

ACCEPTANCE REVIEW MEMO (ARM)

Licensee: Wyoming Medical Center **License No.:** 49-00152-02
Docket No.: 030-03495 **Mail Control No.:** 471807
Type of Action: Amend **Date of Requested Action:** 04-29-08
Reviewer Assigned: **ARM reviewer(s):** Torres

Response	Deficiencies Noted During Acceptance Review
	[] Open ended possession limits. Submit inventory. Limit possession. [] Submit copies of latest leak test results. [] Add IC L.C./Fingerprint LC, add SUNSI markings to license. [] Confirm with licensee if they have NARM material.

Reviewer's Initials: _____ **Date:** _____

<input type="checkbox"/> Yes	<input type="checkbox"/> No	Request for unrestricted release Group 2 or >. Consult with Bravo Branch.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Termination request < 90 days from date of expiration
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Expedite (medical emergency, no RSO, location of use/storage not on license, RAM in possession not on license, other)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	TAR needed to complete action.

Branch Chief's and/or HP's Initials: _____ **Date:** _____

SUNSI Screening according to RIS 2005-31		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Sensitive and Non-Publicly Available if <u>any</u> item below is checked
General guidance:		
_____ RAM = or > than Category 3 (Table 1, RIS 2005-31), use Unity Rule		
_____ Exact location of RAM (whether = or > than Category 3 or not)		
_____ Design of structure and/or equipment (site specific)		
_____ Information on nearby facilities		
_____ Detailed design drawings and/or performance information		
_____ Emergency planning and/or fire protection systems		
Specific guidance for medical, industrial and academic (above Category 3):		
_____ RAM quantities and inventory		
_____ Manufacturer's name and model number of sealed sources & devices		
_____ Site drawings with exact location of RAM, description of facility		
_____ RAM security program information (locks, alarms, etc.)		
_____ Emergency Plan specifics (routes to/from RAM, response to security events)		
_____ Vulnerability/security assessment/accident-safety analysis/risk assess		
_____ Mailing lists related to security response		
Branch Chief's and/or HP's Initials: <u>RTC</u>		Date: <u>MAY 19 2008</u>

April 29, 2008

US Nuclear Regulatory Commission Region IV
Nuclear Materials Licensing Branch
611 Ryan Plaza Drive
Suite 400
Arlington, Texas 76011-8064

RECEIVED

MAY 6 2008

DNMS

RE: Amendment for Radioactive Materials License #49-00152-02

Dear Sir or Madam:

The subject license authorizes, in part, the uses under 35.400 for manual brachytherapy. Under item 7.D. are listed various sealed sources. We would request that the license be amended as followings:

7.D. to include: **Theragenics Corporation Model 200** (containing ^{103}Pd .)

Palladium has been in use under the previous regulations which were not subject to NRC licensing. The receipt use and disposal of this material will be handled in accordance with our policies for safe handling, in effect for all radioactive materials.

For further information, please contact me at our Radiation Safety Officer's number: (307) 233-4751 or fax (307) 233-4700.

Sincerely,



Alan G. Douglas, MS
Radiation Safety Officer
Wyoming Medical Center
1233 E. 2nd Street
Casper, WY 82601

Source Specifications for TheraSeed ^{103}Pd

Source Information

Model Name: Model 200

Manufacturer: Theragenics Corporation, Buford, GA

Half-life: 16.99 days

Air kerma conversion: 1.293 U/mCi

Reference Material:

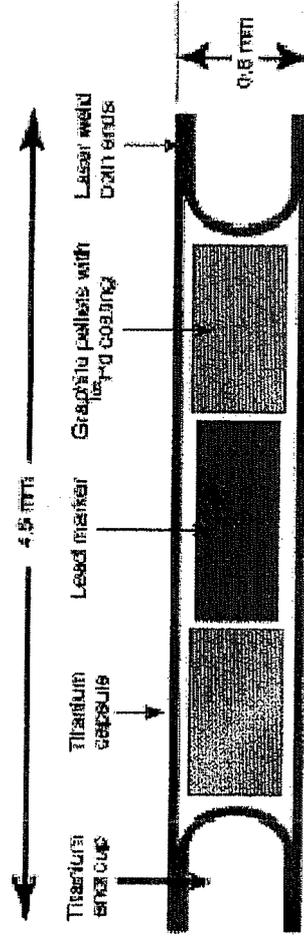
Dose Rate Constant, L

NIST 2000 WAFAC calibration

0.686 cGy $h^{-1}U^{-1}$

0.887 cGy $h^{-1}mCi^{-1}$

M.J. Rivard, et al., "Update of AAPM Task Group No. 43 Report: A revised AAPM protocol for brachytherapy dose calculations," Med. Phys. **31**, 633-674 (2004).



