

 West Virginia University
RADIATION SAFETY DEPARTMENT
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

June 21, 2010

Attn: Betsy Ullrich, MS, CHP
Senior Health Physicist
Commercial and R&D Branch
Division of Nuclear Material Safety

MSC
Q-5

2010 JUN 22 AM 10:20

RECEIVED
REGION I

Subject: Additional Information Concerning Application for New License

License No. 47-23035-03
Docket No. 030-38182

Control No. 144281

Dear Ms. Ullrich,

Additional Information

This is in response to your e-mail dated May 14, 2010, requesting additional information. Please correct item 6/7/8 A to read (*Our possession of any byproduct material with atomic number 1 through 83 and half life less than 120 days, any chemical/physical form to maximum possession limit of 2 Curies and 200 mCi per radionuclide.*)

- A. Any by product material with Atomic Number A. Any A. 200mCi per radionuclide and 2 Ci
1 through 83 and half life less than 120 days total

And also attached is Corrected version of "Certification Of Financial Assurance" based on the types and quantities listed on the license.

Sincerely yours,


Nasser Razmian
Director and Radiation Safety Officer

Cc: Radiological Safety Committee

Robert C. Byrd Health Sciences Center
West Virginia University
WVU Hospitals

G-139 Health Sciences North
PO Box 9006
Morgantown, WV 26506-9006

Phone: 304-293-3413
Fax: 304-293-4529

144281
NMSS/RGN1 MATERIALS-002

Equal Opportunity/Affirmative Action Institution



West Virginia University

Office of the Provost

CERTIFICATION OF FINANCIAL ASSURANCE

June 14, 2010

West Virginia University
P.O. Box 9006
Morgantown, WV 26506

NRC License # 47-23035-03

West Virginia University- Cyclotron Facility
Robert C.Byrd Health Science Center South
One Medical Center Drive, Room # B-043A
Morgantown, WV 26506

Issued to: U.S.Nuclear Regulatory Commission

We certify that West Virginia University-Cyclotron Facility is licensed to possess the following types of unsealed byproduct materials [incidental activated isotopes] with a half-life greater than 120 days licensed less than 10 CFR Parts 30 in the following amount.

Isotope	MAX Licensed mCi	10CFR30 App. B mCi	Ratios
Beryllium-10	200	0.0001	2.00E+06
Cadmium-109	200	0.01	2.00E+04
Calcium-41	200	0.0001	2.00E+06
Carbon-14	200	0.1	2.00E+03
Cesium-134	200	0.001	2.00E+05
Cobalt-57	200	0.0001	2.00E+06
Cobalt-60	200	0.001	2.00E+05
Europium-152	200	0.001	2.00E+05
Europium-154	200	0.001	2.00E+05
Hafnium-172	200	0.0001	2.00E+06
Iron-55	200	0.1	2.00E+03
Lutetium-173	200	0.0001	2.00E+06
Manganese-54	200	0.01	2.00E+04
Nickel-59	200	0.1	2.00E+03
Nickel-63	200	0.01	2.00E+04
Rhenium-184	200	0.0001	2.00E+06
Silver-108m	200	0.0001	2.00E+06
Silver-110	200	0.0001	2.00E+06
Sodium-22	200	0.0001	2.00E+06
Tritium H3	200	0.0001	2.00E+06
Tungston-181	200	0.01	2.00E+04
Zinc-65	200	0.01	2.00E+04
Sum of the Ratios			2.09E+07

**Academic Affairs
Research
Extension and Public Service
Information Technology**

Stewart Hall
PO Box 6203
Morgantown, WV 26506-6203

Fax: 304-293-7554
www.wvu.edu/~acadaff/

Equal Opportunity/Affirmative Action Institution

We also certify that financial assurance in the amount of **\$356,263.68** (three hundred fifty-six thousand two-hundred sixty –three dollars and sixty eight cents) has been obtained for the purpose of decommissioning as prescribed by 10 CFR Part 30. This amount will be available if the need should arise.

Sincerely yours,



Michele G. Wheatly
Provost and Vice President
For Academic Affairs

Cc: Nasser Razmianfar, Director and Radiation Safety Officer
Fred Butcher, VP for Planning and Operations
Gary Marano, Interim President/CEO of UHA
Sahar Saaid, Radiology Administrator
Radiological Safety Committee

Self-Shielded PETtrace facility. Maximum allowed by the license.

Cyclotron Activation Products with half-life of more than 120 days.

Isotope	Half-Life	Location Where Isotope Might Appear	MAX Licensed mCi	10CFR30 AppB mCi	Ratios
Beryllium-10	1.51E+06 years	Polyethylene (3% B), Boric Acid solution in tanks	200	0.0001	2.00E+06
Cadmium-109	1.24 years	Target inserts, Frits, QMA, Delivery lines, Silver parts	200	0.01	2.00E+04
Calcium-41	1.03E+06 years	In concrete	200	0.0001	2.00E+06
Carbon-14	5730 years	In concrete	200	0.1	2.00E+03
Cesium-134	2.1 years	In concrete	200	0.001	2.00E+05
Cobalt-57	1.24 years	D-tips, HAVAR foils	200	0.0001	2.00E+06
Cobalt-60	5.26 years	Concrete, Yoke, Target insert, Ion source, Target body	200	0.001	2.00E+05
Europium-152	13.2 years	In concrete	200	0.001	2.00E+05
Europium-154	16 years	In concrete	200	0.001	2.00E+05
Hafnium-172	1.87 years	Collimator, Beam probe	200	0.0001	2.00E+06
Iron-55	2.73 years	Iron yoke, Self shield plate steel	200	0.1	2.00E+03
Lutetium-173	1.37 years	Collimator, Ion source	200	0.0001	2.00E+06
Manganese-54	312.5 days	Yoke, Target body, Gate valves, etc.	200	0.01	2.00E+04
Nickel-59	7.6E+04 years	Aux Equipment	200	0.1	2.00E+03
Nickel-63	100.1 years	Aux Equipment	200	0.01	2.00E+04
Rhenium-184	165 days	Dee tips	200	0.0001	2.00E+06
Silver-108m	418 years	Target holder	200	0.0001	2.00E+06
Silver-110	252 days	Magnet and targets	200	0.0001	2.00E+06
Sodium-22	2.602 years	Target insert, Bodies, Gate valve, Carbon of the extr	200	0.0001	2.00E+06
Tritium H3	12.33 years	Concrete, Once-used target water, Shield water tank	200	0.0001	2.00E+06
Tungston-181	121.2 days	Collimator, Probe	200	0.01	2.00E+04
Zinc-65	244 days	Target body, Gate Valve, Extractor holder, RF Dees, Extraction cartridge, Ion source	200	0.01	2.00E+04
				Sum of the Ratios	2.09E+07