



21 January 2013

U.S. Nuclear Regulatory Commission, Region III

Attn: Frank Tran

Materials Licensing Branch

Division of Nuclear Material Safety

2443 Warrenville Road

Suite 210

Lisle, Illinois 60532-4352

Subject: Additional Information for Radioactive Material License 22-00057-03,  
Control No. 579058

Dear Mr. Tran:

In your request for additional information dated 11 January 2013, you asked for a copy of the receipt documentation for the Cm-244 sources that were previously used under the subject license. Attachment 1 contains copies of these receipt letters including the recipient's radioactive material license number. You requested the last leak test data for each of those sources. Attachment 2 contains a list of those leak test results. Please note that the last leak test result for source serial number 2238LM is not provided. That device was used for a period of 5 weeks in 1998 on loan from the device manufacturer. The manufacturer provided a leak test certificate with the device; but no further leak testing was done by 3M. The manufacturer's leak test certificate is no longer maintained by 3M.

In your correspondence you requested a copy of the receipt documentation for the sources previously used at the 3M facility in Columbia, Missouri. Attachment 3 contains copies of the documentation for all sources transferred since 1998. Receipt documentation for sources transferred prior to that year is no longer maintained by 3M. Attachment 4 contains a list of the last leak test results for many of the sources previously used at the 3M facility in Columbia. Some sources were not required to be leak tested; either because they contained only H-3 or because they contained less than 100 microcuries of a beta-emitting isotope (either Pm-147 or Tl-204).

RECEIVED JAN 25 2013

Frank Tran  
Page 2  
21 January 2013

Please contact Mike Lewandowski of this office at 651-737-4452 if you have any further questions.

Sincerely,



Frederick Entwistle  
Certified Health Physicist®  
Manager, 3M Corporate Health Physics  
3M Corporate Radiation Safety Officer

File: QDS\License & Registration\170. -03\2100 USNRC License 22-00057-03

Enclosures: Attachment 1: Copies of Receipt Letters for Cm-244 Sources  
Attachment 2: A List of Attachment 1 Leak Test Results  
Attachment 3: Copies of the Receipt Documentation for  
Columbia, MO Sources  
Attachment 4: Last Leak Test Results for Sources Previously Used  
at the 3M Facility in Columbia

**Attachment 1**

September 10, 2012

Mr. Michael A. Lewandowski  
3M COMPANY  
3M Center, Building 220-6W-08  
St. Paul, MN 55144-1000  
Ph: (651) 736-0498

Dear Mr. Lewandowski:

Please be advised that the radioactive device(s) as detailed below have been received by NDC Infrared Engineering. As of July 13, 1998, NDC Infrared Engineering has taken possession and title of these devices under CA License No 1451-19.

<u>Date Received</u>	<u>Model</u>	<u>NDC S/N</u>	<u>Source S/N</u>	<u>Isotope</u>	<u>Activity (mCi)</u>
13-July-1998	105	6104	2238LM	Cm-244	250

Notification of this transfer must be sent to your government agency that controls radiation in your area. This notification must be sent on company letterhead. If you have any questions please feel free to give me a call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Aguirre', with a stylized flourish at the end.

Frank Aguirre  
Radiation Safety Officer  
NDC Infrared Engineering Inc

**Attachment 1**



South Dakota  
State University

Environmental Health & Safety  
Radiation Safety  
Chemical Hygiene  
Laboratory Safety  
Biological Safety

Box 2202  
Brookings, SD 57007-0896  
Phone: 605-688-4264  
FAX: 605-688-4290

October 4, 2012

Mr. Mike Lewandowski  
Corporate Health Physics  
3M Center, Bldg. 220-06-W-08  
St. Paul, MN 55144

Mr. Lewandowski;

This letter is to confirm that on 09-13-2001 South Dakota State University accepted the transfer of the following electronic device from the 3M plant located in Brookings, SD. This was accepted from Mr. Kaounas Kostas.

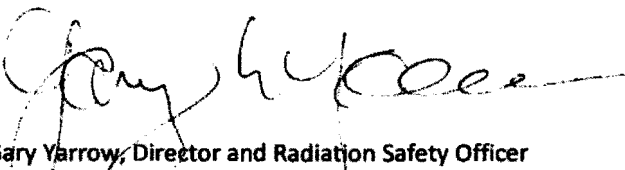
Device: X-Ray Spectrometer  
Manufacturer: Metorex  
Model Number: XMET820  
Serial No.: PSS2250

This device contained two radioactive sources as below:

- 1) Fe-55 source
  - a. S/N: 7024LG
- 2) Cm-244
  - a. S/N: 1730LM

For your information, this device was accepted under our Broadscope License Number: 40-02194-17.

