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U.S. ATOMIC ENERGY COMMISSION

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DATE 3/13/72

LIST OF AEC RADIOISOTOPE CUSTOMERS WITH SUMMARY OF RADIOISOTOPE SHIPMENTS FY 1971

ISOTOPES INFORMATION CENTER

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ORNL-IIC-38

Contract NO. W-7405-eng-26

LIST OF AEC RADIOISOTOPE CUSTOMERS
WITH SUMMARY OF RADIOISOTOPE SHIPMENTS
FY 1971

Compiled by Ruth Curl

Published by
Isotopes Information Center
for the
Division of Applied Technology
U. S. Atomic Energy Commission

FEBRUARY 1972

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
operated by
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for the
U. S. ATOMIC ENERGY COMMISSION

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LIST OF AEC RADIOISOTOPE CUSTOMERS
WITH SUMMARY OF RADIOISOTOPE SHIPMENTS
FY 1971

Introduction

This eighth edition of the AEC radioisotope customer list has been prepared, as previously, at the request of the Commission's Division of Applied Technology as a compilation of radioisotope sales during FY 1971 by Commission facilities at Argonne National Laboratory, Brookhaven National Laboratory, Douglas-United Nuclear, Inc., Idaho Nuclear Corporation, Mound Laboratory, Oak Ridge National Laboratory, Richland Operations Office, and Savannah River Plant.

The information is divided into four sections. The first is an alphabetical list of customers, with isotopes purchased during the fiscal year. It is subdivided into domestic and foreign customers. In order to differentiate among the suppliers, the isotopes furnished by Oak Ridge National Laboratory have no other designation. Those furnished by Argonne National Laboratory are followed by (A); those by Brookhaven National Laboratory, by (B); those by Douglas-United Nuclear, Inc., by (D); those by Idaho Nuclear Corporation, by (I); those by Mound, by (M); those by Richland Operations Office, by (R); and those by Savannah River Plant, by (S). All entries for Argonne, Douglas, and Idaho are either reactor service irradiations or cyclotron service irradiations, or both, with no processed isotopes being sold. The entries for Savannah River represent material for resale and loans. The designations CSI, RSI, MCP, and SS denote, respectively, cyclotron service irradiations, reactor service irradiations, miscellaneous compound preparations, and special services. Targets are designated as Tgs, and fission products as FP.

The second section is an alphabetical list of isotopes, cross-referenced to customer numbers and again divided into the domestic and foreign categories. The third section is an alphabetical list of states and countries, also cross-referenced to customer numbers, the purpose of which is to indicate geographical concentrations of isotope users. The final section is a comprehensive table which includes an alphabetical listing of the isotopes and a breakdown into shipments, quantities, and dollars for each isotope under the domestic, foreign, and project (AEC facilities) categories. Also included are total figures for each isotope.

Previous reports in this series are TID-21620 (FY 1964), ORNL-IIC-6 (FY 1965), ORNL-IIC-9 (FY 1966), ORNL-IIC-13 (FY 1967), ORNL-IIC-17 (FY 1968), ORNL-IIC-27 (FY 1969), and ORNL-IIC-32 (FY 1970).

A similar report covering stable isotope distribution has also been prepared (ORNL-TM-3543), Stable Isotope Customer List and Summary of Shipments, FY 1971.

I. ALPHABETICAL LIST OF CUSTOMERS, WITH
CONTACTS AND ISOTOPES PURCHASED

A. Domestic

- 1 Abbott Laboratories
1400 Sheridan Road
North Chicago, Illinois 60064

 ^{133}Ba , ^{14}C , ^{137}Cs
- 2 Aerojet General Corp.
Plant Control Dept.
3300 Crow Canyon Road
San Ramon, California 94583

 Pu(R)
- 3 Air Reduction Company
Murray Hill, New Jersey 07971

 SS , ^{133}Xe
- 4 Air Reduction Company
Airco Industrial Gases Division
Union Landing and River Roads
Riverton, New Jersey 08077

