Maui Memorial
MEDICAL CENTER
Hawaii Health Systems Corporation - Maui Region

July 6, 2006

U.S. Nuclear Regulatory Commission, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Subject: License Amendment Request
NRC License No. 53-13519-01
Docket No. 030-03561

Dear License Reviewer:

We have transferred all licensed materials from our temporary waste storage area to the long-term storage area. We are requesting that the temporary waste storage area be released for unrestricted use. As described in the enclosed decommissioning survey report, surveys have shown that residual radioactivity is below ALARA levels.

Your prompt attention to this request would be greatly appreciated. Please contact our Radiation Safety Consultant, Ronald Frick, at 808-373-7009 if you require additional information.

Sincerely,

Wesley P. Lo
Chief Executive Officer

Enclosures

221 Mahalani Street • Wailuku, Hawaii 96793 • (808) 244-9056 • Fax (808) 242-2443

NRC FORM 313 (10-2005) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*

- [ ] A. NEW LICENSE
- [x] B. AMENDMENT TO LICENSE NUMBER 53-13519-01
- [ ] C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include ZIP code)*

Maui Memorial Medical Center
221 Mahalani Street
Wailuku, HI 96793

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Same as in Item #2

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Ronald Frick, M.S., CHP, DABR

TELEPHONE NUMBER

(808) 373-7009

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES *(See 10 CFR 170 and Section 170.31)*

FEE CATEGORY 7C AMOUNT ENCLOSED $ 0.00

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
Wesley P. Lo, Chief Executive Officer		

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY			DATE		471037

NRC FORM 313 (10-2005)

PRINTED ON RECYCLED PAPER

Decommissioning Survey

Facility: Maui Memorial Medical Center

Address: 221 Mahalani St.
Wailuku, HI 96793

Survey Area: Temporary waste/brachytherapy source storage area

Survey date: May 1, 2006

Survey Performed By: Mike Garringer, CNMT, NCT

Reported By: Ronald Frick, M.S., CHP, DABR

Background: Maui Memorial Medical Center is authorized to use byproduct material listed in 10 CFR 35.100 - 35.400. The area in question was used for the storage of used Mo-99 generators and nuclear medicine decay-in-storage waste. Isotopes stored in this area included Tc-99m, Tl-201, Ga-67, In-111, I-131 and Xe-133. It was also used as a storage area for Cs-137 brachytherapy sources.

All unsealed, short-lived radioactive materials were removed from this area and transferred to the other long term waste storage area more than six months ago. This represents decay of more than 22 half-lives for I-131, which is the longest lived unsealed material stored in this area. The Cs-137 sources were recently transferred to the other long term waste storage area. Leak tests performed on the Cs-137 sources show no evidence of leakage (leak test certificates attached).

Upon decommissioning, this area will be released for unrestricted use. It will be primarily used for equipment storage.

Previous Incidents: There have been no major radiological spills or incidents which resulted in off-site contamination or required more than minimal decontamination effort.

Instrumentation: Scan surveys were performed with a Victoreen 290 GM survey meter. This meter has a range of 0 to 1,000 mR/hr, and was last calibrated on 5/6/05 (see enclosed certificate).

Wipe samples were analyzed for gamma emitters with the Capintec Captus 3000 NaI well counter. The detection efficiency for I-131 gammas is 89%, as measured with a Ba-133 standard. Average background for the counter is 269 cpm. For a one minute count, minimum detectable activity is 89 dpm. The following MDA formula was used:

$$MDA(dpm) = \frac{2.71 + 4.65\sqrt{CR_B}}{\varepsilon}$$

Efficiency determinations are attached. Since I-131 has the highest gamma energy of all unsealed nuclides used at this facility, it is detected least efficiently. The detection efficiency for I-131 was conservatively used for all gamma emitting nuclides.

Survey Guidelines: Subpart E of 10 CFR 20, Radiological Criteria for License Termination, states that "A site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 25 mrem per year, including that from groundwater sources of drinking water, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable". NRC NUREG-1757, *Consolidated NMSS Decommissioning Guidance*, provides tables which list the residual surface contamination in dpm/100 cm^2 for radionuclides which would result in a TEDE of less than 25 mrem/year for a building occupancy scenario. For Cs-137, the permissible surface contamination is 28,000 dpm/100 cm^2. No values are listed for short-lived radionuclides. NUREG 1556, Vol 7, *Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope*, sets the removable and non-removable contamination limits for beta-gamma emitters at 1000 and 5000 dpm/100 cm^2, respectively, and sets the removable contamination limit for I-131 at 200 dpm/100 cm^2.

Based on these documents, we have set a removable contamination guideline of 200 dpm/100 cm^2 for all beta-gamma emitters. These contamination levels are above the minimum detectable activities of the survey equipment used, and can be reasonably achieved using standard decontamination methods.

Description: Scan surveys were performed of all floors, walls and doors within the storage area using the GM survey meter.

Wipe samples were taken in the numbered locations indicated on the attached survey diagram. All wipe samples were taken over a minimum area of 100 cm^2.

Results: The scan survey with the GM survey meter found no radiation levels distinguishable from background (approximately 0.01 mR/hr).

