

**ADVANCED CARDIOVASCULAR SPECIALISTS, LLC**

1530 N. Church Road  
Liberty, Missouri 64068  
(816)678-5787

12/01/2010

U.S. Nuclear Regulatory Commission  
Region III  
Materials Licensing Section  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

**RE: MATERIAL LICENSE 24-32712-01, Termination of NRC license.**

Dear Region III Materials Licensing Branch:

Advanced Cardiovascular Specialists, LLC., has ceased all operations under our materials license and is submitting an NRC FORM 314, CERTIFICATE OF DISPOSITION OF MATERIALS for termination of our materials license. ***We are also terminating our private medical practice so we are requesting an expedited amendment to our materials license so we may release for unrestricted use those areas of former RAM use at our location, 1530 N. Church Road, Liberty, Missouri and return control of this area to the building owners.***

After all radioactive material was removed from 1530 N. Church Road, a complete close out survey was done following the **Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material**. Attached is a close out survey dated 11/03/10.

Sealed sources (Cs-137 and Ba-133 vials, Co-57 Flood, and exempt Cs-137 rod source) all for instrument testing (35.65) were the only sealed source we possessed. These sources were shipped back to the manufacturer, Isotope Products. Attached is acknowledgment from Isotope Products that they received the sealed sources. There was no history of any leak test exceeding 0.005  $\mu\text{Ci}$  on these sources. Attached is a copy of leak test done on these sources.

Radioactive material permitted by 35.200 (Tc-99m and Tl-201), in unit dose form, were the only radiopharmaceuticals used at our facility. The last day of radiopharmaceutical use was June 29, 2010. Tc-99m and Tl-201 waste decayed to background levels using decay-in-storage authorization and was disposed as non radioactive waste on 11/02/10.

Attached are the results of the close out survey (ambient radiation exposure and removable contamination) and a diagram noting the locations where exposure readings

**RECEIVED DEC 2 1 2010**

and wipe smears were taken. The Ludlum 14C survey meter, S/N 158684, was last calibrated on 11/09/09. Radiation exposure surveys were done with the survey meter set to the most sensitive scale (lowest range). There were no ambient radiation exposures in excess of 0.02 mR/hr. Background radiation exposure in the facility was 0.02mR/hr.

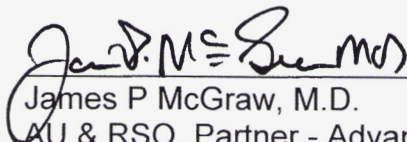
An efficiency test was done (11/30/09) on the Ludlum 243 NaI Well Counter w/ Scaler, S/N 166193. The efficiency for Tc-99m was determined to be 83% (attached), when using a wide counting window of 20 to 800 keV. The results of all wipe tests were below background, demonstrating no removable contamination. All ambient radiation exposures and wipe test analysis were done by Cheryl Gibbs, CNMT.

***We request assistance in expediting this request so we may release the previous areas of use to the building owners.***

Please send all future correspondence regarding this license to: James McGraw, M.D., 17282 Palazzo Drive, Saint Joseph, MO 64505.

If you have any additional questions, please contact me via my email address, [jpmcgraw@me.com](mailto:jpmcgraw@me.com).

Sincerely,



James P McGraw, M.D.

AU & RSO, Partner - Advanced Cardiovascular Specialists

Attachments:

1. NRC FORM 314
2. Close out documents
3. Disposal documents of sealed sources



(4-2008)  
10 CFR 30.36(j)(1); 40.42(j)(1);  
70.38(j)(1); and 72.54(k)(5)(1)(1)

## CERTIFICATE OF DISPOSITION OF MATERIALS

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [infocollects@nrc.gov](mailto:infocollects@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE NAME AND ADDRESS

Advanced Cardiovascular Specialists, LLC.  
1530 N. Church Road  
Liberty, MO 64068

