



**ST. JOHN RIVER DISTRICT
HOSPITAL**

4100 River Road
East China MI 48054

April 13, 2010

United States Nuclear Regulatory Commission
Region III, Materials Licensing
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

**RE: Addition of Authorized User and Delete Gadolinium-153 Sources
NRC License No. 21-26213-01
St. John River District Hospital**

Dear Sir/Madam:

The purpose of this letter is to notify you of the addition of an authorized user to our current NRC Materials License.

1. Please add the following authorized user to our current NRC Materials License:
Edward Mauch, M.D. Group 35.100 and 35.200

Dr. Mauch is currently listed as an authorized user on NRC Materials License #21-15638-01.

2. Please delete the Gadolinium-153 seal sources used in SMV Model PS 96 Transmission Attenuation Correction from our current NRC Material License. The sources have been transferred for disposal to Isotope Products Laboratories. A copy of the Return Packing List is enclosed for your review.

Thank you for your cooperation. If you have any questions or require additional information, please contact our medical physics consultant, Kevin B. Miller at 734-662-3197.

Sincerely,

Frank Poma
President

B**RETURN PACKING LIST****FROM:**

Company Name St. John River District Hospital
 Address 4100 River Rd.
 City East China Twp. State MI
 Zip 48854
 Contact Name Randy Ingham
 Phone Number (810) 329-5391

SEND TO:

Isotope Products
Laboratories

An Eckert & Ziegler Company

1800 North Keystone Street
Burbank, CA 91504

Tel 661-309-1010

Fax 661-257-8303

E-mail: nucmedsales@isotopeproducts.com

RETURN #RA - R85191

STOP: Fill in the return number to the left. This packing list must be affixed to the outside of the package. Each returned source to IPL must be on a one-to-one exchange basis only. For additional returns, please contact IPL customer service for additional cost considerations.

Important: Please complete all requested information below.

Nuclide	Activity	Reference Date	Serial Number	Capsule Description
1) <u>Gd153</u>	<u>300mCi</u>	<u>Dec 1999</u>	<u>NES 8424</u> <u>Lot # 55424011-63561</u>	<u>Transmission Line Source</u>
2) <u>Gd153</u>	<u>300mCi</u>	<u>Dec 1999</u>	<u>NES 8424</u> <u>Lot # 55424011-63561</u>	<u>Transmission Line Source</u>
3) _____	_____	_____	_____	_____
4) _____	_____	_____	_____	_____
5) _____	_____	_____	_____	_____

FAX NUMBER:

(810) 329-5302

NOTE: FAX number must be provided to ensure acknowledgement of return receipt.

This section for IPL internal use only

Received at IPL By:

Print Name ISIDORO LANDEROS

Date 17 MAR 04

All source(s) received at IPL per packing slip? Yes No



TECHNICAL DATA

Gd-153 Transmission Line Source Performance Evaluation Sheet

Model Number: NES 8424

Lot Number: S8424011-G3562

Radionuclide: Gd-153

Half-life: 242 days

Nominal Activity: 300 mCi (11.1 GBq)

Date: DEC-1999

Source Assay: 295 mCi (10.9 GBq) on 8-DEC-1999

SOURCE EMISSION UNIFORMITY

The gadolinium-153 line source emission of 100 keV photons was measured along its length in one centimeter segments. The uniformity was determined by taking the emission of the individual segment having the maximum deviation from the mean and dividing by the mean emission of all the segments. The uniformity of the source was determined to be $\pm 5\%$ of the mean emission.

PRINCIPAL PHOTON EMISSION ⁽¹⁾

ENERGY (keV)	X-Ray (K) 40.9	X-Ray (K) 41.5	X-Ray (K) 47	Gamma-7 97.4	Gamma-8 103.2
INTENSITY (%)	34.6	62.5	24.5	29.5	21.1

⁽¹⁾ A Handbook of Radioactivity Measurements Procedures, NCRP Report No. 58, Second Edition, (February 1985).

LEAK TEST CERTIFICATION

The subject source was leak tested for contamination and radioactivity leakage utilizing a wipe test technique prescribed by ANSI Standard N542-1977. Leakage/contamination of less than 5.0×10^{-4} microcurie was detected.

Date of Wipe Test: 15-DEC-1999

By: Edward Rappa
Edward Rappa

Recommended Procedure:

This leak test procedure is recommended if the user does not already employ an approved procedure.

Wipe all external surfaces of the source or collimating holder with a piece of water moistened filter paper or other suitable "swab".

If the total activity smeared from the source is less than the previous smear test, and less than 5×10^{-4} microcurie, then the source is considered leak free. If the total activity measured is significantly more than the previous test value, then the source should be removed from service until the source leakage can be confirmed or other source of contamination found, (even though the detected quantity may be less than that specified on the user's license for reportable source leakage).

Record test results in a proper source log for future reference.



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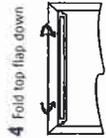
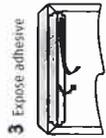
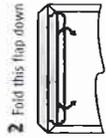
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• For UPS Worldwide Express, the UPS Express Envelope may be used only for documents of no commercial value. There is no limit on the weight or number of pages you can enclose.

• Do not use UPS 2nd Day Air services to send letters weighing over 13 ounces in this envelope. For UPS 2nd Day Air services, UPS Express Envelopes weighing one pound or more are subject to the corresponding rates for the applicable weight.

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