Wipe samples taken in all areas revealed no contamination above the minimum detectable activity of 89 dpm/100 cm^2. Tabulated wipe sample analysis results are attached.

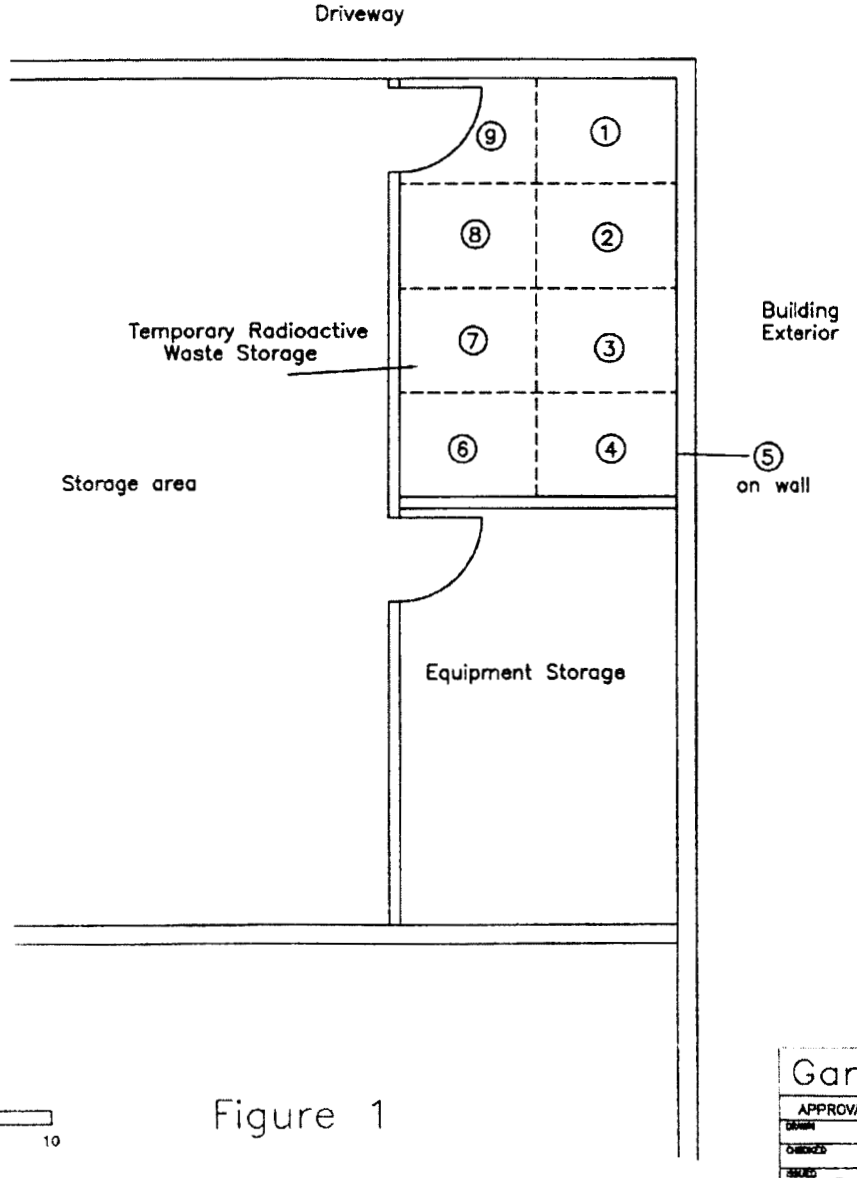
Conclusion: Residual contamination within the storage area is far below the levels which would result in a member of the critical group receiving a TEDE greater than 25 mrem/year. Residual contamination is also below the ALARA levels published in NRC guidance documents. It is recommended that this room be released for unrestricted use.

Efficiency Determination - Well Counter

Ba-133 Standard activity = 0.118 μCi, Cal. 2/25/82
Activity on 12/21/005 = 56254 dpm
Measured cpm = 50250
Detection efficiency = 89%

Gamma Wipe Test Results

Wipe Number	Net cpm	Net dpm
1	7	<89
2	0	<89
3	0	<89
4	0	<89
5	0	<89
6	3	<89
7	0	<89
8	19	<89
9	55	<89



SCALE (FEET)
0 5 10

Figure 1

Gamma Corporation
850 W Hind Dr #116
Honolulu, HI 96821

APPROVALS	DATE
DRAWN	
CHECKED	
ISSUED P. Manly	

FACILITY
Maui Memorial Medical Center

ROOM
Temporary Radioactive Waste Storage

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 02120
Status Code: 0
Fee Category: 7C
Exp. Date: 20110531
Fee Comments: STATE
Decom Fin Assur Reqd: N

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED
   Applicant/Licensee: MAUI MEMORIAL MEDICAL CENTER
   Received Date: 20060717
   Docket No: 3003561
   Control No.: 471037
   License No.: 53-13519-01
   Action Type: Amendment

2. FEE ATTACHED
   Amount: /
   Check No.: /

3. COMMENTS

Signed Colleen Murnahan
Date 7-20-06

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /__/)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:
   Amendment _____
   Renewal _____
   License _____

3. OTHER _____
   _____

Signed _____
Date _____

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