

## Null, Kevin

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**From:** Lawrence Pitt <lpmanisotech@gmail.com>  
**Sent:** Wednesday, April 29, 2015 2:19 PM  
**To:** Null, Kevin  
**Subject:** Fishers Decommissioning Followup  
**Attachments:** Fishers Decommissioning followup.pdf

Kevin,

This what I have so far. The only thing missing is the source leak test results.

Thanks,  
Larry

--

Lawrence Pitt  
Radiation Safety Officer  
Manhattan Isotope Technology LLC  
2301C 122nd  
Lubbock, TX 79423  
Office: 806-745-3300  
Cell: 806-777-8889  
Fax: 806-209-0012  
[lpmanisotech@gmail.com](mailto:lpmanisotech@gmail.com)

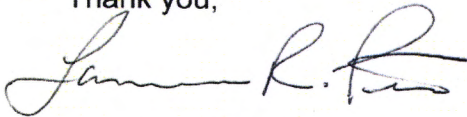
April 29, 2015

Mr. Kevin Null  
Material Licensing Branch  
Region III  
Nuclear Regulatory Commission

Mr. Kevin Null

The following attachments provide supporting documentation for closure of Action Items required per Conversation Record 03/25/2015. Action Items are required by the Nuclear Regulatory Commission for termination of Positron NRC Material License No. 13-32765-01 at 9715 Kincaid, Fishers, Indiana.

Thank you,

A handwritten signature in black ink, appearing to read "Lawrence R. Pitt", with a stylized flourish at the end.

Lawrence R. Pitt  
Radiation Safety Officer  
Positron Corporation

# **Response to Action Item #1**

**-Item #1 Positron/Kincaid location resolved 4/29/2015**

# **Response to Action Item #2**

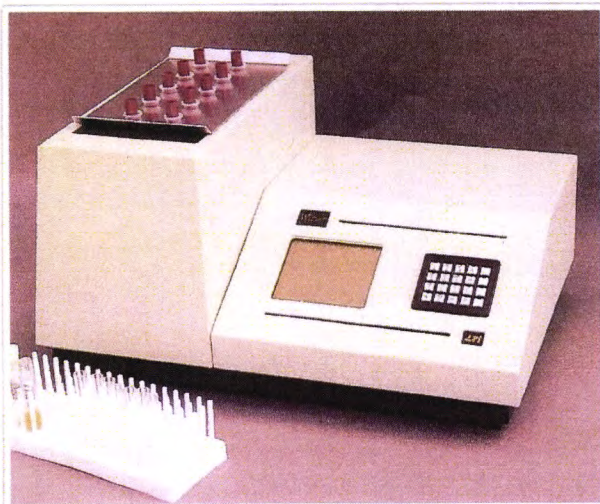
- Instrumentation used to conduct surveys and analyze smears**
- Raw data printouts of smear analysis**
- Background readings info on raw data**



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The Multi-Wiper Multi-Well Wipe Counters are the fastest way to process your wipes. Finish 30 wipes in about 3 minutes.

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### Features

- Comprehensive wipe testing with concise report in DPM
- Available with 1,2,3,4,5,6,8 or 10 wells; choose a model to fit your budget.
- Automatically identifies isotope window where high counts fall
- Pass/Fail based on user-programmable trigger levels
- Heavy shielding for low background readings
- Automatically calculates and reports MDA on each wipe test report
- 4096 channel (12 bit) analyzer for precise isotope identification
- Automatic linearity correction
- Automatic DPM calculation with AutoSpect™ (No sources needed)
- Exceeds all NRC and Agreement State Regulations for patient access areas
- Tremendous labor savings
- Very compact (occupies less than 20 inches of benchspace)
- Very economical

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AMERICAN ENGINEERING, AMERICAN QUALITY, AMERICAN PRIDE - Laboratory Technologies, Inc.

### Our Product Warranty



One Year Warranty



Five Years Warranty

### Have a question?

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## ION CHAMBER TBM

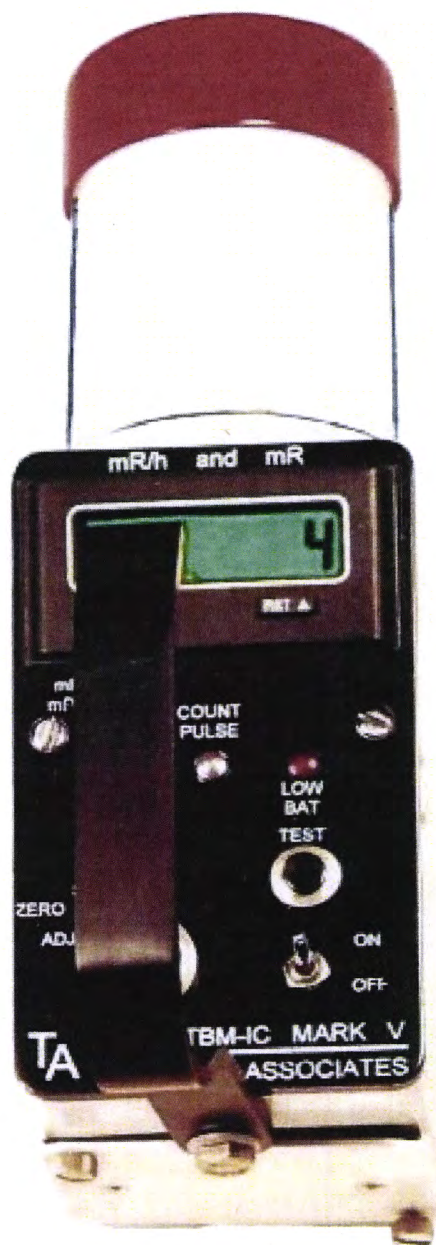
Model # TBM-IC-MARK V

### FEATURES:

- DIGITAL READOUT: 8 digit-rate, 8 digits integrate
- DOSE RATE & TOTAL DOSE READ OUT
- SMALL LIGHTWEIGHT 26 oz.
- TBM PACKAGE
- FLAT RESPONSE - FREE AIR ION CHAMBER
- SEES AXIALLY BELOW 5 KEV GAMMA OR X-RAY
- SEES ALPHA, BETA, GAMMA, X-RAY
- FAST RESPONSE
- WIDE RANGE: 0.1 mR/hr to 9.999 R/hr
- OPTIONAL X-RAY COMPLIANCE SLEEVE

**APPLICATION:** Whenever a fast, sensitive ion chamber instrument is needed, the **TBM-IC-MARK V** is the latest in a series. The **TBM-IC-MARK V** ion chambers are now smaller and lighter. Based on newest more stable, essentially drift-free electrometer technology.

