

**St. Joseph Health Center  
300 First Capitol Drive  
St. Charles, MO 63301  
(636)947-5444**

December 7, 2009

Materials Licensing Section  
U. S. Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road STE 210  
Lisle, Illinois 60532-4352

Re: Control Number 317556  
Lic. No. 24-15159-01

Dear Ms. Casey,

Thank you for your correspondence of Jan 5, 2009 regarding Amendment No. 58 to our Material License. At that time we had requested **removal** of authorization for iridium-192 in a high dose rate remote afterloading brachytherapy device at the 300 First Capitol Drive, St. Charles, Missouri location. You were unable to remove this use from our license since we had not provided receipt confirmation by the manufacturer of the last source removed from the unit. This correspondence therefore includes the receipt confirmation and the leak test of the last source used at that location.

Thank you again for your consideration in this matter.

If you have any questions over this information please feel free to call Mark Pohlman, Ph.D.. His contact numbers are 314-941-1030 or 314-488-5111.

Sincerely,

A handwritten signature in black ink, appearing to read "Sidney Machefsky". The signature is written in a cursive style with a large, sweeping flourish at the end.

Sidney Machefsky, M.D., RSO

RECEIVED DEC 14 2009

## MARK POHLMAN

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**From:** Prager, Cyndie [cyndie.prager@us.nucletron.com]  
**Sent:** Friday, September 19, 2008 10:57 AM  
**To:** MARK POHLMAN  
**Cc:** Prager, Cyndie  
**Subject:** Receiving of source serial# D36B-5346 at Nucletron Corp.



### Received source information

Source serial number: D36B-5346  
Source container : 1836C5  
Source activity : 3.5 Ci  
Date received : 09-17-2008

From : Missouri Cancer Care  
Address : St. Joseph Health Center  
Address 2 : 1475 Kisker Rd.; Ste 180  
City : St. Peters  
State / zip : MO 63304  
Country : United States

**Cyndie Prager**  
Coordinator, Source Logistics  
Nucletron Corporation  
Office: +1 443 545 2218  
[cyndie.prager@us.nucletron.com](mailto:cyndie.prager@us.nucletron.com)  
Visit our website: [www.nucletron.com](http://www.nucletron.com)

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B. JOE - HEALTH CON - SOURCE



**DO NOT REMOVE THIS DOCUMENT FROM THE TRANSPORT DRUM**

**Source Return Document (USA) for Container type ADIC (Part No. 081.040-xx)**

Hospital name:	MISSOURI CANCER CARE	Address:	330 FIRST CAPITAL DR
City:	ST. CHARLES	State/Country:	MO / USA
Container serial no. (on top of lid):	1836 ADIC	Source serial no. (on source tail):	D36B 53410
Afterloader serial no.:	31876		
Source type:	<input checked="" type="checkbox"/> mHDR V2 / GENIE (0.9mm) <input type="checkbox"/> mPDR V2 (0.9mm)	<input type="checkbox"/> mHDR Classic (1.1mm) <input type="checkbox"/> mPDR Classic (1.1mm)	

No.	Item (see Source Handling Procedure, part no. 190.062)	Nucletron Certified Source Handler	
1.	Are you Nucletron-certified for source exchanges?	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
2.	Dose rate above the source channel (without lid) should be lower than on the side of the container	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
3.	Source is locked (lever down) and source cable is undamaged	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
4.	Length of source cable extending from unload tube	$\leq 480\text{mm}$ (0.9 mm source)	$\leq 460\text{mm}$ (1.1 mm source)
		477	
5.	Source information label on container matches actual source	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
6.	Container lid is closed: both nuts fastened and lid locked	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
		$\leq 20\text{ mrem/h}$ or	$\leq 200\text{ }\mu\text{Sv/h}$
7.	Surface dose rate of the hot spot on top of the transport drum	1.1	
8.	Surface dose rate of the hot spot on the side of the transport drum	8.0	
9.	Dose rate for the hot spot at 1 metre from the transport drum	0.3	
10.	Radioactive contamination on transport drum	$\leq 0.4\text{Bq/cm}^2$	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Remark
11.	Measurements within specification?	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
12.	Transport Index (TI)	$0.1 \leq \text{TI} \leq 0.6$	0.3
13.	Source activity	129.87	GBq
14.	Labels are correctly placed and filled in (II-Yellow and address labels)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
15.	Shipping documents are completed and signed	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
16.	No other reportable quality problems with source, container(s), packaging, labelling, error code 227/228, etc.?	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark
17.	RMA label attached? (If yes, submit an FPR report to Nucletron)	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
18.	Lid screwed tightly on to transport drum and red tamper inserted; source return document enclosed (tick 'Pass' if done immediately after completing this form)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Remark