LICENSE NUMBER

24-32712-01

DOCKET NUMBER

030-37838

LICENSE EXPIRATION DATE

10/31/2018

## A. LICENSE STATUS (Check the appropriate box)

This license has expired. ☐ This license has not yet expired; please terminate it. ☒

## B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- ☐ 1. No radioactive materials have ever been procured or possessed by the licensee under this license.
- ☒ 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner:
  - ☒ a. Transfer of radioactive materials to the licensee listed below:  
Sealed sources shipped to manufacturer (Isotope Products) see return packing list for confirmation of receipt.
  - ☒ b. Disposal of radioactive materials:
    - ☒ 1. Directly by the licensee:  
Radioactive waste completed decay-in-storage and was disposed of as non radioactive waste.
    - ☐ 2. By licensed disposal site:
    - ☐ 3. By waste contractor:
  - ☒ c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

## C. SURVEYS PERFORMED AND REPORTED

- ☒ 1. A radiation survey was conducted by the licensee. The survey confirms:
  - ☒ a. the absence of licensed radioactive materials
  - ☒ b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.
- ☒ 2. A copy of the radiation survey results:
  - ☒ a. is attached; or ☐ b. is not attached (Provide explanation); or ☐ c. was forwarded to NRC on: \_\_\_\_\_ Date \_\_\_\_\_
- ☐ 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and
  - ☐ a. The results of the latest leak test are attached; and/or
  - ☒ b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME

James P. McGraw, M.D.

TITLE

RSO, AU - Partner

TELEPHONE (Include Area Code)

46678 5787

E-MAIL ADDRESS

jpmcgraw@me.com

Mail all future correspondence regarding this license to:

James McGraw, 17282 Palazzo Drive, St. Joseph, MO 64505

## C. CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE

James P. McGraw, M.D., RSO, AU - Partner

SIGNATURE



DATE

12/01/2010

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

Advanced Cardiovascular Specialists, LLC.  
1530 N. Church Road  
Liberty, MO 64068

CLOSE OUT SURVEY

Date of survey and wipe tests: 11/03/10

Diagram #	Location	Area Survey (mR/hr)	Wipe Test Removable contamination (dpm/100cm <sup>2</sup> )
N/A	Background	0.02	2165 cpm
1	Treadmill	0.02	2109 cpm (0 dpm)
2	Injection Chair	0.02	2108 cpm (0 dpm)
3	Camera Imaging Pallet	0.02	2161 cpm (0 dpm)
4	Hot Lab Dose Preparation Area & Decay-in-Storage Area	0.02	2136 cpm (0 dpm)

Surveys done with Ludlum 14 C, S/N 158684, calibrated 11/09/09. Check source reading confirmed before use.