**DESCRIPTION:** The **TBM-IC-MARK V** consists of a 2.5" dia x 3.5" long air ion chamber coupled to a stable solid state MOSFET input electrometer with built in A to D converter to read out directly in mR/h or mR. Rate range is 0.1 mR/h to 9.999 R/h in a single range. Dose range is 0.01mR - 99.9R in a single range. 180 mg/cm<sup>2</sup> graphite lined methacrylate walls accurate "air equivalence." Thin (0.5 mg/cm<sup>2</sup>) Mylar window allows high sensitivity readings for alpha and for low energy beta such as C<sup>14</sup> in addition to higher energy Betas, Gammas and X-rays.



TBM-IC Mark V

# T A TECHNICAL ASSOCIATES

7051 ETON AVENUE \* CANOGA PARK, CA 91303  
TELEPHONE (818) 883-7043 \* FAX(818) 883-6103  
e-mail: tagold@nwc.net www.tech-associates.com

---

## ION CHAMBER TBM

Model # TBM-IC-MARK V

### SPECIFICATIONS:

- **Detector:** Free Air ion chamber 2.5" dia x 3.5" long. Internal volume 260 cc
- **Wall & Cap:** Methacrylate, graphite lined 180 mg/cm<sup>2</sup> walls and 540 mg/cm<sup>2</sup> cap. Optional 1g/cm<sup>2</sup> walls.
- **Window:** 2.0" dia. x 0.5 mg/cm<sup>2</sup> Mylar.
- **Readout:** LCD 8 digits.
- **Indicator Lamp:** Green LED 10 pulses/sec per mR/h  
Red Over-range Indicator
- **Range:**
  - Rate 8 digit 0.1 mR/h to 9.999 R/h in a single range.
  - Integrate 8 digits 0.01 mR to 99.9R in a single range.
- **Electrometer:** Solid State MOSFET input.
- **Electronics:** A-D converter LCD drivers.
- **Batteries:**
  - 10 ea. (Button) NEDA CR-1220 - shelf life 7 years.
  - 6 ea. (AA) NEDA 15A - 1000hr.
- **Dimensions:** 5-1/2" x 3-1/2" x 8" including handle.
- **Weight:** 26 oz. complete with batteries.
- **Options:** Readout in Si units: Sv and Sv/h.
- **X-Ray-SLV is optional X-Ray compliance sleeve with 10cm<sup>2</sup> aperture.**



Designer and Manufacturer  
of  
Scientific and Industrial  
Instruments

# CERTIFICATE OF CALIBRATION

**LUDLUM MEASUREMENTS, INC.**

501 Oak Street  
325-235-5494  
Sweetwater, TX 79556, U.S.A.

☐ 10744 Dutchtown Road  
865-392-4601  
Knoxville, TN 37932, U.S.A.

CUSTOMER MANHATTAN ISOTOPE TECH/POSITRON

ORDER NO. 20262285/417378

Mfg. Technical Associates Model TBM-IC

Serial No. 011645

Mfg. \_\_\_\_\_ Model \_\_\_\_\_

Serial No. \_\_\_\_\_

Cal. Date 18-Feb-15 Cal Due Date 18-Feb-16 Cal. Interval 1 Year Meterface DIGITAL

Check mark ☒ applies to applicable instr. and/or detector IAW mfg. spec.

T. 72 °F RH 20 % Alt 703.8 mm Hg

☐ New Instrument ☐ Instrument Received ☒ Within Toler.  $\pm 10\%$  ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☒ Mechanical ck. ☒ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity  
☐ F/S Resp. ck. ☒ Reset ck. ☐ Window Operation ☐ Geotropism  
☐ Audio ck. ☐ Alarm Setting ck. ☒ Batt. ck. (Min. Volt) \_\_\_\_\_ VDC

☐ Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☒ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set \_\_\_\_\_ V Input Sens. \_\_\_\_\_ mV Det. Oper. \_\_\_\_\_ V at \_\_\_\_\_ mV Threshold Dial Ratio \_\_\_\_\_ = \_\_\_\_\_ mV

☐ HV Readout (2 points) Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V

## COMMENTS:

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
DIGITAL	4R/hr	3986.6	3986.6
DIGITAL	1R/hr	1066.6	1066.6
DIGITAL	400mR/hr	408.3	408.3
DIGITAL	100mR/hr	103.4	103.4
	40mR/hr	40.6	40.6
	10mR/hr	10.2	10.2
	4mR/hr	4.1	4.1
	1mR/hr	1.0	1.0

\*Uncertainty within  $\pm 10\%$  C.F. within  $\pm 20\%$

*Uncertainty within ± 10% C.F. within ± 20%			Range(s) Calibrated Electronically				
Digital Readout	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*	Log Scale	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques. The calibration system conforms to the requirements of ANSI/NCCL Z540-1-1994 and ANSI N323-1978

State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 S/N: ☒ 059 ☐ 2171CP ☐ 2261CP ☐ 720 ☐ 734 ☐ 781 ☐ 1131 ☐ 1616 ☐ 1696 ☐ 1909 ☐ 1916CP ☒ 5105 ☐ 5717CO  
☐ 5719CO ☐ 60646 ☒ 70897 ☐ 73410 ☐ E552 ☐ G112 ☐ M565 ☐ S-394 ☐ S-1054 ☐ T10081 ☐ T10082 Neutron Am-241 Be S/N: ☐ T-304 Ra-226 S/N: ☐ Y982

