Herr, Michael

From: Pelke, Patricia
Sent: Monday, August 22, 2011 11:20 AM
To: Herr, Michael
Subject: Additional Correspondence from ICAL; FW: Seal Source Information
Attachments: sealed_source_leak_check_001.jpg; sources_page1.jpg; sources_page_2_001.jpg

Importance: High

Mike,
Here is the second email from ICAL – please follow-up with them. Thanks - Patty

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From: Linnea Harris -Ical Inc. [mailto:icalinc1@aol.com]
Sent: Saturday, August 20, 2011 11:33 PM
To: Pelke, Patricia
Subject: Seal Source Information

Please find attached the latest leak check information for sources in MCF-3 and a list of sources purchased by ICAL, Inc.

For big sources (J.L.Shepherd)
Model 10 # 11042
Model 28-5 # 10253
Model 89 # 9115
Model 89 # 9138
Model 89 # 8245

Please send response to Linnea Harris or any additonal questions. I hope this helps answer all questions to properly terminate our NRC License.
thanks, David Dempster

ICAL, INC.
RADIATION AND CONTAMINATION SURVEY

FORM 6-8
REV. 1

NAME	K. Dempster / D. Dempster	TYPE	MCF UNIT #	DATE	12/27/2010
AREA	SOURCES	C	2 3	TIME	1330
LOCATION	2800 N. JASPER ST.	PURPOSE	SOURCE LEAK TEST AND INVENTORY		
TYPE INST. USED	MS-3	SERIAL NUMBER USED	1229	CAL. DUE DATE	02/15/2012
	SAC-4		1222		12/26/2011

ALPHA COUNTER EFF =	33.67	%	COUNTER 1/E =	2.97
ALPHA BKG. =	0.2	CPM		
BETA COUNTER EFF =	18.87	%	COUNTER 1/E =	5.30
BETA BKG. =	27.0	CPM		

SOURCE ID #	ISOTOPE	SMEAR #	GROSS CPM ALPHA	GROSS CPM B-G	DPM/SMEAR ALPHA	DPM/SMEAR B-G	uCi ALPHA	uCi B-G
MCF #3								
✔ 9048	Pu-239	1	1	24	2.376002376	0	0.00000	0.00000
✔ 9049	Pu-239	2	0	30	0	15.8982512	0.00000	0.00001
✔ 9050	Pu-239	3	0	23	0	0	0.00000	0.00000
✔ 9051	Pu-239	4	1	32	2.376002376	26.4970853	0.00000	0.00001
✔1062/89	Th-230	5	1	32	2.376002376	26.4970853	0.00000	0.00001
✔S-1754	Am-241	6	1	32	2.376002376	26.4970853	0.00000	0.00001
✔S-3390	Sr/Y-90	7	-	26	-	0	-	0.00000
✔2236/91	Sr/Y-90	8	-	27	-	0	-	0.00000
✔S4556	Tc-99	9	-	27	-	0	-	0.00000
✔M-148	Tc-99	10	-	23	-	0	-	0.00000
✔M-149	Tc-99	11	-	29	-	10.5988341	-	0.00000
✔M-150	Tc-99	12	-	23	-	0	-	0.00000
✔DL234	Tc-99	13	-	30	-	15.8982512	-	0.00001
✔1065/89	Tc-99	14	-	24	-	0	-	0.00000
✔1066/89	Tc-99	15	-	19	-	0	-	0.00000
✔LGS-413	Tc-99	16	-	26	-	0	-	0.00000
✔1623/89	Tc-99	17	-	22	-	0	-	0.00000
✔1624/89	Tc-99	18	-	28	-	5.29941706	-	0.00000
✔1625/89	Tc-99	19	-	29	-	10.5988341	-	0.00000
✔1626/89	Tc-99	20	-	21	-	0	-	0.00000
✔V-137	Cs-137	21	-	29	-	10.5988341	-	0.00000

REMARKS:

SOURCE LEAKAGE MUST BE LESS THAN 0.005 uCi. (11,100 DPM).
IF SOURCE LEAKAGE IS 0.005 uCi. OR GREATER, TAKE SOURCE OUT OF SERVICE AND NOTIFY RSO

ICAL, INC.
CALIBRATION DATA SHEET

FORM 47-1
REV. 3

CUSTOMER NAME	: ICAL, INC	INST. MANUFACTURER	:	EBERLINE INST CORP
PLANT NAME	: NONE	TYPE	: X	G-M CHAMBER
ADDRESS	: 2130 GARY COURT			SCINTILLATION
	DECATUR, IL	MODEL NO.	: X	RM-20-1
	62526			RM-20-5
CONTACT PERSON	: BOB HARRIS	SERIAL NO.	:	1374
	(217) 425 6244			

		AS FOUND	AS LEFT	
HIGH VOLTAGE	:	893.8	893.8	VOLTS
INPUT SENSITIVITY	:	10.0	10.0	MILLIVOLTS

CALIBRATION DATA

MINIPULSER SERIAL NUMBER	:	474
CALIBRATION DUE DATE	:	02/15/2011

SCALE	MINIPULSER INPUT		INSTRUMENT READING		PER CENT ERROR	
	CPM	(CPS)	AS FOUND	AS LEFT	AS FOUND	AS LEFT
X1	100	(1.67)	100	100	0.00	0.00
	400	(6.67)	400	400	0.00	0.00
X10	1000	(16.7)	1000	1000	0.00	0.00
	4000	(66.7)	4100	4100	2.50	2.50
X100	10000	(167)	10500	10500	5.00	5.00
	40000	(667)	42000	42000	5.00	5.00
X1K	100000	(1667)	100000	100000	0.00	0.00
	400000	(6667)	400000	400000	0.00	0.00

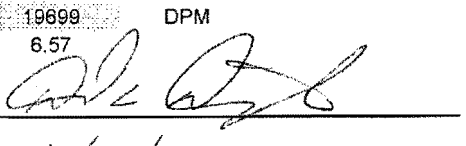
ALARM CHECK

SCALE	MINIPULSER INPUT		INSTRUMENT READING		PER CENT ERROR	
	CPM	(CPS)	AS FOUND	AS LEFT	AS FOUND	AS LEFT
X10	2000	33.35	2000	2000	0.00	0.00
X100	4000	66.7	4000	4000	0.00	0.00

COMMENTS/REMARKS:

ALL CALIBRATION DONE WITH CALIBRATED TEST EQUIPMENT.
CALIBRATION POINTS ACCEPTANCE CRITERIA +/-10% OF ACTUAL INPUT RATE.
OUT OF TOLERANCE VALUES ARE CIRCLED AND CUSTOMER CONTACT NOTIFIED VERBALLY OF CONDITION.
CALIBRATION PERFORMED PER ICAL PROCEDURE NUMBER 47.

Tc-99 EFFICIENCY	3000	CPM /	19699	DPM
% EFF =	15.23	1/E =	6.57	

CALIBRATED BY : 

DATE CALIBRATED : 12/26/2010

CALIBRATION DUE DATE : 12/26/2011

ICAL, INC.
CHI-SQUARE DETERMINATION RECORD

FORM 16-1
REV. 0

DATE 12/26/2010 TIME 1700

INST. MODEL SAC-4 INST. SERIAL NO. 1222

CAL. DUE DATE 12/26/2011 INSTRUMENT LOCATION ___ MCF2 X MCF3

SOURCE NO. S-1754 ISOTOPE Am-241 ORIG. ACT. DATE 04/21/1978

t 1/2 (YEARS) 433 (Sr-90 = 28.2 YRS, Tc-99 = 212000 YRS, Th-230 = 80000 YRS)