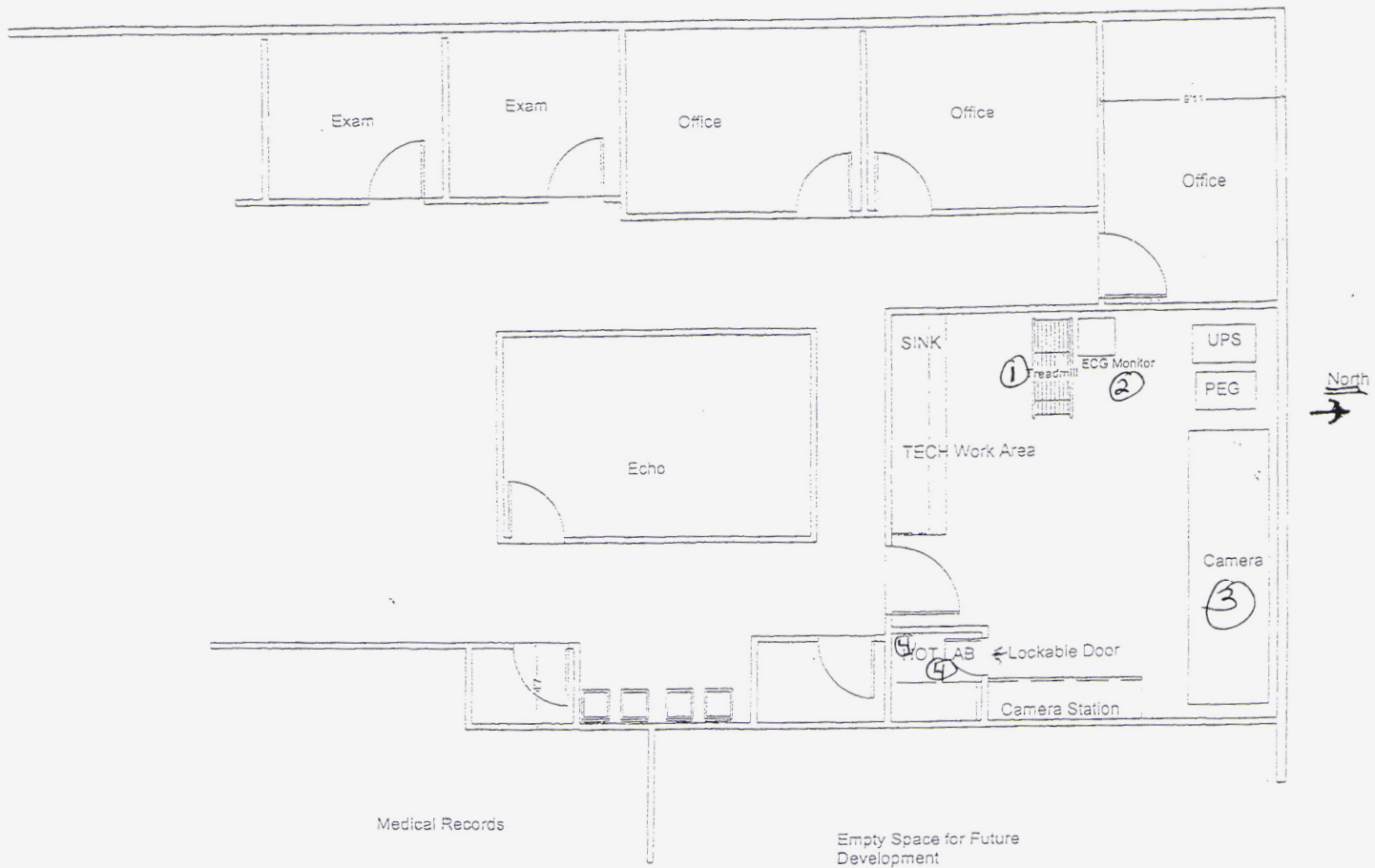
Wipes analyzed with Ludlum 243 NaI well counter w/ Scaler, S/N 166193. Tc-99m efficiency done 11/30/09. Constancy test done before use.

Close out survey performed by Cheryl Gibbs, CNMT



# Facility Diagram

Advanced Cardiovascular Specialists, LLC.  
1530 N. Church Road  
Liberty, MO 64068




**CardinalHealth**

Section 6

Cardinal Health Medical & Health Physics  
 9668 Marion Ridge  
 Kansas City, Missouri 64137  
 Tel 816.965.0330  
 Fax 816.966.2040

Form 105

## CERTIFICATE OF ADEQUATE INSTRUMENT COUNTING SENSITIVITY

Merituas Health Corporation-Northland Cardiology; North Kansas City, MO

1. **Instrument:** Ludlum 243 NaI Well Counter w/ Scaler; S/N:166193 **Date:** 11-30-2009

2. **Use For:**

X Wipe Test Counting Minimum Sensitivity: 2000 dpm/100 cm<sup>2</sup>

3. Radionuclides	Efficiency	Action Level (dpm)	cpm Equivalent
X Technetium-99m	83.4 %	2000 dpm	1668 cpm
X Cesium-137	30.3 %	2000 dpm	606 cpm
X Cobalt-57	83.4 %	2000 dpm	1668 cpm
X Barium-133	92.4 %	2000 dpm	1848 cpm
X Iodine-131	92.4 %	200 dpm	184 cpm

4. **Geometry**

X Well Counter

5. **Specify distance from detector or other pertinent information:**

Place wipe sample in plastic tube and place directly in the well and count for one minute and count background for one minute. Solve for net cpm (sample - bkg = net cpm).