☐ Alpha S/N \_\_\_\_\_ ☐ Beta S/N \_\_\_\_\_ ☐ Other \_\_\_\_\_

☐ m 500 S/N \_\_\_\_\_ ☐ Oscilloscope S/N \_\_\_\_\_ ☐ Multimeter S/N \_\_\_\_\_

Calibrated By: [Signature]

Date 18 Feb 15

Reviewed By: [Signature]

Date 19 Feb 15



Designer and Manufacturer  
of  
Scientific and Industrial  
Instruments

# CERTIFICATE OF CALIBRATION

**LUDLUM MEASUREMENTS, INC.**

501 Oak Street  
325-235-5494  
Sweetwater, TX 79556, U.S.A.

☐ 10744 Dutchtown Road  
865-392-4601  
Knoxville, TN 37932, U.S.A.

CUSTOMER POSITRON CORP

ORDER NO. 20239872/403020

I Technical Associates Model TBM-IC Serial No. 011645

Mfg. \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

Cal. Date 25-Feb-14 Cal Due Date 25-Feb-15 Cal. Interval 1 Year Meterface DIGITAL

Check mark ☒ applies to applicable instr. and/or detector IAW mfg. spec. T. 75 °F RH 24 % Alt 700.8 mm Hg

☐ New Instrument ☐ Instrument Received ☒ Within Toler.  $\pm 10\%$  ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☒ Mechanical ck. ☒ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity

☐ F/S Resp. ck. ☒ Reset ck. ☐ Window Operation ☐ Geotropism

☐ Audio ck. ☐ Alarm Setting ck. ☒ Batt. ck. (Min. Volt) \_\_\_\_\_ VDC

☐ Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☒ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set \_\_\_\_\_ V Input Sens. \_\_\_\_\_ mV Det. Oper. \_\_\_\_\_ V at \_\_\_\_\_ mV Threshold \_\_\_\_\_ mV  
Dial Ratio \_\_\_\_\_ = \_\_\_\_\_

☐ HV Readout (2 points) Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V

## COMMENTS:

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
DIGITAL	4R/hr	4002.3	4002.3
DIGITAL	1R/hr	984.3	984.3
DIGITAL	400mR/hr	410.5	410.5
DIGITAL	100mR/hr	103.2	103.2
	40mR/hr	40.9	40.9
	10mR/hr	9.8	9.8
	4mR/hr	4.1	4.1
	1mR/hr	1.0	1.0

\*Uncertainty within  $\pm 10\%$  C.F. within  $\pm 20\%$

Range(s) Calibrated Electronically

REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*
Digital Readout			Log Scale		

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.

The calibration system conforms to the requirements of ANSI/NCCL Z540-1-1994 and ANSI N323-1978

State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 S/N: ☐ 059 ☐ 280 ☐ 720 ☐ 734 ☐ 781 ☐ 1131 ☐ 1616 ☐ 1696 ☐ 1909 ☐ 1916CP ☒ 5105 ☐ 5717CO ☐ 5719CO  
☐ 60646 ☐ 70897 ☐ 73410 ☐ E552 ☒ G112 ☒ M565 ☐ S-394 ☐ S-1054 ☐ T879 ☐ T10081 ☐ T10082 Neutron Am-241 Be S/N: ☐ T-304 Ra-226 S/N: ☐ Y982

☐ Alpha S/N \_\_\_\_\_ ☐ Beta S/N \_\_\_\_\_ ☐ Other \_\_\_\_\_

☐ m 500 S/N \_\_\_\_\_ ☐ Oscilloscope S/N \_\_\_\_\_ ☐ Multimeter S/N \_\_\_\_\_

Calibrated By: [Signature] Date 25-Feb-14

Reviewed By: [Signature] Date 26-Feb-14

This certificate shall not be reproduced except in full, without the written approval of Ludlum Measurements, Inc.

AC Inst. ☐ Passed Dielectric (Hi-Pot) and Continuity Test

Wiper By LTI Wiper Version 4.3.3 Start up at 10:20:28 01/27/15

**PASSED**

0 KEV BACKGROUND 1000 KEV  
 TIME: 0 CNTS: 511  
 CPM: 170 CPS: 3

*counter  
Bkgd*

TIME: 10:25:45 01/27/15  
 CPM: 170 CPS: 2.84

NOMINAL  
 Count Time (SEC) 180  
 Window KEV 1 1000  
 Trigger(DPM) 10000.00

LOC: 1 NAME: GENERAL  
 TIME: 10:26:37 01/27/15

.....

LOC: 1 NAME: GENERAL  
 TIME: 0 CNTS: 872  
 CPM: 872 CPS: 15  
 AUTOSPECT APPLIED

*Smear  
Bkgd/Blank*

TRIGGER: 2000  
 COUNT TIME (SEC): 60  
 PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	70	70	1	0.0	943
Tc99m	39	0	0	0	0.0	116
I131	96	15	13	0	0.0	364
Ga67	20	0	0	0	0.0	81
In111	20	1	1	0	0.0	201
Co57	32	0	0	0	0.0	116
Cr51	87	223	22	3	0.1	364
Na22	190	0	0	0	0.0	572
Ba133	113	22	22	0	0.0	364
Cs137	361	0	0	0	0.0	731

LOC: 1 NAME: GENERAL  
 TIME: 10:29:39 01/27/15

.....