 ^{85}Kr
- 5 Albright College
Reading, Pennsylvania 19604

 $^{239}\text{Pu(M)}$
- 6 Allen-Bradley Company
136 W. Greenfield Avenue
Milwaukee, Wisconsin 53204

 ^{85}Kr
- 7 American Atomics Corporation
425 South Plumer
Tucson, Arizona 85719

 ^{85}Kr
- 8 American Nuclear Corporation
Post Office Box 426
Oak Ridge, Tennessee 37830

 ^{137}Cs , FPSS
- 9 American Science and Engineering, Inc.
Cambridge, Massachusetts

 $^{252}\text{Cf(S)}$
- 10 Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

 ^{241}Am , ^{140}Ba , ^{249}Bk , ^{252}Cf , ^{244}Cm ,
 ^{246}Cm , ^{248}Cm , ^{253}Es , EU(R) , ^3H ,
 ^{237}Np , NU(P) , $^{208+209}\text{Po(M)}$, $^{210}\text{Po(M)}$,
 ^{239}Pu , ^{240}Pu , ^{241}Pu , ^{242}Pu , ^{244}Pu ,
 $^{238}\text{Pu(M)}$, $^{239}\text{Pu(M)}$, Pu(R) , ^{86}Rb ,
 RSI , RSI(B) , ^{103}Ru , ^{106}Ru , CSI(A) ,
 ^{99}Tc , Th+Y(R) , RSI(I) , ^{234}U , ^{235}U ,
 ^{236}U , ^{238}U , ^{185}W , ^{133}Xe , ^{95}Zr , RSI(A)
- 11 Argonne National Laboratory
P. O. Box 2528
Idaho Falls, Idaho 83401

 EU(R) , Pu(R) , RSI(D)
- 12 Arizona, University of
Post Office Drawer 4100
Tucson, Arizona 85721

 ^{89}Sr
- 13 Arkansas Medical Center, University of
4301 Vest Markham
Little Rock, Arkansas 72201

MCP
- 14 Arkansas, University of
Fayetteville, Arkansas 72701

 ^{86}Rb
- 15 Atlantic Richfield Company
155 North Yacker Drive
Chicago, Illinois 60606

 ^{85}Kr
- 16 Atlantic Richfield Hanford Company
P. O. Box 769
Richland, Washington 99352

 $^{144}\text{Ce(R)}$, $^{137}\text{Cs(R)}$, DU(R) , EU(R) ,
 $^{237}\text{Np(R)}$, NU(R) , $^{239}\text{Pu(M)}$, Pu(R) ,
 $^{238}\text{Pu(R)}$, $^{90}\text{Sr(R)}$, Th(R) , $^{233}\text{U(R)}$
- 17 Atlas Chemical Industries, Inc.
Valley Forge Industrial Park
Valley Forge, Pennsylvania 19481

 ^{85}Kr
- 18 Atomchem Corporation
1 East Main Street
Bay Shore, New York 11706

 ^{137}Cs , MCP
- 19 Atomics International Division
North American Rockwell Corporation
Post Office Box 309
Canoga Park, California 91304

 $^{59}\text{Fe(R)}$, Pu(R) , ^{236}U , ^{238}U
- 20 Automation Industries, Inc.
P. O. Box 245
Phoenixville, Pennsylvania 19460

 $^{192}\text{Ir(M)}$, $^{192}\text{Ir(R)}$
- 21 Babcock Electronics Corporation
P. O. Box 1499
Costa Mesa, California 92626

 ^{85}Kr
- 22 Babcock and Wilcox Company
Atomic Energy Division
1201 Kemper Street
Lynchburg, Virginia 24505

 Pu(R)
- 23 Babcock and Wilcox Company
Research and Development Division
1562 Beeson Street
Alliance, Ohio 44601