6. **Efficiency Determinations:**

Cs-137: Example:  $\frac{\text{Net cpm}}{\text{Efficiency}} = \text{dpm}; \frac{606 \text{ cpm}}{0.303} = 2000 \text{ dpm}$

All Isotopes:  $\text{LLD} = 4.65 * (B_r / t)^{1/2} = 245.1 \text{ cpm}$

Radiation Safety Officer

Signed



# ***MEDICAL PHYSICS SURVEY SEALED SOURCE LEAK TEST ANALYSIS REPORT***

FACILITY: Advanced Cardiovascular  
Specialists, LLC

DEPARTMENT: Nuclear Cardiology

LOCATION: Liberty, Missouri

ATTENTION: Dr. McGraw, RSO

Analysis of the WIPE used to conduct a leak test on the sealed sources identified below was performed by gas or scintillation detection and reveals removable contamination was less than 0.005  $\mu\text{Ci}$ , unless otherwise noted, when compared against NIST traceable standards.

Source: Cs-137 Vial, 197.5  $\mu\text{Ci}$ , 12/01/08, Isotope Products, Mod.# RV-37-200u, S/N 1333-80-15.

Date:	01/15/09 TWD	4/16/09 TWD	10/15/09 TWD	4/22/10 TWD
Wipe No.:	9489	682	2542	4778
MDA ( $\mu\text{Ci}$ ):	2 E-04	2 E-04	2 E-04	2 E-04
Net CPM:	3	8	8	16
Net $\mu\text{Ci}$ :	< MDA	< MDA	< MDA	< MDA
CPM for 0.005 $\mu\text{Ci}$ :	1,500	1,500	1,500	1,500
Analyst:	LB	LB	LB	LB

Source: Co-57, Flood, 10 mCi, 11/01/08, Isotope Products, Model # 3709.AD.010M.N, S/N 1326-013.

Date:	01/15/09 TWD	4/16/09 TWD	10/15/09 TWD	4/22/10 TWD
Wipe No.:	9491	683	2543	4779
MDA ( $\mu\text{Ci}$ ):	3 E-05	3 E-05	3 E-05	3 E-05
Net CPM:	12	76	7	8
Net $\mu\text{Ci}$ :	< MDA	< MDA	< MDA	< MDA
CPM for 0.005 $\mu\text{Ci}$ :	10,160	10,160	10,160	10,160
Analyst:	LB	LB	LB	LB

Source: Ba-133, Vial, 255.0  $\mu\text{Ci}$ , 01/01/09, Isotope Products, Model # RV-133-250u, S/N 1333-81-16.

Date:	01/15/09 TWD	4/16/09 TWD	10/15/09 TWD	4/22/10 TWD
Wipe No:	9490	684	2544	4780
MDA ( $\mu\text{Ci}$ ):	9 E -05	9 E -05	9 E-05	9 E-05
Net CPM:	29	59	97	5
Net $\mu\text{Ci}$ :	< MDA	< MDA	< MDA	< MDA
CPM for 0.005 $\mu\text{Ci}$ :	4,327	4,327	4,327	4,327
Analyst:	LB	LB	LB	LB

Performed by: Associates in Medical Physics, LLC

Under License No. : 34-26645-02

TRN# 8735 8509 2064

**RETURN PACKING LIST**

All information must be provided to ensure proper handling of your return.