ORIG. ACT. (DPM) 48800 DECAYED ACT. TO DATE (DPM) 46313

SOURCE COUNT TIME (MIN.) 2 BKG. COUNT TIME (MIN.) 20

BKG. TOTAL COUNTS 4 0.2 CPM

	COUNTS X	$(X - \bar{X})$	$(X - \bar{X})^2$		COUNTS X	$(X - \bar{X})$	$(X - \bar{X})^2$
1	31074	-292	85439	11	31383	17	279
2	31372	6	32	12	31423	57	3215
3	31271	-95	9082	13	31625	259	66926
4	31184	-182	33233	14	31434	68	4583
5	31458	92	8409	15	31403	37	1347
6	31391	25	610	16	31162	-204	41738
7	31165	-201	40522	17	31756	390	151866
8	31455	89	7868	18	31390	24	562
9	31300	-66	4396	19	31520	154	23624
10	31162	-204	41738	20	31398	32	1005
			TOTALS		627326	0	526474.2

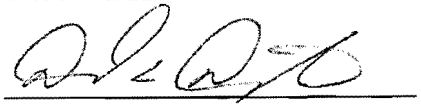
1. SAMPLE AVERAGE, $\bar{X} = \dfrac{\text{SUM } X}{20} = 31366.30$

2. SAMPLE VARIATION $= \dfrac{1}{19} \text{SUM } (X - \bar{X})^2 = 27709.17$

3. SAMPLE DEVIATION $= \sqrt{\dfrac{1}{19} \text{SUM } (X - \bar{X})^2} = 166.46$

4. CHI-SQUARE $= \dfrac{1}{\bar{X}} (X - \bar{X})^2 = 16.78$

** CHI-SQUARE MUST BE LESS THAN OR EQUAL TO 30.14

PERFORMED BY: 

	LGS #	Purchase Date	Nuclide	uCi	Cal Date	MFG	Comments	MFGR S/N	
✓	389	08/21/84	Pu-239	0.0008847 ~~0.001~~	08/02/84	Eber	Alpha cal source *	9048 ✓	
✓	390	08/21/84	Pu-239	0.008739 ~~0.009~~	08/02/84	Eber	Alpha cal source *	9049 ✓	
✓	391	08/21/84	Pu-239	0.103604 ~~0.102~~	08/02/84	Eber	Alpha cal source *	9050 ✓	
✓	392	08/21/84	Pu-239	1.09009 ~~1.07~~	08/02/84	Eber	Alpha cal source *	9051 ✓	
	393 *	08/21/84	Pu-239	0.000254	08/02/84	Eber	Alpha cal source *	9044	NLT
	394 *	08/21/84	Pu-239	0.0030	08/02/84	Eber	Alpha cal source *	9045	NLT
	395 *	08/21/84	Pu-239	0.0329	08/02/84	Eber	Alpha cal source *	9046	NLT
	396 *	08/21/84	Pu-239	0.3162 ~~.311~~	08/02/84	Eber	Alpha cal source *	9047	NLT
✓	413	08/21/84	Tc-99	0.005	08/21/84	Eber	Electroplated 1" disc *	C-1469	
✓	695	04/07/87	Tc-99	0.00285 ~~0.003~~	03/11/87	Eber	Sping cal source *	S-4550	
✓	699	04/07/87	Tc-99	0.262	03/11/87	Eber	Electroplated SS disc *	S-4556	
✓	776	01/14/89	Tc-99	0.382	06/15/89	Eber	ss disc *	1066/89	
✓	777	07/14/89	Tc-99	0.009	06/15/89	Eber	SS disc *	1065/89	
✓	779	07/14/89	Th-230	0.004	06/12/89	Eber	SS disc *	1062/89 ✓	
✓	800	01/17/90	Tc-99	0.013	12/14/89	Eber	Electroplated SS disc *	1625/89	
✓	801	01/17/90	Tc-99	0.0033	12/15/89	Eber	Electroplated SS disc *	1623/89	
✓	802	01/17/90	Tc-99	0.055 ~~0.005~~	12/21/89	Eber	Electroplated SS Plate *	1628/89	
✓	803 *	01/17/90	Tc-99	0.043	12/20/89	Eber	Electroplated SS Plate *	1627/89	
✓	804	01/17/90	Tc-99	0.0104	12/14/89	Eber	Electroplated SS Plate *	1626/89	
✓	805	01/17/90	Tc-99	0.006	12/15/89	Eber	Electroplated SS Plate *	1624/89	
✓	845	05/22/90	Tc-99	0.00229 ~~5.4~~	04/15/90	IPL	Mylar covered plate *	M-148	

