. The licensee shall conduct a physical inventory every six (6) months to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of licensed material, location of sealed sources and the date of the inventory.

16. Leak test samples of teletherapy sources shall be taken from selected accessible surfaces of the teletherapy head. The selected accessible surfaces should be those surfaces on which one might expect contamination (if there were to be leakage) to accumulate and shall include the inner surface of the most frequently used treatment cones or beam collimating device. The test sample shall be taken with the source in the "off" position.

17. The licensee may transport licensed material or deliver licensed material to a carrier for transport in accordance with the provisions of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions".

18. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated November 10, 1983, letter dated January 18, 1984, and letters dated February 15, 1984, June 4, 1984, February 6, 1985, June 13, 1985, August 6, 1985, and November 1, 1985. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date NOV 20 1985

By Beth A. Riedlinger

Beth A. Riedlinger
Health Physicist (Licensing)
Nuclear Materials Safety Section
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