LOC: 1 NAME: GENERAL  
 TIME: 0 CNTS: 829  
 CPM: 829 CPS: 14  
 AUTOSPECT APPLIED

*Smear  
①*

TRIGGER: 2000  
COUNT TIME (SEC):  
PASSED ISOTOPES:

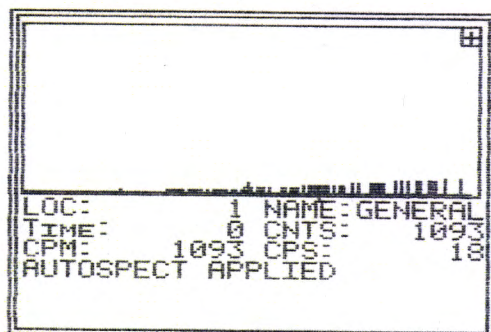
60

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	27	27	0	0.0	985
Tc99m	39	0	0	0	0.0	126
I131	96	12	10	0	0.0	421
Ga67	20	9	4	0	0.0	76
In111	20	3	3	0	0.0	252
Co57	32	0	0	0	0.0	126
Cr51	87	0	0	0	0.0	360
Na22	190	0	0	0	0.0	542
Ba133	113	0	0	0	0.0	252
Cs137	361	0	0	0	0.0	730

p9

(2)

LOC: 1 NAME: GENERAL  
TIME: 10:35:38 01/27/15

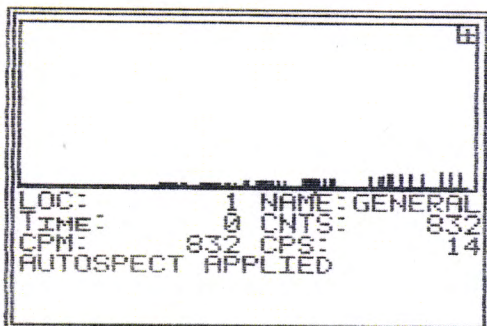


Smear 2

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	291	291	4	0.1	944
Tc99m	39	0	0	0	0.0	148
I131	96	55	45	0	0.0	423
Ga67	20	0	0	0	0.0	78
In111	20	2	2	0	0.0	218
Co57	32	0	0	0	0.0	148
Cr51	87	253	25	4	0.1	369
Na22	190	55	95	0	0.0	499
Ba133	113	26	26	0	0.0	369
Cs137	361	98	84	1	0.0	737

LOC: 1 NAME: GENERAL  
TIME: 10:37:47 01/27/15



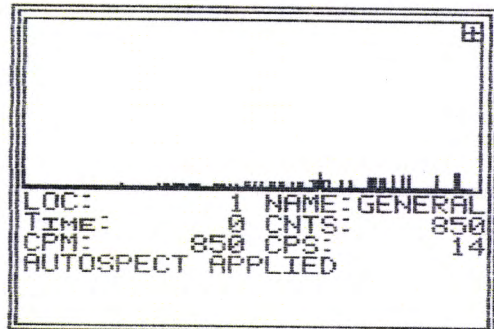
Smear 3

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

LOC	ISOTOPE	HI	KEV	NC	HI	KEY
FULL	802	30	30	0	0.0	940
Tc99m	39	0	0	0	0.0	108
I131	96	18	15	0	0.0	416
Ga67	20	7	3	0	0.0	75
In111	20	4	4	0	0.0	204
Co57	32	0	0	0	0.0	93
Cr51	87	50	5	0	0.0	359
Na22	190	24	41	0	0.0	577
Ba133	113	6	6	0	0.0	416
Cs137	361	0	0	0	0.0	781

Pg ③

LOC: 1 NAME:GENERAL  
TIME:10:40:32 01/27/15

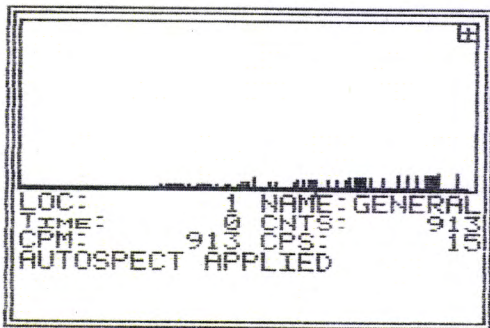


Smear 4

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKND	DPM	CPM	BQ	NC	HI	KEV
FULL	802	48	48	0	0.0		962
Tc99m	39	0	0	0	0.0		102
I131	96	1	1	0	0.0		299
Ga67	20	0	0	0	0.0		75
In111	20	0	0	0	0.0		219
Co57	32	0	0	0	0.0		95
Cr51	87	81	8	1	0.0		299
Na22	190	0	0	0	0.0		574
Ba133	113	0	0	0	0.0		299
Cs137	361	0	0	0	0.0		772

LOC: 1 NAME:GENERAL  
TIME:10:42:38 01/27/15

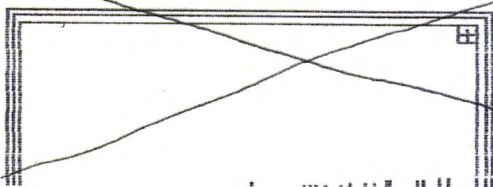


Smear 5

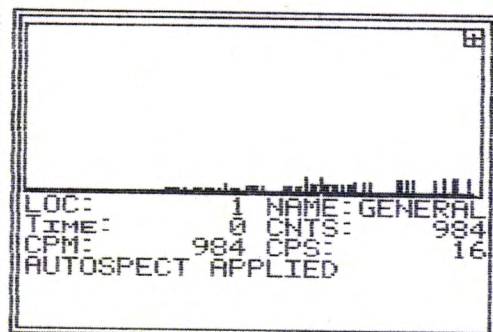
TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI	KEV
FULL	802	111	111	1	0.1		933
Tc99m	39	0	0	0	0.0		199
I131	96	12	10	0	0.0		422
Ga67	20	0	0	0	0.0		79
In111	20	7	7	0	0.0		208
Co57	32	1	1	0	0.0		91
Cr51	87	243	24	4	0.1		360
Na22	190	0	0	0	0.0		521
Ba133	113	25	25	0	0.0		360
Cs137	361	0	0	0	0.0		521

