

CARDIOVASCULAR CONSULTANTS

Gary A. Frick, D.O., M.S., F.A.C.C., F.A.C.O.I.

1123 North Western Avenue
Marion, IN 46952

Phone: 765 - 651 - 9347 Fax: 765 - 651 - 9346

FACSIMILE TRANSMISSION

TO: <u>Bill Reichhold</u>	FROM: <u>Becki Frick</u>
FAX NUMBER: <u>630-829-9782</u>	DATE: <u>8/2/3</u>
PHONE NUMBER: <u>630-829-9839</u>	TOTAL NO. OF PAGES INCLUDING COVER: <u>4</u>

SUBJECT:

*Please call & confirm
if received & OK.*

☐ URGENT

☒ FOR REVIEW

☐ PLEASE REPLY

NOTES/COMMENTS:

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**NC Systems, Inc.****Institute For Nuclear Medical Education, Inc.**

5550 Airport Blvd., Suite 101, Boulder, Colorado 80301

Phone: (800) 548-4024 • (303) 541-0844 • FAX: (303) 541-0868

☐ Standard ☒ Urgent

Total Pages: 7

Being Received in This Area

FAXFrom: Mark DaterTo: BeckiDate: 8/2/06FAX Phone: 765-851-9346Phone: 765-851-9347Location: JN

Reference:

Dear Becki:

Have Dr. Frick sign letter. Fax a copy of documents to Bill Reichhold @ 830-829-8782. keep a set for your site records.

Please call if you have any questions.

Sincerely,

Mark
NC Systems, Inc.

Sender

1075 OFFICE - Fax 88

This message is intended for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the address above via the U.S. Postal services. Thank you.

The following information is needed to complete the review of your amendment request to release "old" facility located at 4506 South Western Avenue Marion, Indiana.

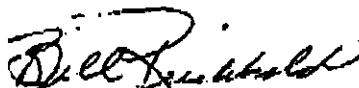
Your close-out survey should consist of exposure rate measurements to show that all sources of radioactive material have been removed, and contamination checks of areas where radioactive materials were used or stored. Average radiation levels associated with surface contamination and removable contaminations should not exceed those specified in the enclosed decontamination guide. Please submit the following information with your close-out survey:

- a. A history of all radionuclides used at your "old" facility.
- b. A current copy of the leak test results for the sealed sources used at your "old" facility. Also a history of leaking sealed sources (if any).
- c. Your wipe tests (dated Thursday April 27, 2006) for contamination appear to show results for only cobalt-57, cesium-137, and barium-133 rather than wipe tests for all radionuclides (such as technetium-99m, etc.) used at your facility. **Please resubmit** wipe test survey results that include all radionuclides used and stored at your facility. Also, the wipe test results (dated Thursday April 27, 2006) were incomplete. The wipe test results for area 8 were not clear because they were "cut off" from the bottom of the page
- d. Please identify the individual who performed the wipe tests for contamination.
- e. Please identify the instrument(s) used for exposure rate measurements and for analysis of the wipes.
- f. Please specify the background readings for both the wipe tests and the ambient radiation level surveys.
- g. Please specify the date that the survey instrument was last calibrated.

Please send a facsimile of your response to the above in 7 days and refer to control 315421.

Please call me at 630-829-9839 if you have any questions.

From the desk of:



Bill Reichhold

8/2/06

Nuclear Regulatory Commission
Region III
ATTN: Bill Reichhold
2443 Warrenville, Suite 210
Lisle, IL 60532-4352
630-829-9839

RE: Fax sent by Bill Reichhold, dated July 12, 2006, Control number 315421

Dear Bill Reichhold:

In response to the above referenced fax requesting additional information.