 ^{237}Np , ^{133}Xe , ^{95}Zr

- 24 Barnes Engineering Company
Stanford, Connecticut
U(S)
- 25 Bartol Research Corporation
Swarthmore, Pennsylvania 19081
 ^{246}Cm
- 26 Battelle Memorial Institute
505 King Highway
Columbus, Ohio 43201
 $^{252}\text{Cf}(\text{S})$, ^{85}Kr , $^{238}\text{Pu}(\text{M})$, $\text{Pu}(\text{R})$
- 27 Bell Telephone Laboratories
Murray Hill, New Jersey 07971
 ^{181}Hf , ^{151}Sm , SS
- 28 Bendix Corporation, The
2000 East Bannister Road
Kansas City, Missouri 64131
 ^{63}Ni
- 29 Biochemical and Nuclear Corporation
(Norchem Division)
P. O. Box 749
Burbank, California 91503
 ^3H
- 30 Bio-Nuclear
Division of BioAssay Laboratories
6324 Midvale
Houston, Texas 77017
 ^3H , ^{147}Pm , ^{122}Sb , ^{133}Xe , ^{91}Y , ^{95}Zr
- 31 Boeing Corporation, The
Aero-Space Division
Post Office Box 3707
Seattle, Washington 98124
 ^{235}U
- 32 Boston College
Chestnut Hill, Massachusetts 02167
 ^{95}Zr
- 33 Boston University
100 Cunnington Street
Boston, Massachusetts 02215
CSI
- 34 Brookhaven National Laboratory
Upton, Long Island, New York 11973
 ^{47}Ca , ^{252}Cf , $^{252}\text{Cf}(\text{S})$, ^3H , ^{181}Hf ,
MCP, ^{237}Np , ^{242}Pu , $^{239}\text{Pu}(\text{M})$, $\text{RSI}(\text{B})$,
 ^{106}Ru , ^{99}Tc , ^{229}Th , $^{229}\text{Th}(\text{M})$,
 $\text{Th}+\text{Y}(\text{R})$, ^{232}U
- 35 Broward General Hospital
1600 S. Andrews Avenue
Ft. Lauderdale, Florida 33316
 ^{133}Xe
- 36 Brown University
Providence, Rhode Island 02912
 ^{36}Cl
- 37 California Institute of Technology
1201 E. California Boulevard
Pasadena, California 91109
 $\text{RSI}(\text{I})$
- 38 California at San Diego, University of
3175 Miramar Road
La Jolla, California 92037
 $\text{RSI}(\text{B})$
- 39 California, University of
Virus Laboratory
Berkeley, California
 $^{28}\text{Mg}(\text{B})$
- 40 California, University of
650 Circle Drive South
Los Angeles, California
 $^{28}\text{Mg}(\text{B})$
- 41 California, University of
400 Sproul Hall
Berkeley, California 94720
 ^{131}I
- 42 California, University of
P. O. Box CA
Irvine, California 92664
 ^{252}Cf , $^{252}\text{Cf}(\text{S})$
- 43 California, University of
Post Office Box 109
La Jolla, California 92077
 ^{109}Pd , $\text{RSI}(\text{A})$, ^{133}Xe
- 44 California, University of
405 Hilgard Avenue
Los Angeles, California 90024
 ^{72}Ga , ^{114}In , MCP, ^{95}Nb , ^{86}Rb , ^{133}Xe
- 45 California, University of
San Francisco Medical Center
San Francisco, California 94122
 ^{14}C , ^3H , ^{86}Rb , ^{133}Xe
- 46 California, University of
Santa Barbara, California 93106
 $^{252}\text{Cf}(\text{S})$, ^{235}U
- 47 California, University of
Lawrence Radiation Laboratory
Berkeley, California 94701
 ^{243}Am , ^{249}Bk , ^{249}Cf , ^{252}Cf , ^{244}Cm ,
 ^{248}Cm , MCP, ^{241}Pu , ^{242}Pu , ^{106}Ru ,
 ^{235}U , ^{236}U , $\text{U}(\text{S})$, ^{133}Xe

- 48 California, University of
Laurence Radiation Laboratory
Box 808
Livermore, California 94550

