

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

Rutgers Environmental Health and Safety
Building 4086 • Livingston Campus
Rutgers, The State University of New Jersey
27 Road 1 • Piscataway • New Jersey 08854-8036
732/445-2550 • FAX: 732/445-3109

L-4

Submitted via Facsimile – 610-337-5393

August 2, 2007

U.S. Nuclear Regulatory Commission
Region I
Attn: Licensing Assistance Team
475 Allendale Road
King of Prussia, PA 19406

Attn: Michelle Beardsley, Senior Health Physicist

03000883

Re: Rutgers, The State University of New Jersey, Response
Concerning Renewed License Number 29-05218-28

Mail Control No: 140034

Dear Ms. Beardsley:

This letter is to request changes and/or clarifications to our recently renewed license of broad scope, license number 29-05218-28. The renewed license was issued by the Commission in a letter dated July 26, 2007. Upon review of the renewed license, I had some questions and concerns and discussed these with you via telephone on the morning of July 31, 2007. As per your request, the following is a summary of the issues discussed that may need the attention of your office.

License Line Item 6 D:

For clarity please change, "Any byproduct material with atomic number 1 through 98, except Samarium-151 and Strontium-90." to "Any byproduct material with atomic number 1 through 98, except Samarium-151 and Strontium-90 as listed below"

REC'D IN LAT AUG 10 2007

140904
MISS/DOH MATERIAL

License Line Item 6 E

Please change our Strontium-90 possession limit to 10 millicuries from 5 millicuries. In my last correspondence dated July 24, 2007, I provided information for two (2) Sr-90 sources from North American Science of 5 millicuries each. However, I inadvertently cited the same serial number for each source. Please be advised the 2 Sr-90 sources have serial numbers of 30182 and 30183.

License Line Item 6 N

The Commission has indicated this line item (Pu-200 millicurie source) is for storage only. You stated the information submitted regarding its origins at Monsanto Research Corporation was not sufficient for the Commission to classify this as a sealed source appropriate for use. Considering the amount of Plutonium in the source, it is not practical for the University to attempt to classify this as an "open" source and allow it to be utilized. In an attempt to provide the Commission with more information to allow for the classification as a sealed source, please see the attached documents. The attachment consists of four pages and includes: The Nuclear Material Transfer Report from June of 1970; the Monsanto Shipping Data Form from April of 1970; the Monsanto Leak Test Certificate from April of 1970; and the Plutonium Order Form from February of 1970.

Please note that the Leak Test Certificate indicates a "Source Number" of PuB-2 and a "Customer Model Number" of MRC-G-SS-W-PuB-2.

License Line Item 9. Authorized use:

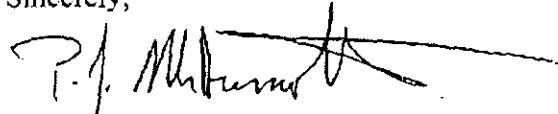
- For clarity, please change A. through D. "As waste from the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School prior to disposal." to A. through D. "As waste from Rutgers University and the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School prior to disposal."
- Assuming the Commission acts favorably regarding the Plutonium sealed source mentioned above, please change "G., K through N., Y., and AA. Possession only." To "G., K. through M., Y., and AA. Possession only."
- Additionally in line item 9, I. and Z. should read as "For possession and use in Troxler Electronics Laboratories, Inc. portable gauging devices for measuring the physical properties of materials." Rutgers no longer possesses any devices from the other manufacturers.

License Line Item Condition 12:

Condition 12, paragraph B formerly contained sections (i) and (ii). Section (ii) has been omitted. Please restore section (ii) which states, "The following nuclides are added: Any byproduct material with atomic number 84 through 98... 1 millicurie."

Thank you again for your attention to these matters. Please do not hesitate to contact me should you have questions or concerns.

Sincerely,



Patrick McDermott, CHP
Radiation Safety Officer

Cc: M. Quinlan, Assoc. VP of Business Services
M. McLane, Director-REHS

File: RU License File

U.S. ATOMIC ENERGY COMMISSION
NUCLEAR MATERIAL TRANSFER REPORT

DOCUMENTATION (Only if document is classified Secret)

Page 1 of 1 Pages Copy of Copies, Series

1. Transfer Code		3. Transfer Series		4. No. of Lines (20-21)		5. Nature of Transaction Complete if Applicable (22)		NO. Distribution of Copies	
1	(2)	(3)	(4)	RIS From (5-7) ZNN	RIS To (9-11)	No. (15-16)	(19)	Transaction Type <input checked="" type="checkbox"/> H	1 Rutgers-AEC
6. Name and Address of Shipper Monsanto Research Corporation Nuclear Products, 1515 Nicholas Road Attention: Dayton, Ohio 45407 Harold A. Malson				7. Name and Address of Receiver Rutgers, The State University Taylor & Bevier Roads University Heights Campus Attention: New Brunswick, N.J. 08903 Dr. N. Kollar				Transaction Type <input type="checkbox"/>	2 Rutgers-ZNN
8. Shipped for Account of RIS (23-25) Same as No. 6				9. Shipped to Account of RIS (26-28) Same as No. 7				Transaction Type <input type="checkbox"/>	3 Rutgers
10. Date of Transfer of Financial Responsibility Mo. (29-30) 5 Day (31-32) 1 Yr. (33) 70								4 ZNN-AEC	
								5 ZNN	
11. Material Type and Description Plutonium mixed with Boron-10 in a sealed source								6	
12. Transfer Authority—SNM Draft Number, Reference, or Order Number (34-50)								7	
								8	
								9	
								10	