Nucletron Certified Source Handler:	Signature:	Date (YYYY-MM-DD):	Release for local and long distance shipment?
SCOTT T. McGUIRE	Scott T. McGuire	2008-09-15	<input checked="" type="checkbox"/> Yes (no unresolved remarks) <input type="checkbox"/> NO: DO NOT SHIP and call Nucletron (1)-800-4459295

Fax a copy to Nucletron, fax no. (1) 410-3124196, and include the white original in the transport drum.

Remarks (place a red RMA Label on the container and on the transport drum):

# Certificate For Sealed Sources

Issue Date: 2008-05-16 (1)

Product Code: REF 105002  
Serial Number: SN D36B-5346  
Production Code: LOT HDR042308

Serial no. Transport Container: 2254C5  
Serial no. Check Cable: N/A  
Certificate Number: ipFc\* #zHJi 9TPd0 E7xzL E1

## Source Specification

Reference Air Kerma Rate: 43.45 mGy h<sup>-1</sup> +/- 5% at 1m (2)  
Measurement Reference Date: 2008-05-20 18:00 CET = 11:00 → (-7 hrs) TIME CORR, ZONE  
Apparent Activity: 395 GBq (10.7 Ci) at measurement reference date. (3,4) M&P 5/27/08

Source Type: MICROSELECTRON-HDR  
Capsule dimensions: 0.9 mm diameter, 4.5 mm length ✓  
Source pellet dimensions: 0.60 mm diameter, 3.5 mm length  
Source pellet form: Solid Iridium  
Radionuclide: Ir-192 ✓  
Encapsulation: single ✓  
Capsule material: stainless steel, AISI 316L  
ISO Classification: C53211  
Special form certificate number: D/0070/S-96

## Quality Control

Laser Weld Visual Check: Passed  
Source Capsule Integrity (15 N pull test): Passed  
Leakage Test: Passed (5)  
Surface Contamination test: < 185 Bq (5 nCi) (6)

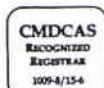
LEAK TEST

The undersigned, authorized officer of QSA Global, Inc. certifies that this source complies with the requirements of ISO2919 and that all of the information given in this certificate is true and correct.

## Quality Assurance

*J. Bouchamp* 16 May 08

- (1) Date Format yyyy-mm-dd.
- (2) Confidence level of 99.7%.
- (3) The apparent activity is determined by applying a conversion factor (0.110 mGy m<sup>2</sup> h<sup>-1</sup> GBq<sup>-1</sup>) to the measured gamma radiation output of the sealed source determined with a calibrated instrument. The instrument is traceable to the National Institute of Standards & Technology. (NIST)
- (4) The apparent activity is the Iridium-192 activity; other radionuclides not detectable.
- (5) Leakage test method according to ISO9978 method Liquid nitrogen bubble test (6.2.4).
- (6) Surface contamination test according to ISO9978 method Wet wipe test (5.3.1).
- (7) The quality assurance system of QSA Global Inc. is certified by Lloyd's Register Quality Assurance (LRQA) according to ISO 9001 and ISO 13485.



40 North Avenue Burlington, MA 01803 1(781) 272-2000

MARK POTEMAN, PhD  
SSM ST. JOSEPH MEDICAL PARK  
1475 KISKER RD  
ST. CHARLES, MO 63304



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