241Am, 249Bk, 252Cf, 244Cm, 248Cm,
CSI, 253Es, 181Hf, 129I, 237Np,
147Pm, 147Pm(R), 239Pu, 240Pu, 242Pu,
SS, Tgs, 229Th, 232U, 235U, 238U
- 49 California, University of
Los Alamos Scientific Laboratory
Post Office Box 1653
Los Alamos, New Mexico 07544

241Am, 249Bk, 249Cf, 252Cf, 244Cm,
246Cm, 248Cm, DU(R), 253Es, 3H, MCP,
237Np, NU(R), 147Pm, 240Pu, 241Pu,
238Pu(M), Pu(R), 238Pu(R), 238Pu(S),
SS, 230Th, 232Th(M), 234U, 238U,
95Zr
- 50 Cambridge Nuclear Corporation
P. O. Box 528
Princeton, New Jersey 08540

133Xe
- 51 Canrad Precision Industries
630 Fifth Avenue
New York, New York 10020

3H
- 52 Carnegie Institution of Washington
Washington, D. C. 20008

230Th, 235U
- 53 Carnegie-Mellon University
5000 Forbes
Pittsburgh, Pennsylvania 15213

111Ag, 181Hf, MCP, 106Ru, 151Sm
- 54 Case Western Reserve University
7720 Circle Drive
Cleveland, Ohio 44106

1CP
- 55 Catholic University of America
104 McCort-Ward Hall
Washington, D. C. 20017

232U
- 56 Chevron Research Company
555 Market Street
San Francisco, California 94120

3H
- 57 Chicago, University of
5827 South Drexel Avenue
Chicago, Illinois

28Mg(B), RSI(B)
- 58 Chicago, University of
5801 Ellis Avenue
Chicago, Illinois

CSI(A), RSI(A)
- 59 Chicago, University of
1160 East 55th Street
Chicago, Illinois 60615

47Ca, 252Cf, 60Co, MCP, RSI
- 60 Chicago-Wesley Memorial Hospital
250 East Superior Street
Chicago, Illinois 60611

47Ca, MCP, CSI(A)
- 61 Cincinnati General Hospital
3231 Burnet Avenue
Cincinnati, Ohio 45229

CSI(A), 133Xe
- 62 Cincinnati, University of
Cincinnati, Ohio 45221

252Cf(S), 133Xe
- 63 Cleveland Metropolitan General Hospital
3395 Scranton Road
Cleveland, Ohio 44109

131I
- 64 College of Medicine and Dentistry of New Jersey
100 Bergen Street
Newark, New Jersey 07103

85Kr
- 65 Colorado State University
Fort Collins, Colorado 80521

85Kr
- 56 Colorado, University of
4200 E. Ninth Avenue
Denver, Colorado 80220

133Xe
- 67 Columbia University
Box 6, Lou Library
New York, New York 10027

88Sr
- 68 Commonwealth Edison Co.
72 West Adams Street
Chicago, Illinois 60690

Pu(R)
- 69 Connecticut, University of
Physical Sciences Bldg.
Storrs, Connecticut 06268

RSI(B)
- 70 Consumers Power Company
212 Michigan Avenue
Jackson, Mississippi 49201

Pu(R)

71 Continental Oil Company
Ponca City, Oklahoma 74602

85Kr

72 Cornell University
Ithaca, New York 14850

252Cf, 28Mg(B), RSI(B), 89Sr, SS

73 De Paul University
25 East Jackson Boulevard
Chicago, Illinois 60604

3H, Tgs

74 Desert Research Institute
University of Nevada System
Reno, Nevada 89507

RSI(B)

75 Dhom Products Ltd.
11120 Cumpston Street
North Hollywood, California 91601

3H

76 Diagnostic Isotopes
123 Pleasant Avenue
Upper Saddle River, New Jersey 07458

MCP

77 Donald W. Douglas Laboratories
2955 George Washington Way
Richland, Washington 99352

147Pm(R), Pu(R), 238Pu(R), Th(R)

78 Douglas United Nuclear, Inc.
P. O. Box 490
Richland, Washington 99352

EU(R), Pu(A), PSI(D), Th(R)