Source Specifications for TheraSeed ¹⁰³Pd

Radial Dose Function

Line Source Approximation

r (cm)	g(r)
0.10	0.911
0.15	1.210
0.25	1.370
0.30	1.380
0.40	1.360
0.50	1.300
0.75	1.150
1.00	1.000
1.50	0.749
2.00	0.555
2.50	0.410
3.00	0.302
3.50	0.223
4.00	0.163
5.00	0.0887
6.00	0.0482
7.00	0.0262
10.00	0.00615

Point Source Approximation

r (cm)	g(r)
0.10	0.494
0.15	0.831
0.25	1.154
0.30	1.220
0.40	1.269
0.50	1.248
0.75	1.137
1.00	1.000
1.50	0.755
2.00	0.561
2.50	0.415
3.00	0.306
3.50	0.226
4.00	0.165
5.00	0.0900
6.00	0.0489
7.00	0.0266
10.00	0.00624

Source Specifications for TheraSeed ¹⁰³Pd

F(r,θ) θ (degrees)	Anisotropy r (cm)								
	0.25	0.5	0.75	1	2	3	4	5	7.5
0	0.619	0.694	0.601	0.541	0.526	0.504	0.497	0.513	0.547
1	0.617	0.689	0.597	0.549	0.492	0.505	0.513	0.533	0.580
2	0.618	0.674	0.574	0.534	0.514	0.517	0.524	0.538	0.568
3	0.620	0.642	0.577	0.538	0.506	0.509	0.519	0.532	0.570
5	0.617	0.600	0.540	0.510	0.499	0.508	0.514	0.531	0.571
7	0.579	0.553	0.519	0.498	0.498	0.509	0.521	0.532	0.568
10	0.284	0.496	0.495	0.487	0.504	0.519	0.530	0.544	0.590
12	0.191	0.466	0.486	0.487	0.512	0.529	0.544	0.555	0.614
15	0.289	0.446	0.482	0.490	0.523	0.540	0.556	0.567	0.614
20	0.496	0.442	0.486	0.501	0.547	0.568	0.585	0.605	0.642
25	0.655	0.497	0.524	0.537	0.582	0.603	0.621	0.640	0.684
30	0.775	0.586	0.585	0.593	0.633	0.654	0.667	0.683	0.719
40	0.917	0.734	0.726	0.727	0.750	0.766	0.778	0.784	0.820
50	0.945	0.837	0.831	0.834	0.853	0.869	0.881	0.886	0.912
60	0.976	0.906	0.907	0.912	0.931	0.942	0.960	0.964	0.974
70	0.981	0.929	0.954	0.964	0.989	1.001	1.008	1.004	1.011
75	0.947	0.938	0.961	0.978	1.006	1.021	1.029	1.024	1.033
80	0.992	0.955	0.959	0.972	1.017	1.035	1.046	1.037	1.043
85	1.007	0.973	0.960	0.982	0.998	1.030	1.041	1.036	1.043
Φ _{an} (r)	1.130	0.880	0.859	0.855	0.870	0.884	0.895	0.897	0.918

MAY 19 2008

DATE

This is to acknowledge the receipt of your letter/application dated 4-29-08, and to inform you that the initial processing, which includes an administrative review, has been performed.

There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card:

The action you requested is normally processed within 90 days.

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 471807.
When calling to inquire about this action, please refer to this mail control number.
You may call me at 817-860-8103.

Sincerely,



Licensing Assistant

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

LICENSE FEE TRANSMITTAL

(FOR LEADS USE)
INFORMATION FROM LTS

Program Code: 02120
Status Code: 0
Fee Category: 7C
Exp. Date: 20150531
Fee Comments:
Decom Fin Assur Reqdt: N

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: WYOMING MEDICAL CENTER
Received Date: 20080506
Docket No.: 3003495
Control No.: 471807
License No.: 49-00152-02
Action Type: Amendment

2. FEE ATTACHED

Amount: _____
Check No.: _____

3. COMMENTS

Signed *Allen P. ...*
Date 5-19-08

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 _____

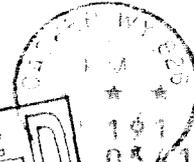
Alan Douglas, RSO


Wyoming
Medical
Center

RADIOLOGY

1233 East Second Street
Casper, Wyoming 82601

Address Service Requested



US Nuclear Regulatory Commission Region IV
Nuclear Materials Licensing Branch
611 Ryan Plaza Drive
Suite 400
Arlington, Texas 76011-8064

7601184005 C024

