

30-22112

**RADIATION PROTECTION SERVICES, INC.**

CONSULTANTS IN HEALTH PHYSICS

P.O. Box 2359

DARIEN, CT 06820

(203) 324-7967

(201) 254-9080

June 16, 1986

Materials Licensing Branch  
 U.S. Nuclear Regulatory Commission  
 Region I  
 631 Park Avenue  
 King of Prussia, PA 19406

RECEIVED

'86 JUL -9 A9:22

Re: Cesium-137 irradiator  
 NRC License No. 06-20811-01

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

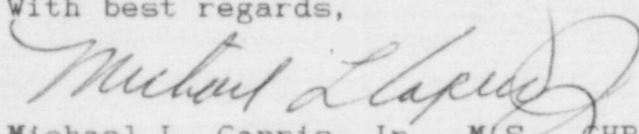
Gentlemen:

With reference to the materials license (NRC License No. 06-20811-01) issued to Radiation Protection Services, Inc., please note that a Model 10 (SN-11036) Cs-137 irradiator was received at our laboratory. Information for your files is as follows:

- (1) Source calibration certificate; external radiation level survey and initial leak test analysis as prepared by J.L. Shepherd are enclosed for your review.
- (2) Shielding integrity survey of the calibration lab is enclosed for your review.

If you have any additional questions, please do not hesitate to contact our offices at (203) 324-7967.

With best regards,



Michael L. Caprio, Jr., M.S., CHP  
 Certified Health Physicist/RSO

86 JUN 23 P2:10

RECEIVED

Log	Jun 17
Remitter	
Check No.	To be Voided
Amount	
Fee	By Region
Type	
Date	6/23/86
Date Completed	6/25/86
By:	J. Shepherd

86 JUN 18 PM 2:59

RECEIVED-REGION 1

**"OFFICIAL RECORD COPY"**

ML10

105676

JUN 18 1986

B703240446 B60701  
 REG1 LIC30  
 06-20811-01 PDR

## Calibration Lab Survey Form

4/14/86

Surveyed C/Victor 160

Cs-137 off  
Unpackaged

4.8 mR/h

3.5 mR/h

4.0 mR/h

5.2 <sup>10</sup> mR/h

3.9 mR/h

J. Grel  
M. Caprio

4.6

11

5.4 mR/h

4.5 mR/h

2.5 mR/h

J Grel = Recorder  
M Caprio = Monitor

Cs-137 Irradiation Open

12

0.1 mR/h

20'

50 mg Ra in Shield

4

0.11

	Area	mR/hr	mR/hr	mR/hr	Actual	Actual
1) outside	11					
2) outside						
3) outside		4.0				
4) outside						
5) outside		11				
6) @ 1m @ 50 cm		146				
7) @ 2m						
8) @ 3m						
9)						
10)		4.8				
11) Open		5.4				
Closed		4.7				

all Measurements  
Waist High (3')

# JLS **SHEPHERD** *and Associates*

740 Salem Street, Glendale, California 91203

• 213/245-0187

*Irradiation & Calibration Equipment*

• *Lead Shielding*

• *Nuclear Applications*

## CALIBRATION CERTIFICATE

TO: RADIATION PROTECTION SERVICES, INC. P.O.# MLC-011186

SOURCE: 100mCi Cs-137, Amersham Type X.8, S. N. 4658GF

MOUNTING: J. L. Shepherd & Associates Series 10 Beam Portable  
Calibrator, S. N. 11036

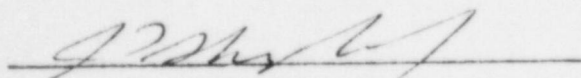
INSTRUMENT: All calibration is done with MDH Industries, Model  
2025 X-Ray Monitor, S.N. 2127, with 180cc Probe, S.N.  
6105 and 3cc Probe, S.N. 4126. This meter is calibrated  
by MDH Industries, Inc. using a Model 10X5-6 modified  
3-terminal Ion Chamber, S.N. X2, National Bureau of  
Standards Report #DG 7856/82. Accuracy  $\pm 5\%$ .

POSITION: Centered in Beam Port 20° Beam Port

DISTANCE: 50cm from source centerline 50cm from source centerline

OUTPUT: 136.0mR/hr - free air side fire 139.0mR/hr

DATE: April 1, 1986

  
J. L. SHEPHERD

## EXTERNAL RADIATION LEVELS

TO: RADIATION PROTECTION SERVICES, INC.

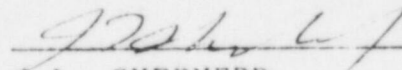
SOURCE: 100mCi Cs-137, Amersham Type X.8, S. N. 4658GF

MOUNTING: J. L. Shepherd & Associates Series 10 Beam Portable  
Calibrator, S. N. 11036

SOURCE IN "OFF" POSITION:  $\leq 2.0\text{mR/hr}$  at 12" from surface  
 $\leq 30.0\text{mR/hr}$  at contact

SOURCE IN "ON" POSITION:  $\leq 2.0\text{mR/hr}$  with beam port plug removed  
thru 180° angle behind the plane  
parallel with the rear face of the  
calibrator.

DATE: April 1, 1986

  
J.L. SHEPHERD

## LEAK TEST CERTIFICATION

TO: RADIATION PROTECTION SERVICES, INC.

SOURCE: 100mCi Cs-137, Amersham Type X.8, S. N. 4658GF

MOUNTING: J. L. Shepherd & Associates Series 10 Beam Portable  
Calibrator, S. N. 11036

LEAK TEST:  $\leq 5 \times 10^{-5}$  Microcuries

DATE: April 1, 1986

  
J. L. SHEPHERD

William O. Miller, Chief  
License Fee Management Branch  
Office of Administration

John E. Glenn, Chief  
Nuclear Materials Section B  
Division of Engineering and  
Technical Programs

03022112  
03221  
11/90

LICENSE FEE TRANSMITTAL

Fee Needed

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: Radiation Protection Services, Inc.

Application Dated: 6/16/86

Control No.: 105676

License No.: 06-20811-01

2. FEE ATTACHED

Amount: 0

Check No.: 0

3. COMMENTS

To be VOIDED by  
Region I. Per Doris  
6/25/86. SK

Signed Brenda Platchek

Date 6/19/86

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 322

2. Correct Fee Paid. Application may be processed for:

Amendment                     

Renewal                     

License                     

Signed X Kimberly

Date 6/25/86