79 Dow Chemical Company
Rocky Flats Division
Post Office Box 888
Golden, Colorado 80401

**241Am, 243Am, Am(S), 252Cf, Cm(S),
236Pu, 238Pu, 239Pu, 241Pu, 242Pu,
242Pu(S); 232U, 233U, 235U, 236U**

80 Dresser Atlas
Division of Dresser Industries, Inc.
P. O. Box 1407
Houston, Texas 77001

Pu(R)

81 Du Pont de Nemours and Company, E. I.
Savannah River Plant
Aiken, South Carolina 29801

**241Am, 140Ba, 249Bk, 252Cf, 252Cf(S),
253Es, MCP, 237Np(R), 109Pd,
238Pu(M), Pu(R), SS, 238U, 95Zr**

82 Duke University
Durham, North Carolina 27708

MCP, 133Xe

83 Duquesne University
Pittsburgh, Pennsylvania 15200

140Ba

84 Eastern New Mexico University
Portales, New Mexico 88130

252Cf(S)

85 Eastern Washington State College
Cheney, Washington 99004

239Pu(M)

86 Eastman Kodak Company
Kodak Park Works
Rochester, New York 14650

252Cf(S)

87 Edgerton, Germeshausen and Grier
95 Brookline Avenue
Boston, Massachusetts 02215

252Cf(S)

88 Edgerton, Germeshausen and Grier
P. O. Box 98
Goleta, California 93017

252Cf(S), 129I

89 Enrico Fermi Institute
Chicago, University of
5630 S. Ellis Avenue
Chicago, Illinois 60637

RSI(A)

90 Fairchild Semiconductors
333 Western Avenue
So. Portland, Maine 04106

85Kr

91 Fairchild Semiconductors
P. O. Box 708
Shiprock, New Mexico 87420

85Kr

92 Florida, University of
Gainesville, Florida 32601

**133Ba, 14C, 252Cf, MCP, 28Mg(B),
86Rb, 235U**

93 Furman University
Greenville, South Carolina 29613

239Pu(M)

94 Gamma Industries, Inc.
Post Office Box 2543
Baton Rouge, Louisiana 70821

252Cf(S), 137Cs, FPSS

95 Gammie Nuclear Services
Franklin Park, Illinois 60131

RSI(A)