If you have any questions, please feel free to contact me.



Gary Yarrow, Director and Radiation Safety Officer

Attachment 1

pr 16 02 03:54p

Konnors

1-512-248 1303

p.



**To: Brad Taylor**

**Company: 3M**

**Serial Number: 1015**

**Fax Number : 573-886-1084**

**From: Cyndi Korsgaard**

**Date Sent: 16-April-2002**

**Number of Pages: 1**  
(including cover page)

3MA1298

**RE: Disposal of your analyzer**

This is to inform you that on April 11, 2002 Spectro ASOMA Analytical Instruments received and took possession of your analyzer serial number 1186, containing radioisotope Cm-244 13mCi, serial number 0947LMLM, Am-241 3mCi, serial number 6441LA and an Am-241 30μCi stabilizer.

I trust this information is sufficient. Please feel free to contact me if I can be of further assistance.

Best regards,

Technical Services

License No. L02788

Apr 16 02 03:55p

Kommers

1-512-249 1303

P.



**To: Brad Taylor**

**Company: 3M**

**Serial Number: 1186**

**Fax Number : 573-886-1084**

**From: Cyndi Korsgaard**

**Date Sent: 16-April-2002**

**Number of Pages: 1**  
(including cover page)

**RE: Disposal of your analyzer**

This is to inform you that on April 11, 2002 Spectro ASOMA Analytical Instruments received and took possession of your analyzer serial number 1186, containing radioisotope Cm-244 30mCi, serial number 1231LM, Am-241 5mCi, serial number 4893LV and an Am-241 30µCi stabilizer.

I trust this information is sufficient. Please feel free to contact me if I can be of further assistance.

Best regards,

Technical Services

Page 2 of 2



**Instrumentation and Professional Services**

Date: 1/3/2006

Daniel McGrane  
3M Corporate Health Physics  
3M Center Bldg. 220-06-W08  
PO Box 33283  
St. Paul, MN. 55133-3283

This is to advise that the Radioactive Material as detailed below has been received by Qal-Tek Associates as of 12/21/2005 and we have taken possession of these sources:

☐ If checked see attached spreadsheet

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Isotope</u>	<u>Activity (mCi)</u>
NDC	105	6066 (1329LM)	Cm-244	250mCi
NDC	103	1641 (6049LV)	Am-241	150mCi

License No. 11-27610-01

<b>Attachment 2</b> <b>Last Leak Test Results for CM-244 Sources</b> <b>US NRC 22-00057-03</b>			
<b>Isotope</b>	<b>Source Serial Number</b>	<b>Date of Last Leak Test</b>	<b>Result (microcuries)</b>
CM-244	2238LM	Test data not available	
CM-244	1730LM	7/27/2001	<1.5 X 10 <sup>-6</sup>
CM-244	0947LM	1/29/2002	<1.4 X 10 <sup>-6</sup>
CM-244	1231LM	1/29/2002	<1.4 X 10 <sup>-6</sup>
CM-244	1329LM	7/7/2005	<1.0 X 10 <sup>-6</sup>



## Attachment 3



September 10, 2012

Mr. Michael A. Lewandowski  
3M COMPANY  
3M Center, Building 220-6W-08  
St. Paul, MN 55144-1000  
Ph: (651) 736-0498

Dear Mr. Lewandowski:

Please be advised that the radioactive device(s) as detailed below have been received by NDC Infrared Engineering. As of July 13, 1998, NDC Infrared Engineering has taken possession and title of these devices under CA License No 1451-19.

<u>Date Received</u>	<u>Model</u>	<u>NDC S/N</u>	<u>Source S/N</u>	<u>Isotope</u>	<u>Activity (mCi)</u>
13-July-1998	105	6104	2238LM	Cm-244	250

Notification of this transfer must be sent to your government agency that controls radiation in your area. This notification must be sent on company letterhead. If you have any questions please feel free to give me a call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Aguirre', with a stylized flourish at the end.

