

To: James Mullaver
NRC

Fax # 630-829-9873

From: Kathy Koremenos
Cardiac Care Consultants

Fax # 219-836-0688

Pgs incl. cover: 12

Re: Additional information
needed for closeout survey
at 9120 Columbia Ave. Munster, IN.

Please call me at
219-836-4389 if there's any
further ~~in~~ questions.

Thank You,
Kathy Koremenos

**CARDIAC CARE CONSULTANTS P.C.
9116 COLUMBIA AVE
MUNSTER IN 46321**

ANURADHA DIVAKARUNI, M.D.

SHASHIDHAR DIVAKARUNI, M.D.

June 18, 2007

James R. Mullauer, MHS
Health Physicist
U.S. Nuclear Regulatory Commission, Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532

License No 13-32585-01
CN 316264
ML 071420073

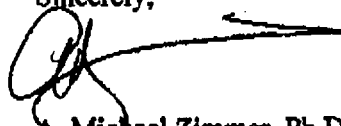
Dear Mr. Mullauer,

The following is the response to the additional information requested by you for the closeout survey at the 9120 Columbia Ave facility.

1. Leak Test Results: The last leak test results and sealed source inventory is found in Attachment A.
2. Survey meter calibration and counting equipment calibration: The latest survey meter calibration and counting equipment calibration, including the minimum detectable activity are found in Attachment B.
3. Minimum Detectable Activity: The MDA is found in Attachment B.
4. Wipe Test Results: The wipe test results in DPM/100cm² are found in Attachment C. Each wipe, consisting of a 100 cm² area, was taken in a specific radiation area and is marked on the schematic drawing.
5. The radionuclides used at the facility are found in Attachment D.
6. The background readings are found on the original survey form located in Attachment C. The background using a GM survey meter with a pancake probe was 0.01 mR/hr and the background on the wipe counter was 380 CPM.

If further information is required, you can contact me at the contact number on the application or my fax number which is 312 926-0862.

Sincerely,



A. Michael Zimmer, Ph.D.
Radiation Safety Officer

ATTACHMENT A

20070619 12:07:27 FAX
00871872001 14:30 FAX

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ATTACHMENT B

sahci

Certification of Calibration - Radiation Survey Instruments

Stan A. Huber Consultants, Inc. - 200 North Cedar Road - New Lenox, Illinois 80481 - (800) 383-0488 - Fax (815) 485-4433

Calibration Date: 8-24-2006Facility: Cardiac Care ConsultantsCity: MunsterState: IN

Instrument Identification:



G-M



Ion Chamber



Pocket Dosimeter



Other

GM Probe Type:



Pancake



End Window



Side Window



Other

Manufacturer: LudlumModel: 2241-2Serial No.: 217849Calibration Sources: Cs-137 ($\Gamma = 0.33$) 0.1081 mCiCs-137 ($\Gamma = 0.33$) 75.88 mCiCo-57 ($\Gamma = 0.09$) 0.0163 mCiAll as of date: 8-24-2006Co-57 efficiency relative to Cs-137: 1 mR/hr = N/A cm

Observed mR/hr:

Actual mR/hr (Co-57) N/A X 100 = N/A %

Window:



Open



Closed



Fixed

* All sources used for calibrations are traceable to the National Institute of Standards and Technology *

| SCALE RANGE | DISTANCE SOURCE #1 | DISTANCE SOURCE #2 | ACTUAL mR/hr | OBSERVED mR/hr | WITHIN +/- 10% | CORRECTION FACTOR |
|-------------|-----------------------|-----------------------|-----------------|-------------------|-------------------|----------------------|
| Auto | 84.5 | | 0.05 | 0.05 | YES | - |
| | 42.8 | | 0.15 | 0.15 | | - |
| | 26.7 | | 0.5 | 0.5 | | - |
| | 15.4 | | 1.5 | 1.5 | | - |
| Scale | 8.4 | 223.8 | 5 | 5 | YES | - |
| | | 129.2 | 15 | 15 | | - |
| | | 70.8 | 50 | 50 | | - |
| | | 40.9 | 150 | 150 | | - |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Angle of the flux field to detector (internal or external) is 90 degrees (perpendicular) and the distance is from center of source to center of detector, unless stated otherwise. Sodium Iodide front and detectors are calibrated parallel to the flux field.