A. Date Shipped Mo. (70-71) 4 Day (72-73) 29 Yr. (74) 70				B. Form No. (75) 4		C. Signature of Authorized Official and Date Signed Harold A. Malson <i>Harold A. Malson</i> 6-16-70						
Line No. (20-21) D	AEC Project Number and Identification (22-31) E	Material Type (32-33) F	Material Description Code (34-35) G	Compositional Code (36-37) H	Owner Code (37) I	Gross Weight J	Net Weight K	Element Weight (40-50) L	Weight % Isotope (51-54) M	Isotope Weight (55-65) N	Limits of Error Element (66-70) O Isotope (71-75) P	
	MRC-G-SS-W- PUB-2	50	G		J			3	7.89	3		

A. Date Received Mo. (70-71) Day (72-73) Yr. (74)				B. Form No. (75) 4		C. Signature of Authorized Official and Date Signed						
Line No. (20-21) D	AEC Project Number and Identification (22-31) E	Material Type (32-33) F	Material Description Code (34-35) G	Compositional Code (36-37) H	Owner Code (37) I	Gross Weight J	Net Weight X	Element Weight (40-50) L	Weight % Isotope (51-54) M	Isotope Weight (55-65) N	Limits of Error Element (66-70) O Isotope (71-75) P	

18 U.S.C., SECTION 1001; ACT OF JUNE 25, 1948; 62 STAT. 749; 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.

GPO 847-815

PAGE 05/08

RUTGERS PEHS

7324453109

03/02/2007 14:20

MONSANTO RESEARCH CORPORATION

▲ SUBSIDIARY OF MONSANTO COMPANY

NUCLEAR SOURCES DEPARTMENT

1515 NICHOLAS ROAD

DAYTON, OHIO 45407

Mail Address: Station B, Box 8, Dayton, Ohio 45407

Telephone: 268-5481

Area Code 513

USAEC License No. SNM-567

SHIPPING DATA FORM

DATE OF SHIPMENT

4-29-70

P.O.B. POINT

Dayton, Ohio

VIA

B/L NUMBER

Prepaid & Charge Emery

Air Freight

DAY-26581

SHIPPING ADDRESS:

Rutgers, The State University
Radiation Science Center
Taylor & Bevier Roads
University Hts. Campus Bldg. 3541
New Brunswick, New Jersey 08903

Attn: Dr. N. Kollar
P.O.No. 333583

SHIPPING CONTAINER DESCRIPTION:

8" Steel Container with
pipe nipple

S OF E PERMIT NO.: UDA DOT 7A, Type A

TO

Rutgers - The State University
Taylor & Bevier Roads
University Heights Campus Bldg. 3541
New Brunswick, New Jersey 08903

Attn: John C. Frisch, Jr.
P.O.No. 333583

Accountability data

Customer Purchase Order No. 333583

Customer License No. AEC 29-5218-28

Accountability Station:

Technical Information

Type of Source: Gamma

Isotope: Pu-239

Chemical Form: PuO₂

Target (if any): Boron-10

Source No.Am't of IsotopeWt. of TargetParticle EnergyEmission Rate/Date

MRC-G-SS-W-PuB-2

3.0 gms

10.0 gms

N.M.

N.M.

or
approx. 0.2 Ci

Source(s) Container Description:

Stainless Steel, 1.00"OD X 1.50"CL.

(material, dimensions, window thickness, if any)

Remarks:

Price of Source(s)

\$

Container deposit price

\$

Total-----\$

MONSANTO RESEARCH CORPORATION

By

Harold A. Malson

Title

Manager, Manufacturing

Date

4-29-70



2

LEAK TEST CERTIFICATE
MONSANTO RESEARCH CORPORATION
NUCLEAR PRODUCTS

CUSTOMER NAME: Rutgers - The State University, Radiation Science Center
ADDRESS: Taylor & Bevier Road, University Heights Campus Bldg. 354
CITY & STATE: New Brunswick, New Jersey 08903

Certificate & Test Date: 4-29-70
Source Number PuB-2
Isotope: Pu-239
Amount of Activity: 3.0 gms or 0.2 Ci
Customer Model Number: MRC-G-SS-W-PuB-2

RESULTS: The AEC and presently existing State regulations define a source as leaking if removable activity in excess of 0.005 microcuries is found in a leak test.