Frank Aguirre  
Radiation Safety Officer  
NDC Infrared Engineering Inc

NDC Infrared Engineering Inc., 5314 North Irwindale Avenue, Irwindale, CA 91706 USA  
Telephone: (626) 960 - 3300, Fax: (626) 939-3870,  
info@ndcinfrared.com



www.ndcinfrared.com

Attachment 3

FL

### 3M Internal Correspondence

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To: R. A. Huck – Safety – Columbia, MO – 01/030  
From: F. B. Entwistle(736-0740) - Health Physics Services - 220-3W-06  
Subject: 3M Model 703 Meters Receipt  
Serial Numbers 70385 and 410377  
Date: December 6, 1999

This is to advise you that 3M Health Physics Services received the subject 3M Model 703 Meters from you on November 24, 1999. Their receipt was authorized under the provisions of U.S. NRC License 22-00057-03 which expires on September 30, 2002. The radioactive tritium sources have been transferred to this license.

If you have further questions please contact me at the above number.

Sincerely,



Frederick B. Entwistle

FBE:ckm

(703 receipt int memo)

pr 16 02 03:54p

Konnors

1-512-249 1303



**SPECTRO**

**To: Brad Taylor**

**Company: 3M**

**Serial Number: 1015**

**Fax Number : 573-886-1084**

**From: Cyndi Korsgaard**

**Date Sent: 16-April-2002**

**Number of Pages: 1**  
(including cover page)

3M A1298

**RE: Disposal of your analyzer**

This is to inform you that on April 11, 2002 Spectro ASOMA Analytical Instruments received and took possession of your analyzer serial number 1186, containing radioisotope Cm-244 13mCi, serial number 0947LMLM, Am-241 3mCi, serial number 6441LA and an Am-241 30μCi stabilizer.

I trust this information is sufficient. Please feel free to contact me if I can be of further assistance.

Best regards,

Technical Services

License No. L02788

Apr 16 02 03:55p

Kommers

1-512-249 1303

P.



**To: Brad Taylor**

**Company: 3M**

**Serial Number: 1186**

**Fax Number : 573-886-1084**

**From: Cyndi Korsgaard**

**Date Sent: 16-April-2002**

**Number of Pages: 1**  
(including cover page)

**RE: Disposal of your analyzer**

This is to inform you that on April 11, 2002 Spectro ASOMA Analytical Instruments received and took possession of your analyzer serial number 1186, containing radioisotope Cm-244 30mCi, serial number 1231LM, Am-241 5mCi, serial number 4893LV and an Am-241 30µCi stabilizer.

I trust this information is sufficient. Please feel free to contact me if I can be of further assistance.

Best regards,

Technical Services

Attachment 3



Instrumentation and Professional Services

Date: 1/3/2006

Daniel McGrane  
3M Corporate Health Physics  
3M Center Bldg. 220-06-W08  
PO Box 33283  
St. Paul, MN. 55133-3283

This is to advise that the Radioactive Material as detailed below has been received by Qal-Tek Associates as of 12/21/2005 and we have taken possession of these sources:

☐ If checked see attached spreadsheet

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Isotope</u>	<u>Activity (mCi)</u>
NDC	105	6066 (1329LM)	Cm-244	250mCi
NDC	103	1641 (6049LV)	Am-241	150mCi

License No. 11-27610-01

3998 Commerce Cr. Idaho Falls, Idaho 83401 (208) 523-5557 Fax (208) 524-8470

Attachment 3



SOURCE SN 6268LV

**Instrumentation and Professional Services**

Jason Flora  
Corporate Health Physics  
3M Center, Bldg. 220-6W-08  
P.O.Box 33283  
St. Paul, MN. 55133-3283

Columbia

Date: 2/17/2006

This is to advise that the Radioactive Material as detailed below has been received by Qal-Tek Associates as of 2/17/2006 and we have taken possession of these sources:

☐ If checked see attached spreadsheet

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Isotope</u>	<u>Activity (mCi)</u>
NDC	103	1657		
		SS/N <u>6268LV</u>	Am-241	146

↑  
SOURCE SERIAL No. 62

Please retain this record for your files. Should you require further assistance, please contact us at Qal-Tek Associates.

Regards,

Tim Jenkins  
Radioactive Source Disposal Specialist

Rcvd 21 FEB 2006

**Attachment 3**

**3M Internal Correspondence**

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To: R. A. Huck – Electronic Product Division - 3M Columbia MO

From: F. B. Entwistle – Corporate Health Physics - 220-06-W-08

Subject: 3M Model 703 Meter Receipt  
Serial Number: 7030500

Date: August 22, 2007

This is to advise you that 3M received the subject 3M Model 703 Meter from you on August 22, 2007. Its receipt was authorized under the provisions of Minnesota radioactive materials license 1116-100-62, which expires on September 30, 2012. The radioactive tritium source has been transferred to this license.