Source Set: 0

Comments:

Battery Check: OK (mR/hr) or Operational Check: 4.5 mR/hr using side 1 sourceN/A mCi Cs-137 check at cm = mR/hrNext Calibration Date: August 2007

Calibrated By:

Tai M. O'Neil

LUDLUM 2241-2
Nal Detector (44-2)

SS 217849

Date: 9/04/06

Activity 1 (uCi) = 50 Date 5/1/2000
Days Decayed = 1952

Bkgnd Cts (cpm) = 330
Counts (cpm) = 116874 Date 9/4/2006
116253
116156

Cs-137 STAND Spectrum Techn 1237

Counts (cpm) 134002
135490
137974

Efficiency (%) = 15.4
2000 DPM = 308 **NET CPM**

Cs Standard
Mean Net CPM = 135492
Range (net cpm) =
Lower = 121943
Upper = 149041

MINIMUM DETECTABLE ACTIVITY

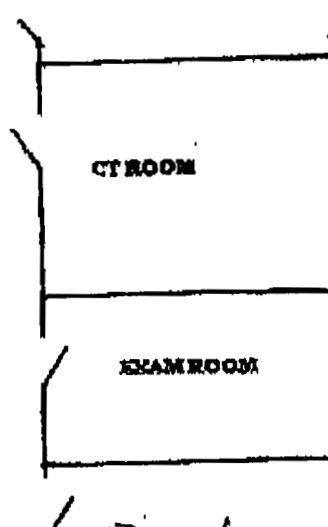
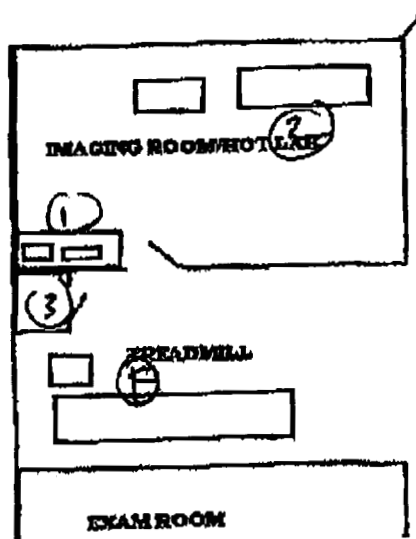
Lower Limit of ((2.71 + 4.65 SR(Background))/Efficiency)
Detection (dpm) = 585

ATTACHMENT C

CLOSURE SURVEY OF FACILITY AT 9120 COLUMBIA

CARDIAC CARE CONSULTANTS SURVEY OF ANCILLARY AREAS

CLOSURE
SURVEY +
WIRES



⑤ Hot Lab Room

Date of Survey 5/5/07

Survey Instrument Laquer

Model 2241-1

Serial No

217849

Pancake Probe

Survey Performed By

M. J. J. J.

Also NAI NGTECH

RSO Signature

[Signature] 5/5/07

SURVEY RESULTS

| AREA | READING (mR/hr) | LOCATION OF AREA (mR/hr) |
|----------|-----------------|--------------------------|
| BKGROUND | 0.01 mR/hr | 380 cpm |
| AREA 1 | 0.01 mR/hr | 402 cpm |
| AREA 2 | 0.01 mR/hr | 348 cpm |
| AREA 3 | 0.01 mR/hr | 389 cpm |
| AREA 4 | 0.01 mR/hr | 359 cpm |
| AREA 5 | 0.01 mR/hr | 416 cpm |
| AREA 6 | | |
| AREA 7 | | |
| AREA 8 | | |
| AREA 9 | | |
| AREA 10 | | |
| AREA 11 | | |
| AREA 12 | | |
| AREA 13 | | |
| AREA 14 | | |

308 NGT CPM = 2000 DPM

ALL WIRE < 2000 DPM

WIPE TEST RESULTS

| LOCATION | NET CPM/100 cm2 | NET DPM/100 cm2 |
|----------|-----------------|-----------------|
| AREA 1 | 22 | 143 |
| AREA 2 | -32 | 0 |
| AREA 3 | 9 | 58 |
| AREA 4 | -21 | 0 |
| AREA 5 | 36 | 234 |

BACKGROUND= 380 CPM

ATTACHMENT D

RADIONUCLIDES USED AT FACILITY

The radionuclides used in our facility includes radionuclide sealed sources and unsealed sources (radiopharmaceuticals). Sealed sources include Co-57, Cs-137 and Ba-133. Unsealed sources include Tc-99m. No other radionuclides have been utilized at our facility.