**FROM:**

Company Name

ACS

Address

1530 N Church Road

City

Liberty

State

MO

Zip

64068

Contact Name

Cheryl Gibbs

Telephone:

816-682-9209

Fax:

816-415-1800

E-mail:

CherylA234@yahoo.com

**SEND TO:**

Eckert &amp; Ziegler

Isotope Products

1800 North Keystone Street  
Burbank, CA 91504

Tel 661-309-1010

Fax 661-257-8303

E-mail: nucmedsales@ezag.com

**RETURN #RA - 128254**

LOK per Kelly7

**STOP:** This packing list must be affixed to the outside and a copy placed inside of the package. Each returned source to EZIP must be on a one-to-one exchange basis only. For additional returns, please contact EZIP customer service for additional cost considerations.

Nuclide	Activity	Reference Date	Serial No.	Capsule Description	Source Wipe Test $\leq 5$ nci
1) <sup>132</sup> I	255u	1/1/09	1333-81-16	Sealed Source	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2) <sup>137</sup> Cs	197.5u	12/1/08	1333-80-15	Sealed Source	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3) <sup>137</sup> Cs	500nCi	1/1/09	1333-85-64	Sealed Source	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4)					<input type="checkbox"/> Yes <input type="checkbox"/> No
5)					<input type="checkbox"/> Yes <input type="checkbox"/> No

If source is damaged, broken, or leaking, describe under "Capsule Description" section and submit a copy of last leak test. Keep a copy of this form for your records. It may be requested by your regulatory agency. I acknowledge that the above information is true to the best of my knowledge.

Contact's Signature

Cheryl Gibbs

For EZIP Use only.

EZIP has received the radioactive sources listed above, except as noted below:

Receiver's Name

JULIAN NGERU

Receipt Date

05 NOV 10

Sources not received:

☒ N/A



TRXN# 8492 1862 5504

**B**

# RETURN PACKING LIST

All information must be provided to ensure proper handling of your return.

## FROM:

Company Name ACS  
Address 530 N. Church Road  
City Liberty State MO Zip 64068  
Contact Name Cheryl Gibbs  
Telephone: 816-682-9809 Fax: 816-~~682-9809~~  
E-mail: cherylA234@yahoo.com 415-1800

## SEND TO:

 **Eckert & Ziegler**  
Isotope Products

**1800 North Keystone Street  
Burbank, CA 91504**

Tel 661-309-1010  
Fax 661-257-8303  
E-mail: nucmedsales@ezag.com

**RETURN #RA-128254**

OK per Kelly

**STOP:** This packing list must be affixed to the outside and a copy placed inside of the package. Each returned source to EZIP must be on a one-to-one exchange basis only. For additional returns, please contact EZIP customer service for additional cost considerations.

Nuclide	Activity	Reference Date	Serial No.	Capsule Description	Source Wipe Test ≤5nci
1) <sup>57</sup> Co	10mcg	11/01/08	1326-013	sealed source H100D ME03709	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2)					<input type="checkbox"/> Yes <input type="checkbox"/> No
3)					<input type="checkbox"/> Yes <input type="checkbox"/> No
4)					<input type="checkbox"/> Yes <input type="checkbox"/> No
5)					<input type="checkbox"/> Yes <input type="checkbox"/> No

If source is damaged, broken, or leaking, describe under "Capsule Description" section and submit a copy of last leak test. **Keep a copy of this form for your records. It may be requested by your regulatory agency.**  
I acknowledge that the above information is true to the best of my knowledge.

Contact's Signature

*Cheryl Gibbs*

For EZIP Use only.

EZIP has received the radioactive sources listed above, except as noted below:

Receiver's Name JULIUS NGERU

Receipt Date 05 NOV 10

Sources not received: N/A



James McGraw, MD  
17282 Palazzio Dr.  
St. Joseph, MO 64505



U.S. Nuclear Regulatory Commission  
Region III  
Materials Licensing Section  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352