If you have further questions, please contact me at (651) 736-0740.

Sincerely,



Frederick B. Entwistle  
Manager, Corporate Health Physics

FBE:caj

(file: 703 receipt)

**Attachment 3**

**3M Internal Correspondence**

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To: R. Schulte  
From: M. Lewandowski  
Subject: Confirmation of Receipt of Radioactive Source  
Serial Number: A2HX092  
Date: 2 July 2012

This is to advise you that 3M Center received the subject radioactive source(s) from you on 21 June 2012. Receipt and possession are authorized under the provisions of Minnesota Radioactive Material License 1066-201-62, which expires on 10/31/2012. The radioactive source(s) has/have been transferred to this license.

Signed: M. Lewandowski, <sup>Corp. Health Physics</sup>  
~~Radiation Safety Officer~~

cc: Lori O'Donovan - Corporate Health Physics (fax 651-732-8418)



**Attachment 4**  
**Last Leak Test Results for Sources Used at 3M Columbia**  
**US NRC 22-00057-03**

<b>Isotope</b>	<b>Source Serial Number</b>	<b>Date of Last Leak Test</b>	<b>Result (microcuries)</b>
PM-147	14437	Not tested	
TL-204	16461	Not tested	
PM-147	14912	Not tested	
TL-204	16361	Not tested	
PM-147	14231	Not tested	
PM-147	14742	Not tested	
PM-147	14673	Not tested	
TL-204	16599	Not tested	
TL-204	16260	Not tested	
PM-147	14482	Not tested	
PM-147	14717	Not tested	
TL-204	16660	Not tested	
PM-147	24305	Not tested	
PM-147	24318	Not tested	
PM-147	24432	Not tested	
PM-147	24465	Not tested	
PM-147	24693	Not tested	
PM-147	24825	Not tested	
PM-147	24829	Not tested	
PM-147	24853	Not tested	
TL-204	26249	Not tested	
TL-204	26446	Not tested	
PM-147	34026	Not tested	
PM-147	34052	Not tested	
TL-204	C6402	Not tested	
PM-147	C8283	Not tested	
PM-147	24886	Not tested	
TL-204	36198	Not tested	
H-3	7031001	Not tested	
PO-210	SP22172	6/5/1992	<1.0 x 10 <sup>-6</sup>
PO-210	SP22173	6/5/1992	<1.0 x 10 <sup>-6</sup>
PO-210	SP21938	8/12/1992	<1.0 x 10 <sup>-4</sup>
PO-210	SP21939	8/12/1992	<1.0 x 10 <sup>-4</sup>
PO-210	SP21940	8/12/1992	<1.0 x 10 <sup>-4</sup>
PO-210	SP28251	7/11/1994	<1.0 x 10 <sup>-4</sup>
PO-210	SP28252	7/11/1994	<1.0 x 10 <sup>-4</sup>
PO-210	SP25343	7/11/1994	<1.0 x 10 <sup>-4</sup>

**Attachment 4**  
**Last Leak Test Results for Sources Used at 3M Columbia**  
**US NRC 22-00057-03**

<b>Isotope</b>	<b>Source Serial Number</b>	<b>Date of Last Leak Test</b>	<b>Result (microcuries)</b>
PO-210	SP25344	2/2/1994	<1.1 x 10 <sup>-6</sup>
CM-244	2238LM	Test data not available	
H-3	70385	Not tested	
H-3	410377	Not tested	
CM-244	0947LM	1/29/2002	<1.4 X 10 <sup>-6</sup>
AM-241	6441LA	1/29/2002	<1.8 X 10 <sup>-6</sup>
CM-244	1231LM	1/29/2002	<1.4 X 10 <sup>-6</sup>
AM-241	4893LV	1/29/2002	<1.8 X 10 <sup>-6</sup>
CM-244	1329LM	7/7/2005	<1.0 X 10 <sup>-6</sup>
AM-241	6268LV	1/12/2006	<1.0 X 10 <sup>-6</sup>
H-3	7030500	Not tested	
PO-210	A2HX092	6/29/2012	<1.0 X 10 <sup>-6</sup>

3M General Offices  
3M Center Bldg. 220-6W-08  
St. Paul, MN 55144-1000  
Frederick Entwistle

**3M**



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U.S. NRC, Region III  
Materials Licensing Branch  
Division of Nuclear Material Safety  
Attn: Frank Tran  
2443 Warrenville Road  
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Lisle, IL 60532-4352

