



St Joseph's
HOSPITAL - MILWAUKEE

5000 West Chambers Street - Milwaukee, WI 53210 - 414 447-2000

January 10, 1985

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U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Ill. 60137

U.S. N.R.C.
LIC. FEE MGMT. BRANCH

Attention: Licensing

Re: Amendment to NRC License No. 48-00537-03

Gentlemen:

We wish to amend our license number 48-00537-03 to allow the use of the following sealed source.

A. Radioactive Material

Element and Mass number: Gadolinium-153
Chemical and Physical Form: GdO₂ (sealed source)
Manufacturer: Gulf Nuclear, Webster, Texas
Model Number: GD-1
Maximum Amount: 1.6 Ci (This includes a new source of approximately 1.0 Ci and a partially decayed source to be returned to the source manufacturer)

B. Description of Use:

The sealed source will be used in a bone mineral analyzer manufactured by Lunar Radiation Corporation of Madison, Wisconsin, Model number DP-3.

This device is registered by the NRC with the registration number: NR-430-D-101-S and by the FDA (K802180A)

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REGION III

CONTROL NO. 78213

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Applicant: *Feb 10 1985*
Check No. *200747*
Amount: *\$120*
Type of Fee: *7.5% annual*
Date Check Rec'd: *2/11/85*
Received By: *[Signature]*

8506030615 850510
REG3 LIC30
48-00537-03 PDR

C. Authorized Users

The device will be used by, or under the supervision of:

Joseph F. Wepfer, M.D. or John P. Matsis, M.D., who are currently licensed to use all Groups of Schedule A, Section 35.100 of Title 10, Code of Federal Regulations.

D. Installation

The device will be installed by the manufacturer who will provide two days of installation and training. The training will include source installation, wipe testing, scan operations, data analysis and interpretation.

E. Leak Testing

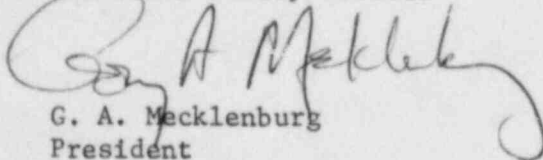
The leak testing will be done at a maximum interval of six months using a single channel analyzer, counter and a calibrated reference source using procedures as described in previous amendment applications. The test will be capable of detecting the presence of 0.005 microcurie on the test sample and if needed, the device will be withdrawn from use until decontaminated and repaired.

An amendment fee of \$120.00 is enclosed.

Sincerely,



John B. Whitton
Radiation Safety Officer



G. A. Mecklenburg
President

JBW/lb
Enclosure

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LUNAR RADIATION CORP.

DP3 SPINE/FEMUR SCANNER and SP2 FOREARM SCANNER SPECIFICATIONS

Computer

NorthStar Advantage

Dimensions: 28x51x32cm (20kg)

Processor: Z80A CPU and INTEL 8035; option IBM compatible

Display: 28cm diagonal P31 Phosphor; 1920 character (24 lines x 80 characters);
graphics 240x640 pixels bit-mapped; screen dump to printer

Disks: Two 5-1/4" floppy diskette drives (double-sided, double density); 360K byte per
diskette (10 sector); holds 25 spine or femur scans or 55 forearm scans per diskette

Nuclear Instrumentation

High voltage: Programmable 600 to 1600V

Amplifier: High-speed (0.25 microsec shaping time)

Dual-channel analyzer: Low-drift fast analyzers

Dual-scalers: 10 MHz scalers (16-bit)

Timer: Crystal-controlled programmable

Detector: Collimated NaI (Tl) scintillation detector with Bialkali Cathode

Motors and Control

Motors: 4-phase stepping motors

Control: Programmable controller; menu-driven step interval and speed

Scan Table (for DP3)

Dimensions: 183 x 81 x 69cm (50kg)

Materials: 2.5 x 5cm chrome plated steel legs; laminate covered wood top

Console Table (for both DP3 and SP2)

Dimensions: 152 x 75 x 69cm (30kg)

Materials: 2.5 x 5cm chrome plated steel legs; laminate covered wood top

Scanner Mechanism

DP3-Dimensions: 60 x 60 x 25cm metal enclosure below table (30kg)

SP2-Dimensions: 56 x 54 x 46cm metal enclosure

Source access: Through locked table top

Software

Operating system, graphics and BASIC are standard.

Compiled programs include: spinal scanning, femoral scanning, quality control;
reanalysis of data from diskette

Warranty

Ninety day complete parts and labor coverage warranty. One-year parts warranty on Lunar Radiation components (scanner and counting electronics).

Service Contracts

Extension of the complete warranty service can be obtained under a service contract. Service contracts provide for the continued operation of your systems at a predictable cost. Benefits include one-day replacement service in case of failure and on-site service if necessary.

Radionuclide sources

¹⁵³GD (1 Ci) sources are supplied by Gulf Nuclear of Webster, Texas (713-332-3581) for approximately \$6700 and can be used for 12-18 months.

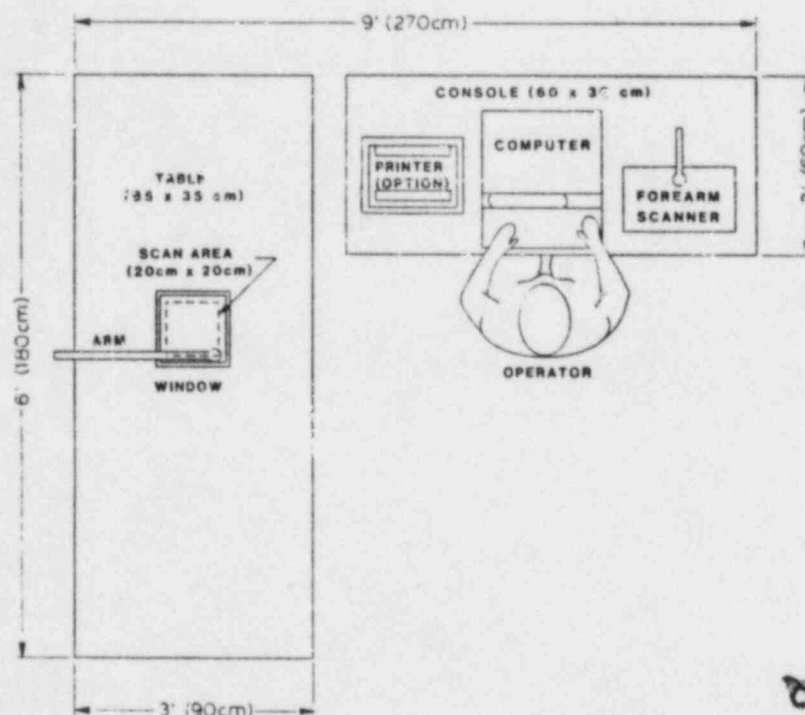
¹²⁵I sources (200mCi) are supplied by Atomic Energy of Canada, Ltd. (613-592-2790, ext. 2048) for about \$600 and can be used for 6 months.

N.R.C. Device Registration: DP3 NR-430-D-101-S, SP2 NR-430-D-102-S. 8-hours training required for license.

Delivery

30 days ARO.

System Configuration (typical)



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LUNAR RADIATION CORPORATION
916 Williamson Street—Madison, Wisconsin 53703
(608) 258-8545