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August 28, 2015

UNITED STATES NUCLEAR REGULATORY COMMISSION
Region III, Materials Licensing Section
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Attn: Colleen Casey

Re: Renewal of Materials License:
License number 21-01430-01, Edward W. Sparrow Hospital
Control number 586160

Hello Colleen,
Please find the enclosed paperwork for our renewal:

- Sealed Source Leak Test for afterloader model 105.999 dated March 18, 2015.

Our Afterloader unit was upgraded on March 18, 2015 from a model #105.999 to a model #106.990. The last source in the #105.999 was an Ir-192 source with serial # D36K0425. The attached shows the leak test for that last source.

If you have any questions regarding the application please contact Marty Johnson, M.S. at (517) 364-2167 or Marty.Johnson@Sparrow.org.

Thank you it has been a pleasure working through this renewal with you.

Sincerely,

A handwritten signature in black ink that reads 'Martin W. Johnson'. The signature is fluid and cursive, with the first name 'Martin' being the most prominent.

Martin W. Johnson, M.S., D.A.B.R.
Radiation Safety Officer

**Radiation
Oncology**

James Herman, MD, FRCP(C)
Kris Lindquist, PA-C
Martin Johnson, MS

Luciano DiCarlo, DO
Beverly Sainz, PA-C
Theresa Pruder, MSA

1215 E. Michigan Avenue
P.O. Box 30480
Lansing, Michigan 48909-7980

T 517.364.2318
F 517.364.2987
sparrow.org



Transport Drum (Barrel) Wipe Test Work Sheet Sealed Source (Cable) Leak Test Work Sheet

DID: NADoc0040-1 VID: 2.0

ELEKTA, 400 Perimeter Center Terrace, Suite 50, Atlanta, GA 30346 1-855-MYELEKTA (855-693-5358)

INSTRUCTIONS FOR ELEKTA, INC FIELD SERVICE ENGINEER

- 1 Follow the RNA Wipe Test Procedure, NADoc0040, to perform the tests and analyses described below.
- 2 After the spent source is secured within the shielded inner source shipping container (pig), collect a leak test sample of the sealed source by wiping along the source cable. Using a dry wipe pad, wipe FROM the end of the cable TOWARD the source. Do not touch the wipe to any other surface.
- 3 Collect a wipe test of 300 cm² from the exterior of the outer shipping container using a dry wipe. Wipe twice (2x) around the side of the container and twice (2x) across the top using moderate pressure.
- 4 In a low radiation background area, use the "Inspector" Survey Instrument to measure the background count rate and the count rate from each wipe. Place the wipe on the tray, centered under the detector.
- 5 If the BR exceeds 80 cpm, re-measure the background count rate.
- 6 If the sample activity of either wipe exceeds 1000 dpm, contact the RSO.
- 7 Measure and record the maximum dose rate on the surface of the outer shipping container and the maximum dose rate at one (1) meter.

Device Serial No.	Source Serial No. & Type	Container S/N	Radiation Inst. S/N & Cal	Background BR	LLD = (4.66)(Sqrt B)+3+B	Source Wipe SWR	Drum Wipe DWR
31863	D36K0425 IR-192	1940C6 Calibrated on 12-Aug-14 Calibration due 11-Aug-15	6001	34 cpm If >80 move to lower background area	64.73 counts	33 cpm	35.8 cpm
Maximum dose rate (surface):		Maximum dose rate (1 meter)		Current activity:			
8.0 mR/h		0.3 mR/h		3.96 Ci 146.67 Gbq			

CERTIFICATE OF TRANSPORT DRUM CONTAMINATION ANALYSIS

The Transport Drum Wipe Test was assayed for beta-gamma contamination. Title 49 CFR 173.443 Table 9 limits the removable contamination for 1cm² surface wipes to less than 4 Bq, 10⁻⁴ µCi, 220 dpm for external surfaces of packages in transportation.

If DWR is less than or equal to LLD, record "<LLD". Otherwise, Sample Activity = (DWR-BR)/E, where E is the instrument efficiency found on the calibration sticker

FSE Name

Dennis Tressler

Sample Activity <LLD dpm

Date 18-Mar-15

FSE Signature

03/22/2015 05:19:29 pm

SigPlus2

CERTIFICATE OF CABLE WIPE TEST

The Leak Test Sample was assayed for beta-gamma contamination. The limit for removable contamination from a sealed source used in brachytherapy is 180 Bq, 0.005 µCi, 11,100 dpm.

If SWR is less than or equal to LLD, record "<LLD". Otherwise, Sample Activity = (SWR-BR)/E, where E is the instrument efficiency found on the calibration sticker

FSE Name

Dennis Tressler

Sample Activity <LLD dpm

Date 18-Mar-15

FSE Signature

03/22/2015 05:19:29 pm

SigPlus1

Hospital: Sparrow Hospital
Address: 1215 E. Michigan St.
Lansing, MI 48909

Contact name: Martin Johnson

Note to licensee: This report should be reviewed by your Radiation Safety Officer and filed for future reference.

Casey, Colleen

From: Johnson, Martin <Marty.Johnson@SPARROW.ORG>
Sent: Friday, August 28, 2015 10:02 AM
To: Casey, Colleen
Cc: Edwards, Dawn
Subject: [External_Sender] RE: If this helps you....
Attachments: Sparrow License Renewal control 586160 2015_08_28.pdf

Dear Colleen,

Very much appreciated the "guidance " documents that you have given me. The design process for our new cancer center is large and the reference information will be helpful.

Attached is the last document we discussed yesterday for our material license renewal (Control #586160). It is dealing with the upgrade of our HDR afterloader from a model #105.999 to a model #106.990 on March 18, 2015. The last source that was in the older model #105.999 was the D36K0425. The attachment also has the leak test results for that last source.

Thank you again for your assistance in renewing our materials license.
If you have any questions, please feel free to contact me.

Have a great weekend!
Marty

Marty Johnson | Radiation Safety Officer | Chief - Medical Physics / Cancer Center | [Sparrow Health System](#) |
marty.johnson@sparrow.org | P:517.364.2167 |

From: Casey, Colleen [mailto:Colleen.Casey@nrc.gov]
Sent: Thursday, August 27, 2015 4:54 PM
To: Johnson, Martin
Subject: If this helps you....

Dear Marty,

Thanks again for the good call this afternoon, cleared up a lot for the renewal.

Attached are the informal "guidance" type documents I've put together that may give you a starting point, in conjunction with the NUREG 1556 series documents (Vols. 9 Rev. 2, Vol. 5, etc.) and our regulations, etc. of course.

If you still have questions, feel free to call me or email me. I will look for your response tomorrow then on the HDR model no. matter.

Thanks again!

Colleen

Colleen Carol Casey
Materials Licensing Reviewer
U.S. Nuclear Regulatory Commission
Region III

2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352
(630) 829-9841 Direct
(630) 515-1078 Fax
NRC 24 HR Operations Center
(301) 816-5100

Gentle Reminders: Unless previously arranged with or requested by me directly, please do not submit any licensing requests, responses or correspondence via e-mail. Please only submit one complete, signed copy of your correspondence to us. Please prepare your licensing requests in accordance with NUREG 1556 Series Guidance, as appropriate. Thank you very much!
Please also note that my full-time work schedule includes every other Friday off.

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our people, our nation and
our environment
<http://www.nrc.gov/>



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