LOC: 1 NAME:GENERAL  
TIME:11:08:58 01/27/15



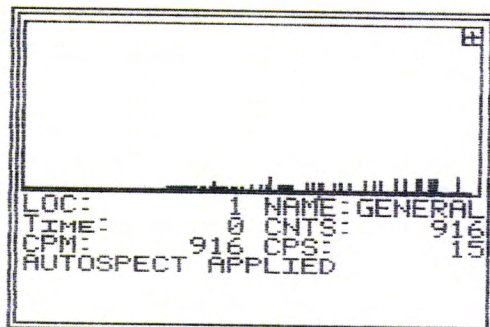
LOC: 1 NAME: GENERAL  
TIME: 11:23:49 01/27/15



TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	182	182	3	0.1	625
Tc99m	39	0	0	0	0.0	139
I131	96	7	6	0	0.0	416
Ga67	20	0	0	0	0.0	77
In111	20	5	5	0	0.0	204
Co57	32	1	1	0	0.0	139
Cr51	87	0	0	0	0.0	374
Na22	190	0	0	0	0.0	441
Ba133	113	4	4	0	0.0	416
Cs137	361	88	75	1	0.0	625

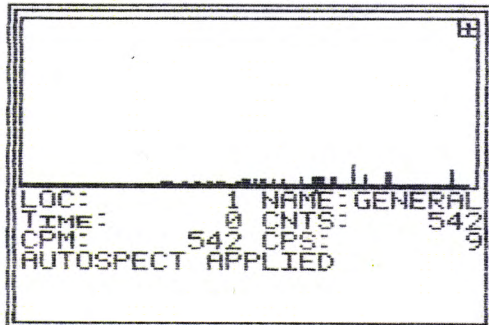
LOC: 1 NAME: GENERAL  
TIME: 11:25:47 01/27/15



TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	114	114	1	0.1	996
Tc99m	39	0	0	0	0.0	105
I131	96	97	80	1	0.0	423
Ga67	20	0	0	0	0.0	82
In111	20	1	1	0	0.0	207
Co57	32	0	0	0	0.0	94
Cr51	87	405	40	6	0.2	363
Na22	190	27	46	0	0.0	547
Ba133	113	46	45	0	0.0	416
Cs137	361	0	0	0	0.0	547

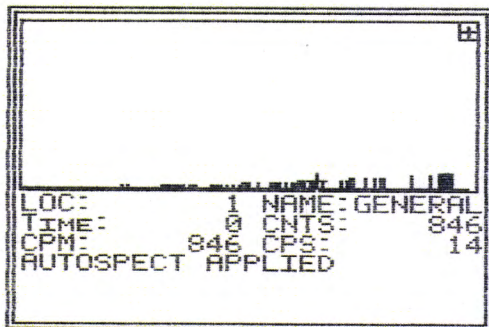
LOC: 1 NAME: GENERAL  
TIME: 11:27:49 01/27/15



TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	0	0	0	0.0	743
Tc99m	39	0	0	0	0.0	129
I131	96	0	0	0	0.0	420
Ga67	20	0	0	0	0.0	82
In111	20	6	6	0	0.0	201
Co57	32	0	0	0	0.0	129
Cr51	87	0	0	0	0.0	368
Na22	190	0	0	0	0.0	582
Ba133	113	0	0	0	0.0	368
Cs137	361	0	0	0	0.0	743

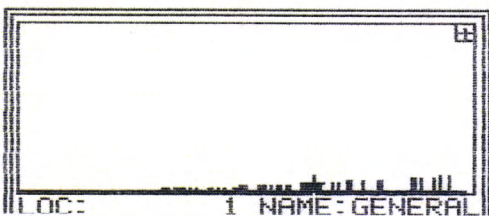
LOC: 1 NAME: GENERAL  
TIME: 11:30:26 01/27/15



TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	44	44	0	0.0	937
Tc99m	39	1	1	0	0.0	141
I131	96	3	3	0	0.0	424
Ga67	20	0	0	0	0.0	76
In111	20	4	4	0	0.0	222
Co57	32	1	1	0	0.0	141
Cr51	87	50	5	0	0.0	365
Na22	190	0	0	0	0.0	573
Ba133	113	0	0	0	0.0	365
Cs137	361	0	0	0	0.0	735

LOC: 1 NAME: GENERAL  
TIME: 11:33:25 01/27/15



CPM: 778 CPS:  
AUTOSPECT APPLIED

13

10

Pg 6

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	0	0	0	0.0	944
Tc99m	39	0	0	0	0.0	100
I131	96	0	0	0	0.0	425
Ga67	20	0	0	0	0.0	76
In111	20	0	0	0	0.0	200
Co57	32	0	0	0	0.0	99
Cr51	87	0	0	0	0.0	360
Na22	190	0	0	0	0.0	577
Ba133	113	0	0	0	0.0	360
Cs137	361	0	0	0	0.0	733

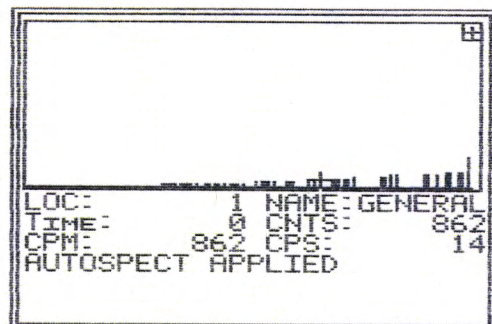
LOC: 1 NAME: GENERAL  
TIME: 11:35:29 01/27/15

LOC: 1 NAME: GENERAL  
TIME: 0 CNTS: 820  
CPM: 820 CPS: 14  
AUTOSPECT APPLIED

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	18	18	0	0.0	622
Tc99m	39	0	0	0	0.0	123
I131	96	0	0	0	0.0	362
Ga67	20	14	6	0	0.0	79
In111	20	1	1	0	0.0	200
Co57	32	7	7	0	0.0	123
Cr51	87	121	12	2	0.1	362
Na22	190	22	39	0	0.0	577
Ba133	113	0	0	0	0.0	362
Cs137	361	15	13	0	0.0	622