- a. The radionuclide's used at the facility for patient doses were 99Tcm; 201Tl. The Sealed sources used at the facility for quality control of equipment were 57Co; 133Ba; 137 Cs.
- b. I have enclosed a copy of the leak test for the sources used at the old facility. There were never any leaking sources.
- c. I have resubmitted wipe results covering all radionuclide's used at the facility.
- d. The identity of the person who performed the 1st wipe tests was Thomas Euler. The person performing the wipe test for the 2nd set of wipes was Becky Frick
- e. The survey instrument used for the ambient survey was a Bicron Model Surveyor 2000 with a side window probe. The instrument used for contamination wipe survey is a Atomlab 450 counting system with a 2x2 NaI well detector.
- f. Background for the ambient survey was .03mr/hr Background for wipe survey was 1360dpm
- g. The survey instrument date of last calibration was 12/10/05.

Should you have any further questions, please contact me at 765-651-9347
or Mark Dater (Consultant: NC Systems, Inc) at 800-548-4024.

Sincerely,


Gary A. Frick, D.O.
Radiation Safety Officer

Sealed Source Leak Test and Inventory

Licensee: Cardiovascular Consultants

Address: 1123 N. Western Ave.

City: Marion

State: IN

Zip: 46952

License #: 15-32-301-01

Telephone: 765-674-9347

Sample Identification / Analysis

Source	1	2	3	4
Nuclide	<u>Co-57</u>	<u>Co-57</u>	<u>133-Ba</u>	<u>137-Cs</u>
Mfg	<u>IPL</u>	<u>IPL</u>	<u>IPL</u>	<u>IPL</u>
Model	<u>FLOOD</u>	<u>REF</u>	<u>REF</u>	<u>REF</u>
Serial	<u>1155-112</u>	<u>1074-82-3</u>	<u>747-22-18</u>	<u>743-0-45</u>
Assay Date	<u>1 Apr 2006</u>	<u>1 Dec 2004</u>	<u>1 Apr 2001</u>	<u>1 Mar 2001</u>
Activity	<u>10 mCi</u>	<u>8.28 mCi</u>	<u>240 uCi</u>	<u>290 uCi</u>

Current

Activity	<u>8.88 mCi</u>	<u>1.34 mCi</u>	<u>172 uCi</u>	<u>221 uCi</u>
Location	<u>H.I.</u>	<u>H.I.</u>	<u>H.I.</u>	<u>H.I.</u>
Use	<u>Camera</u>	<u>D.C.</u>	<u>D.C.</u>	<u>D.C.</u>

Wipe

Date	<u>24 Apr 2006</u>	<u>24 Apr 2006</u>	<u>24 Apr 2006</u>	<u>24 Apr 2006</u>
By	<u>R. Frick, RN</u>	<u>R. Frick, RN</u>	<u>R. Frick, RN</u>	<u>R. Frick, RN</u>

Assay

Date	<u>1 May 2006</u>	<u>1 May 2006</u>	<u>1 May 2006</u>	<u>1 May 2006</u>
μ CI	<u>6.444e-05</u>	<u>-1.151e-05</u>	<u>-0.002113</u>	<u>2.515e-05</u>

LLD

μ CI	<u>2.32e-05</u>	<u>2.32e-05</u>	<u>3.096e-05</u>	<u>1.714e-05</u>
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Analysis

<0.005 μ CI	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
>0.005 μ CI				

Next Leak Test Due: (every 6 mo.) 28 Oct 2006 **PASSED** Due: (every 3 mo.) 28 July 2006

Comments/Actions: _____

Assay Performed By: Thomas Euler Date: 1 May 2006

RSO Signature: _____ Date: _____



NC Systems, Inc. • Licensed Leak Testing • Colorado 751

5800 Airport Blvd., Suite 101, Boulder, CO 80301 • (800) 548-4834 • (303) 641-0044 • (303) 641-0088 FAX

SealedSourceLeakTestInv05.02

Sealed Source Leak Test and InventoryLicensee: Cardiovascular ConsultantsAddress: 1123 N. Western Ave.City: MarionState: INZip: 46852License #: 13-32-301-01Telephone: 765-674-6347**Sample Identification / Analysis**