S94-1 set

S94-4 set

* TRANSFER TO MANUFACTURING SCIENCES

✓	846	04/22/90	Tc-99	0.0023	04/15/90	IPL	Mylar covered plate *	M-149
✓	847	04/22/90	Tc-99	0.0023	04/15/90	IPL	Mylar covered plate *	M-150
✓	890	11/15/92	Cs-137	~~0.209~~ 0.00565	11/15/90	IPL	Mylar covered plate *	V-137
✓	934 *	06/03/93	Tc-99	0.003	05/07/93	Amer	4 x 4 electroplated source *	DL232
✓	936	06/03/93	Tc-99	0.003	05/07/93	Amer	4 x 4 electroplated source *	DL234

* Suggested disposal method is to transfer source to vendor license.

* TRANSFER TO MANUFACTURING SCIENCES

		Initial	X	Announced		Unannounced		Routine		Special	X	Increased Controls

NRC FORM 591M PART 3
(10-2003) 10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

Docket File Information

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE	2. NRC/REGIONAL OFFICE
ICAL, Inc. **2130 Gary Court** **Decatur, IL 62526** REPORT NOS **2010-01**	**U.S. Nuclear Regulatory Commission** **Region III, 2443 Warrenville Road** **Suite 210** **Lisle Illinois, 60532-4352**

3. DOCKET NUMBER(S)	4. LICENSE NUMBER(S)	5. DATE(S) OF INSPECTION
030-29717	**12-24846-01**	**December 22, 2010**

6. INSPECTION PROCEDURES USED	7. INSPECTION FOCUS AREAS	8. INSPECTOR
TI 2800/038, Appendix A	**IC Order requirements**	**R. P. Hays**

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
03222	**5**	**George Hall**	**217-937-3706; 217-412-0704**

☐ Main Office Inspection — Next Inspection Date: **TBD**

☒ Field Office **2800 Jasper St., Decatur, IL**

☐ Temporary Job Site Inspection

PROGRAM SCOPE

The licensee is authorized to possess sealed sources containing nominal activities of cesium-137, strontium-90, and/or cobalt-60, as specified by the license to be used for instrument calibrations contained in survey instrument calibrator devices and used at temporary job sites in NRC jurisdiction. The licensee is also authorized to posses any byproduct material as contamination when found on customer's survey instruments. The calibration devices are contained in a mobile calibration facility (MCF) which can be transported to customer locations. Each MCF contains a J. L. Shepherd Model 89 calibration device which contains a nominal activity of cesium-137 greater than the minimum quantity of concern and therefore is subject to the Order Imposing Increased Controls (Order) issued November 14, 2005. The purpose of the inspection was to review the licensee's continued implementation of the Order and implementation of the Order EA-07-305 imposing fingerprinting and criminal history records check (Fingerprint Order) requirements dated December 5, 2007. Recently, the principle owner of ICAL, Inc., Robert Harris, unexpectedly died and the wife and family of Mr. Harris have been working to transfer all licensed material possessed under the licensee's State of Illinois license to another licensee. After discussions with the licensee, on December 22, 2010, the licensee informed the inspector that an amendment request to terminate the NRC license would be submitted within the next 30 days. The inspection determined that the licensee has not transported to, or stored any devices at, a NRC temporary jobsite since the Orders were issued.