LOC: 1 NAME: GENERAL  
TIME: 11:37:54 01/27/15

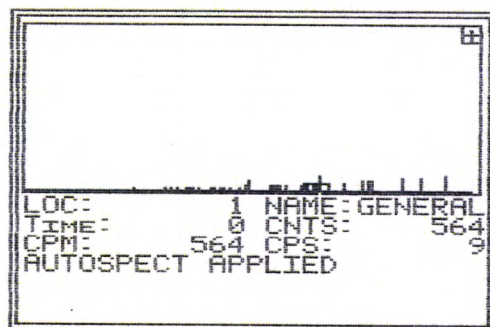


12

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI	KEV
FULL	802	60	60	1	0.0		992
Tc99m	39	0	0	0	0.0		105
I131	96	22	18	0	0.0		306
Ga67	20	0	0	0	0.0		77
In111	20	6	6	0	0.0		204
Co57	32	0	0	0	0.0		96
Cr51	87	141	14	2	0.1		306
Na22	190	0	0	0	0.0		582
Ba133	113	12	12	0	0.0		306
Cs137	361	0	0	0	0.0		733

LOC: 1 NAME: GENERAL  
TIME: 11:40:00 01/27/15

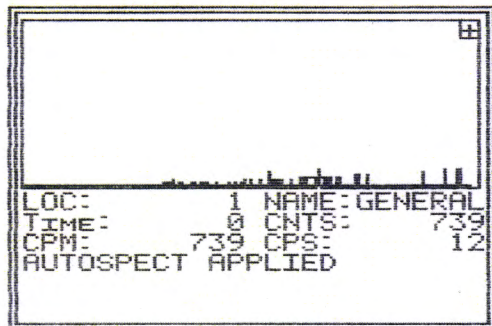


13

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI	KEV
FULL	802	0	0	0	0.0		941
Tc99m	39	0	0	0	0.0		112
I131	96	0	0	0	0.0		418
Ga67	20	0	0	0	0.0		75
In111	20	0	0	0	0.0		243
Co57	32	0	0	0	0.0		112
Cr51	87	0	0	0	0.0		365
Na22	190	0	0	0	0.0		498
Ba133	113	0	0	0	0.0		418
Cs137	361	0	0	0	0.0		755

LOC: 1 NAME: GENERAL  
TIME: 11:41:39 01/27/15

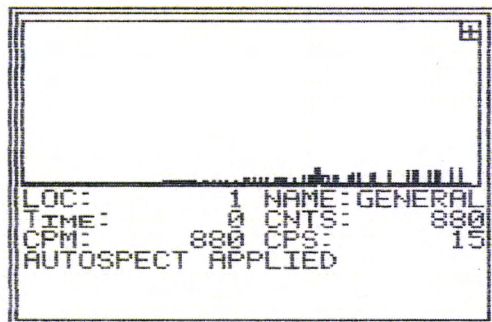


14

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPEs:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	0	0	0	0.0	940
Tc99m	39	0	0	0	0.0	100
I131	96	0	0	0	0.0	337
Ga67	20	14	6	0	0.0	100
In111	20	11	11	0	0.0	202
Co57	32	1	1	0	0.0	100
Cr51	87	131	13	2	0.1	337
Na22	190	1	3	0	0.0	548
Ba133	113	2	2	0	0.0	337
Cs137	361	0	0	0	0.0	548

LOC: 1 NAME: GENERAL  
TIME: 11:43:11 01/27/15

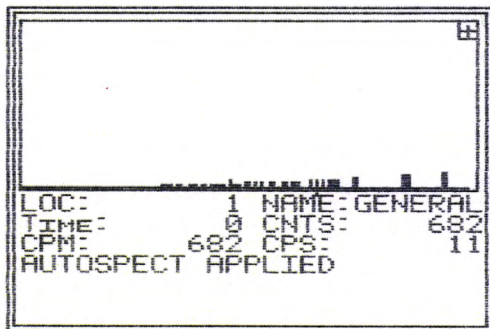


15

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPEs:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	78	78	1	0.0	652
Tc99m	39	0	0	0	0.0	107
I131	96	29	24	0	0.0	425
Ga67	20	0	0	0	0.0	76
In111	20	3	3	0	0.0	202
Co57	32	0	0	0	0.0	94
Cr51	87	425	42	7	0.2	360
Na22	190	0	0	0	0.0	572
Ba133	113	26	26	0	0.0	360
Cs137	361	19	17	0	0.0	652

LOC: 1 NAME: GENERAL  
TIME: 11:45:17 01/27/15

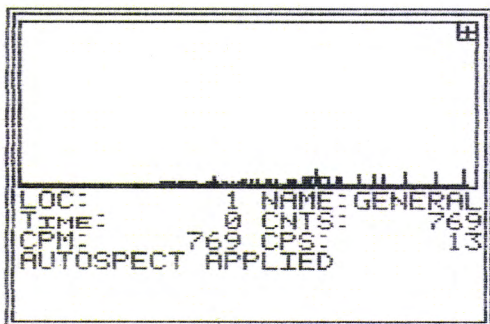


16

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	0	0	0	0.0	939
Tc99m	39	0	0	0	0.0	133
I131	96	9	8	0	0.0	423
Ga67	20	0	0	0	0.0	77
In111	20	4	4	0	0.0	207
Co57	32	0	0	0	0.0	133
Cr51	87	0	0	0	0.0	378
Na22	190	0	0	0	0.0	464
Ba133	113	0	0	0	0.0	378
Cs137	361	0	0	0	0.0	743

LOC: 1 NAME: GENERAL  
TIME: 11:47:23 01/27/15



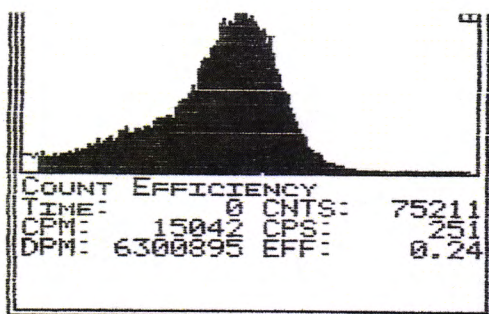
17

TRIGGER: 2000  
COUNT TIME (SEC): 60  
PASSED ISOTOPES:

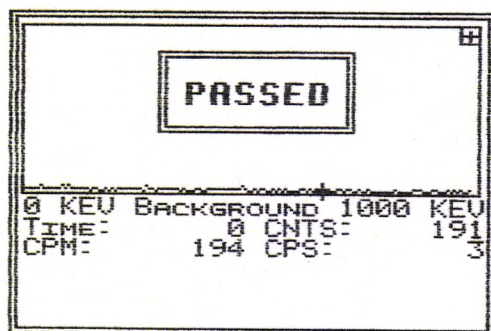
ISO	BKGND	DPM	CPM	BQ	NC	HI KEV
FULL	802	0	0	0	0.0	990
Tc99m	39	0	0	0	0.0	126
I131	96	69	57	1	0.0	427
Ga67	20	0	0	0	0.0	76
In111	20	2	2	0	0.0	204
Co57	32	0	0	0	0.0	126
Cr51	87	354	35	5	0.2	362
Na22	190	1	2	0	0.0	427
Ba133	113	31	30	0	0.0	419
Cs137	361	0	0	0	0.0	754

Comments:

Supervisor: Larry Poe Date: 1/28/15

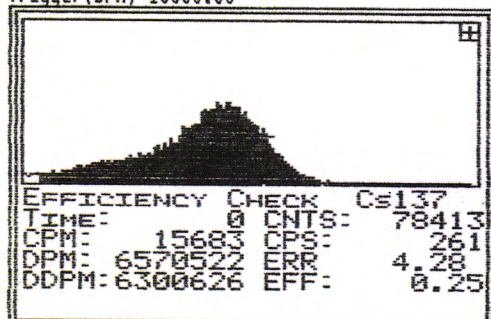


ISO EFF CAL  
 DATE: 16:50:25 01/27/15  
 Count Time (SEC) 300  
 LOT: 0824124  
 CALDATE: 12:00 08/24/12  
 WIN: 500, 800 KEV  
 DPM: 6300895  
 DAYS: 886.20  
 EFF: 0.24



TIME: 08:57:36 01/28/15  
 CPM: 191 CPS: 3.18

NOMINAL  
 Count Time (SEC) 60  
 Window KEV 1 1000  
 Trigger (DPM) 10000.00



SYSTEM EFF CHECK  
 DATE: 09:03:15 01/28/15  
 Count Time (SEC) 300  
 LOT: 0824124  
 CALDATE: 12:00 08/24/12  
 WIN: 500, 800 KEV  
 CPM: 15655  
 DAYS: 886.877  
 DPM: 6570522 ERR: 4.3  
 DDPM: 6300626 EFF: 0.25

MDA

UNK 1						
ISOTOPE	BKGND	MDA	TRIGGER	NET ACTIVITY	UNITS	RESULT
FULL	359	130.7	2000	0	CPM	PASS
Tc-99m	44	46.3	2000	0	CPM	PASS
I-131	40	44.2	2000	3	CPM	PASS
Co-57	33	40.3	2000	3	CPM	PASS
Co-58	227	104.1	2000	0	CPM	PASS
Cs-137	201	98.0	2000	0	CPM	PASS
I-125	15	27.4	2000	0	CPM	PASS
I-123	36	42.0	2000	0	CPM	PASS
F-18	48	48.4	2000	0	CPM	PASS
Ba-133	50	49.3	2000	0	CPM	PASS
Ga-67	11	23.6	2000	3	CPM	PASS
Cr-51	40	44.2	2000	0	CPM	PASS
In-111	32	39.7	2000	1	CPM	PASS
Tl-201	55	51.7	2000	2	CPM	PASS
Xe-133	27	36.5	2000	5	CPM	PASS
Sm-153	26	35.8	2000	5	CPM	PASS
Na-22	39	43.7	2000	0	CPM	PASS
SR 82	200	97.8	2000	0	CPM	PASS
GE 68	201	98.0	2000	0	CPM	PASS
SE 75	10	22.6	2000	1	CPM	PASS
CO 58	0	0.9	2000	0	CPM	PASS
CO 56	0	0.9	2000	0	CPM	PASS
RB 84	0	0.9	2000	0	CPM	PASS
RB 83	198	97.3	2000	0	CPM	PASS
SR 83	233	105.4	2000	0	CPM	PASS
SR 85	200	97.8	2000	0	CPM	PASS
RB 82	0	0.9	2000	0	CPM	PASS
AS 74	201	98.0	2000	0	CPM	PASS

# Response to Action Item #3

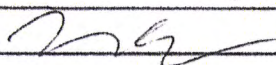
-List of Sealed Sources removed by ADCO

-Correspondence with ADCO ; Waiting Leak Test Results from ADCO

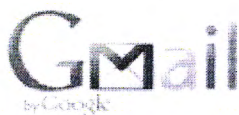
# Radioactive Sealed Source Inventory Log: Fishers, IN

Received Date	Positron ID	Isotope	Manufacture	Model Number	Serial Number	Nominal Calibration Date	Activity	Storage Location	Retired / Disposed
2-Apr-10	NA	Cs-137	RadQual	BM08-37	BM0813709295117	27-Oct-09	0.1107 uCi	RAM Room	<input type="checkbox"/> Yes
13-Jun-12	NA	Cs-137	RadQual	BM06E-37	BM06137E11117143	2-May-11	0.207 mCi	RAM Room	<input type="checkbox"/> Yes
13-Jun-12	NA	Co-57	RadQual	BM06E-57	BM06057E11214120	4-Aug-11	5.53 mCi	RAM Room	<input type="checkbox"/> Yes
13-Jun-12	NA	Ba-133	RadQual	BM06E-33	BM06133E11157208	10-Jun-11	0.298 mCi	RAM Room	<input type="checkbox"/> Yes
									<input type="checkbox"/> Yes
									<input type="checkbox"/> Yes
									<input type="checkbox"/> Yes
									<input type="checkbox"/> Yes

Comments: <sup>NO 16 Sept 14</sup> Cs-137 (7143), ~~Co-57 (7)~~ Co-57 (4120) and Ba-133 (7208) are in storage and not to be used until a leak test has been conducted.