- 96 General Dynamics Corporation
P. O. Box 748
Fort Worth, Texas 76101
 $^{252}\text{Cf}(\text{S})$, SS
- 97 General Electric Co.
Pyrotechnics Installation Bldg.
John F. Kennedy Space Center
Florida 32815
 $^{238}\text{Pu}(\text{M})$
- 98 General Electric Co.
Pinellas Peninsula Plant
Post Office Box 11508
St. Petersburg, Florida 33733
 ^{85}Kr
- 99 General Electric Company
Vallecitos Nuclear Center
P.O. Box 846, Vallecitos Road
Pleasanton, California 94566
 $^{238}\text{Pu}(\text{M})$
- 100 General Electric Company
Nuclear Materials and Propulsion Operation
Post Office Box 15132
Cincinnati, Ohio 45215
 $^{14}\text{C}(\text{R})$, ^{85}Kr
- 101 General Electric Company
21800 Tungsten Road
Cleveland, Ohio 44117
 ^3H , ^{85}Kr
- 102 General Electric Company
P. O. Box 8694
Philadelphia, Pennsylvania 19101
MCP, SS
- 103 General Electric Company
Post Office Box 254
San Jose, California 95103
 ^{241}Am , ^{252}Cf , $\text{EU}(\text{R})$, ^{181}Hf , ^{129}I ,
 ^{237}Np , ^{236}Pu , ^{244}Pu , $\text{Pu}(\text{R})$, ^{235}U ,
 ^{238}U , ^{133}Xe
- 104 General Electric Company
The Knolls, Post Office Box 1072
Schenectady, New York 12301
 $^{60}\text{Co}(\text{R})$, $^{59}\text{Fe}(\text{R})$, $^{95}\text{Zr}+^{95}\text{Nb}(\text{R})$
- 105 General Electric Company
General Electric Drive
Waynesboro, Virginia 22980
 ^{85}Kr
- 106 General Electric Corp.
Research and Development Center
P. O. Box 8
Schenectady, New York 12301
 $\text{RSI}(\text{B})$
- 107 General Motors Corporation
Frigidaire Division
Dayton, Ohio 45501
 ^{85}Kr
- 108 General Nuclear, Inc.
9320 Tavenor
P. O. Box 34526
Houston, Texas 77034
 ^{241}Am , ^{137}Cs , $^{152}+^{154}\text{Eu}$, FP , ^{181}Hf ,
 ^{129}I , MCP, ^{186}Re , ^{103}Ru , ^{106}Ru ,
 ^{185}W
- 109 General Nucleonics Division, Tyco Laboratories,
2811 Metropolitan Place
Pomona, California 91767
 ^{85}Kr
- 110 Georgetown University
3800 Reservoir Road, N.W.
Washington, D. C. 20007
MCP, ^{133}Xe
- 111 Georgia, University of
Athens, Georgia 30601
 ^{89}Sr
- 112 Goodyear Atomic Corporation
Post Office Box 628
Piketon, Ohio 45661
 $\text{EU}(\text{R})$, ^{238}U
- 113 Gulf Energy and Environmental Systems
P. O. Box 608
San Diego, California 92112
 $^{252}\text{Cf}(\text{S})$, FPSS, ^{85}Kr , ^{242}Pu , $\text{Pu}(\text{R})$,
 $\text{RSI}(\text{R})$, ^{89}Sr , ^{90}Sr , ^{133}Xe
- 114 Gulf General Atomics
P. O. Box 608
San Diego, California 92112
 $^{238}\text{Pu}(\text{M})$, $^{239}\text{Pu}(\text{M})$
- 115 Hahnemann Medical College
230 North Broad Street
Philadelphia, Pennsylvania 19102
MCP
- 116 Hanford Engineering Development Lab.
P. O. Box 1970
Richland, Washington 99352
 $\text{DU}(\text{R})$, $\text{EU}(\text{R})$, $^{237}\text{Np}(\text{R})$, $\text{NU}(\text{R})$,
 $\text{Pu}(\text{R})$, $^{238}\text{Pu}(\text{R})$, $\text{Th}(\text{R})$, $^{233}\text{U}(\text{R})$
- 117 Harshaw Chemical Company
Division of Kewanee Oil Company
6801 Cochran Road
Solon, Ohio 44139
 $^{241}\text{Am}(\text{R})$, ^{14}C