Actual Reading: 7.2 X 10⁻⁶ uCi.
There is no indication of a leak in the source.

Approved By:

John C. Dikman
Harold A. Malson
Manager, Manufacturing

RL-458(1-69) U. S. ATOMIC ENERGY COMMISSION RICHLAND OPERATIONS OFFICE <h2 style="text-align: center;">PLUTONIUM ORDER FORM</h2>		U. S. ATOMIC ENERGY COMMISSION RICHLAND OPERATIONS OFFICE POST OFFICE BOX 550 RICHLAND, WASHINGTON 99352 ATTN: DIRECTOR, CHEMICAL PROCESSING DIV.	
PART I (TO BE COMPLETED BY ORDERING FACILITY)			
1. NAME & ADDRESS OF ORDERING FACILITY Rutgers - The State University Physics Dept. New Brunswick, New Jersey		4. FACILITY ORDER NO. P.O.# 333583	
2. LICENSE NO. OF ORDERING FACILITY - RIS NO. SNM-314		5. DATE OF ORDER 2/4/70	
3. FACILITY ADDRESS FOR INVOICES (IF DIFFERENT FROM ITEM 1) Send to Above address Attn:		6. FACILITY'S ORDERING AUTHORITY (INDICATE ONLY THAT WHICH APPLIES TO THIS ORDER) A. LEASE NO. B. SUPPLY AGREEMENT NO. C. EDUCATIONAL ASSISTANCE PROGRAM LOAN NO. D. OTHER <u>Research</u>	
7. AEC PROJECT NO.		8. (1) FOR MATERIAL REQUESTED FROM AN AEC FACILITY, COMPLETE ITEMS 8, 9, AND 10 BELOW. (2) FOR MATERIAL TO BE OBTAINED FROM OTHER THAN AN AEC FACILITY, COMPLETE ITEM 8 BELOW FOR AEC INFORMATION. IF NO PHYSICAL TRANSFER OF THE MATERIAL LISTED IN ITEM 11 OCCURS, SO INDICATE IN ITEM 8 BELOW AND SHOW PRESENT PHYSICAL LOCATION.	
9. SHIP TO Radiation Safety Office UH. Campus Bldg 3541 Taylor and Bowler Road New Brunswick, New Jersey 08103 Attn: Ari N. Keller		10. VIA (METHOD OF SHIPMENT)	
11. MATERIAL: FACILITY HEREBY ORDERS FROM THE AEC, PURSUANT TO THE AGREEMENT REFERRED TO IN ITEM 6 ABOVE, THE FOLLOWING PLUTONIUM:			
DESCRIPTION CHEMICAL FORM	ELEMENT WT (KILOGRAMS)	WEIGHT % PU 239 ISOTOPE	ISOTOPE WEIGHT PU 239 + PU 241 (KILOGRAMS)
SPECIFICATIONS (IF APPLICABLE)			
3 gm ²³⁹ Pu O ₂ + 10 gm ¹⁰ B doubly encapsulated in welded stainless steel with dimensions 1.00" O.D. X 1.50" O.L.			
(ATTACH ADDITIONAL PAGES AS NECESSARY)			
IF MATERIAL DESCRIBED IN ITEM 11 ABOVE IS TO BE OBTAINED FROM A NON-AEC FACILITY, COMPLETE ITEMS 12 AND 13 BELOW AND HAVE SUPPLYING FACILITY EXECUTE CONSENT AND AGREEMENT STATEMENT, PART II, OF THIS FORM. LEAVE BLANK IF MATERIAL IS TO BE OBTAINED FROM AN AEC FACILITY.			
12. NAME & ADDRESS OF SUPPLYING FACILITY Monsanto Research Corp Dayton Laboratory 1515 Nicholas Rd. Dayton, Ohio 45418		13. EFFECTIVE DATE FOR CHARGING ORDERING FACILITY'S ACCOUNT Date of shipment	
IMPORTANT NOTICE: WHERE THE MATERIAL REFERRED TO ABOVE IS BEING OR HAS BEEN OBTAINED FROM OTHER THAN AN AEC FACILITY, AND A PHYSICAL MOVEMENT OF THE MATERIAL IS OR WAS INVOLVED, THIS ORDER WILL BE OF NO FORCE OR EFFECT UNLESS AND UNTIL A MATERIAL TRANSFER DOCUMENT IS EXECUTED BY BOTH FACILITIES WITH RESPECT TO SUCH MATERIAL, AND THE QUANTITY AND PROPERTIES OF MATERIAL COVERED BY THIS ORDER SHALL BE DETERMINED BY THAT SPECIFIED IN THE MATERIAL TRANSFER DOCUMENT.			

This is to acknowledge the receipt of your letter/application dated

8/2/2007, and to inform you that the initial processing which includes an administrative review has been performed.

☒ AMEND. 29-05212-28
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 140904.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.