	Print Name	Signature	Date
Completed By:	Nick Overman		16 Sept 14
Reviewed By:			

30.18  
except just.  
Cs-137 10pc  
Ba-133 10pc  
Co-57 100pc



Lawrence Pitt <lpmanisotech@gmail.com>

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**FW: Manhattan Isotope Technology**

5 messages

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**James Bell** <jimp@adcoservices.com>  
To: Lawrence Pitt <lpmanisotech@gmail.com>  
Cc: Jerry Wiza <jwiza@ramservicesinc.com>

Mon, Apr 13, 2015 at 1:13 PM

Larry,

Here is the information about your leak tests. They can still be done apparently even though they were already removed from your facility. You will need to pay RAM Services directly for this service. See his e-mail below. I have copied Jerry Wiza; president of RAM Services in on this e-mail.

Thanks,

James P. Bell, Jr.  
Facility Manager

ADCO Services, Inc./ADCOM Express, Inc.

Phone: 708/429-1660 X-16

Cellular (Voice/Text): 708/845-2760

Fax: 708/429-9759

Website: <http://adcoservices.com>

*~We are what we repeatedly do. Excellence, therefore, is not an act but a habit.~  
Aristotle*

---

**From:** Jerry Wiza [<mailto:jwiza@ramservicesinc.com>]  
**Sent:** Saturday, April 11, 2015 11:54 AM  
**To:** 'James Bell'  
**Cc:** Jerry P. Wiza  
**Subject:** RE: Manhattan Isotope Technology

**From:** Jerry Wiza [mailto:[wiza@ramservicesinc.com](mailto:wiza@ramservicesinc.com)]  
**Sent:** Saturday, April 11, 2015 11:54 AM  
**To:** 'James Bell'  
**Cc:** Jerry P. Wiza  
**Subject:** RE: Manhattan Isotope Technology

Jim,

ALL Alpha sources above 10 uCi and ALL beta/gamma sources above 100 uCi require a valid leak test be performed. We can print, assemble, and deliver the leak test kits to your client provided we have the exact physical delivery address, contact person and phone number. Pricing is \$27.00 per sample. It looks like the C0-57 and ba-133 sources need leak tests.

Please advise when time permits.

Thanks,

Jerry Wiza, RPT  
RAM Services, Inc.  
510 County Highway V  
Two Rivers, WI 54241  
United States of America  
Office: [1 920 686-3889](tel:19206863889)  
Fax: [1 920 686-3899](tel:19206863899)  
Mobile: [1 708 408-3889](tel:17084083889)

# **Response to Action Item #4&5**

**-Statement Letter of “no possession” from Positron Procurement Director**

**-Summary Letter of Sealed Sources tracking**

# Positron

## **Sealed Sources as Listed on Material License for Fishers/Kincaid**

Dear Mr. Kevin Null

As a Director of Operations for Positron Corporation, I verify that Positron Corporation never purchased Sealed Sources listed in Items J., K., and L. on the Positron Materials License dated Dec. 19, 2011, although listed for license application purposes.

As described in the Response to Action Item #4 and #5 Summary, Positron Corporation – Fishers, Indiana (Kincaid) never took possession of the sealed sources identified.

If you have any questions please feel free to call me.

Adel Abdullah

Sincerely,



Adel Abdullah  
Director of Operations  
Positron Corporation  
Direct number: (716) 243-1760

# Positron

## Sealed Sources as Listed on Material License for Fishers/Kincaid

### Response to Action Item # 4 and # 5

- **Cobalt-57** Sealed Sources (IPL and Isotopes Products Cesio Model PHI-XXXG GFS series A3201; International Isotopes Idaho, **Model BM06 E&S series**)

*Removed from Positron - Fishers/Kincaid on 1/7/15 by ACDCO Services, Inc.  
Cobalt-57 Sealed Source (RadQual; **Model BM06E-57**; SN BM06057E11214120) (5.53 mCi)*

- **J. Cobalt-57** Sealed sources (Eckert & Ziegler Isotope Products; Model NES Flood series; International Isotopes, Model BM04 series)

*Listed in License but Never Procured by Positron*

- **K. Germanium-68** Sealed Sources (Sanders Medical Products; Model PET-xxx/YY; International Isotopes, Idaho, Inc.; Model BM06 E&S series)  
*Listed in License but Never Procured by Positron*

- **L. Americium-241** Sealed Sources (IPL and Isotope Products Cesio, Models PHI-xxxGFS Series or Am1.G10)  
*Listed in License but Never Procured by Positron*

- **M. Cesium-137** Sealed Sources (Isotope Products Labs, Model GF-xxx Type R series; International Isotopes Idaho, Inc.; **Model BM06S series**)

*Removed from Positron - Fishers/Kincaid on 1/7/15 by ACDCO Services  
Cs-137 Sealed Sources (RadQual; Model BM06E-37; SN BM06137E11117143) (0.298mCi)  
Cs-137 Sealed Sources (RadQual; Model BM08-37; SN BM0813709295117) (0.1107uCi) \*\* < 10 uCi although removed for decommissioning*

Never  
Procured

# Positron

- **O. Barium-133 Sealed Sources** (International Isotopes Idaho, Inc.; **Model BM06E-33**)

*Removed from Positron - Fishers/Kincaid on 1/7/15 by ACDCO Services  
Barium-133 Sealed Sources (RadQual; BM06E-33; SN BM06133E11157208)  
(0.298mCi)*

Adel Abdullah  
Sincerely,



Adel Abdullah  
Director of Operations  
Positron Corporation  
Direct number: (716) 243-1760



530 OAKMONT LANE | WESTMONT, IL 60559 | PHONE: 317.576.0183 | FAX: 630.537.1249 | [WWW.POSITRON.COM](http://WWW.POSITRON.COM)