Source	1	2	3	4
Nuclide	<u>Co-57</u>			
Mfg	<u>IPL</u>			
Model	<u>FLOOD</u>			
Serial	<u>1033-166</u>			
Assay Date	<u>1 Jan 2004</u>			
Activity	<u>10 mCi</u>			

Current

Activity 1.14 mCi
Location H.L.
Use Camera

Wipe

Date 24 Apr 2006
By R. Frick, RN

Assay

Date 1 May 2006
 μ Ci 0

LLD

μ Ci 2.32e-05

Analysis

<0.005 μ Ci _____
>0.005 μ Ci _____

Next Leak Test Due:(every 6 mo.) _____ Next Inventory Due:(every 3 mo.) _____

Comments/Actions: This Co-57 Flood replaced with new Flood, serial 1155-112

Assay Performed By: **ASSED** Thomas Euler Date: 1 May 2006

RSO Signature: _____ Date: _____

**NC Systems, Inc. • Licensed Leak Testing • Colorado 751**

6660 Airport Blvd., Suite 101, Boulder, CO 80501 • (303) 448-0234 • (303) 441-0244 • (303) 441-0285 FAX

Boulder@ncsystems.com/ThomasEuler-02

Cardiovascular Consultants
1123 North Western Avenue
Marion, IN 46952
765-651-9347

Wipe Results Report

Tuesday, August 1, 2006 2:13 PM

Area: Contamination Survey

Unrestricted Area, R50 Trigger at 25% of Federal Guidelines, Well

Location: Areas 1-5 Wipes

>LLD	>Trigger	Isotope	Trigger	LLD	Background	Count Time	Activity
No	No	Wide Window	500 dpm	53 dpm	1380 dpm	60 sec.	27 dpm

Location: Areas 6-9 Wipes

>LLD	>Trigger	Isotope	Trigger	LLD	Background	Count Time	Activity
Yes	No	Wide Window	500 dpm	53 dpm	1380 dpm	60 sec.	77 dpm

Technologist: _____

Comments:

Date of Samples: 07-27-2006

WINDOW SET AT 50KEV-726 KEV

Wipe #1 - Negative

Wipe #2 - Negative

Wipe #3 - Negative

Wipe #4 - Negative

Wipe #5 - Negative

Wipe #6 - Negative

Wipe #7 - Negative

Wipe #8 - Negative

Wipe #9 - Negative

Signature:

Thomas E. Felson

Date:

08-09-2006

WM 05:28 0007-70-704



NC SYSTEMS, INC.
NATIONAL LABORATORIES
 5660 AIRPORT BLVD., SUITE 101
 BOULDER, CO 80301
 303-541-0044

Calibration Certificate

This is to certify that the instrument described below was calibrated by or contracted through our laboratory on;

Instrument Geiger Counter Manufacturer Bicron Model # surveyor 2000
 Serial # I-537A Detector SWGM#CBS8H

The instrument was found to be within the manufacturer's specifications or within the tolerances and specifications given below.

Detector(s)	Range(s) Scale(s)	Calibration Point	Reading	Other Specs or % error
Internal	X1000	1500 mR/h	1460 mR/h	
Internal	X1000	500 mR/h	530 mR/h	
External	X100	150 mR/h	145 mR/h	
External	X100	50 mR/h	52 mR/h	
External	X10	15 mR/h	14.9 mR/h	
External	X10	5 mR/h	5 mR/h	
External	X1	1.5 mR/h	1.4 mR/h	
External	X1	5 mR/h	0.35 mR/h	
NA	X0.1	268 ppm	0.14 mR/h	
NA	X0.1	106 ppm	0.055 mR/h	

0.9 mR/h

Check Source Reading: _____

Instrument was repaired as noted below.

Comments:

This will further certify that all calibrations were performed using standards traceable to the National Institute for Standards and Technology (NIST). Calibration methods may be obtained by contacting our office.

12/10/05

Date

12/10/06

Recalibration

R. J. Long
 By
 Laboratory Manager

Title

1027-13
 11/10/06

TYPE 1000 Certificate 1000