- 118 Harvard Medical School
28 Shattuck Street
Boston, Massachusetts 02115
 $^{28}\text{Mg}(\text{B})$
- 119 Harvard University
Cambridge, Massachusetts 02138
 ^{122}Sb
- 120 Hastings Radiochemical Works, Inc.
P. O. Box 479
Friendswood, Texas 77546
CSI
- 121 Heidelberg College
Tiffin, Ohio 44883
 $^{239}\text{Pu}(\text{M})$
- 122 Henderson State College
Arkadelphia, Arkansas 71923
 $^{239}\text{Pu}(\text{M})$
- 123 Henry Ford Hospital
2799 West Grand Boulevard
Detroit, Michigan 48202
MCP
- 124 Hillcrest Hospital
6780 Mayfield Road
Cleveland, Ohio 44124
 ^{133}Xe
- 125 Honeywell, Inc.
2701 Fourth Avenue, So.
Minneapolis, Minnesota 55408
 ^{63}Ni
- 126 Hughes Aircraft Company
P. O. Box 92907
Los Angeles, California 90009
 ^{85}Kr
- 127 Hunter College
695 Park Avenue
New York, New York 10021
 $^{28}\text{Mg}(\text{B})$
- 128 Yuntington Memorial Hospital
100 Congress Street
Pasadena, California 91105
CSI
- 129 ICN Tracerlab
1601 Trapelo Road
Waltham, Massachusetts 02154
 ^{85}Kr
- 130 ITT Semiconductors
4 Division of Int'l Telephone and Telegraph
3301 Electronics Way
W. Palm Beach, Florida 33407
 ^{85}Kr
- 131 Idaho Nuclear Corporation
550 Second Street
P. O. Box 1845
Idaho Falls, Idaho 83401
 ^{133}Ba , ^{144}Ce , ^{252}Cf ,
RSI(I), EU(R),
 ^{85}Kr , ^{237}Np ,
 ^{236}Pu , ^{239}Pu , ^{240}Pu , ^{241}Pu , ^{242}Pu ,
Pu(R), $^{238}\text{Pu}(\text{R})$, RSI(R), ^{106}Ru ,
 ^{233}U ,
 ^{235}U , ^{95}Zr ,
- 132 Idaho, University of
Moscow, Idaho 83843
 ^{99}Tc
- 133 Illinois Institute of Technology
3300 S. Federal Street
Chicago, Illinois 60616
RSI(A)
- 134 Illinois, University of
203 Administration Building E
Urbana, Illinois 61803
 ^{47}Ca , ^{36}Cl , ^{129}I , ^{86}Rb
- 135 Illinois, University of
P. O. Box 4348
Chicago, Illinois 60680
RSI(A)
- 136 Indiana State University
6th and Chestnut Streets
Terre Haute, Indiana 47809
CSI(A)
- 137 Industrial Nucleonics Corporation
650 Ackerman Road
Columbus, Ohio 43202
 ^{85}Kr
- 138 International Chemical and Nuclear Corporation
2727 Campus Drive
Irvine, California 92664
 ^{241}Am , ^{144}Ce , ^{60}Co , ^{137}Cs CSI,
FPSS, ^3H , ^{129}I , ^{85}Kr , ^{63}N , ^{147}Pm ,
 ^{106}Ru , ^{151}Sm , ^{90}Sr , ^{133}Xe
- 139 International Nutronics, Inc.
Los Altos, California
 $^{252}\text{Cf}(\text{S})$
- 140 Iowa State University
Ames, Iowa 50010
MCP, ^{230}Th , ^{235}U , ^{238}U
- 141 Iowa, University of
Iowa City, Iowa 52240
 $^{204}\text{Bi}(\text{B})$

142 Isotope Products Laboratories
404 South Luke Street
Hurbank, California 91502
 ^{252}Cf , ^{236}Pu , ^{238}Pu , ^{239}Pu , ^{235}U

143 Isovac Engineering Company
6220 San Fernando Road
Glendale, California 91204
 ^{85}Kr

144 J. C. Haynes Company
Rural Route 6, Box 136
Newark, Ohio 43055
 ^{241}Am

145 Jackson Community College
Jackson, Michigan 49201
 $^{239}\text{Pu}(\text{M})$

146 Jet Propulsion Laboratory
4800 Oak Hcu Drive
Pasadena, California 91103
 ^{244}Cm

147 Johns Hopkins University
Baltimore, Maryland 21218
 ^{36}Cl , ^{114}In , MCP, RSI

148 Kamsn Nuclear
1700 Garden of the Gods Road
Colorado Springs, Colorado 80907
 ^3H

149 Kansas State University
Manhattan, Kansas 66502
 $^{252}\text{Cf}(\text{S})$, ^{237}Np , ^{239}Pu , ^{230}Th

150 Kansas, University of
Medical Center
Yansas City, Kansas 65103
 ^{89}Sr

151 Kentucky, University of
Lexington, Kentucky 40506
 $^{252}\text{Cf}(\text{S})$, $\text{CSI}(\text{A})$, ^{133}Xe

152 Kerr-McGee Corp.
Nuclear Products Dept.
Cimarron Facility
Route 4, Box 81
Guthrie, Oklahoma 73044
 $\text{Pu}(\text{R})$

163 Kerr-McGee Corporation
Oklahoma City, Oklahoma
 $^{252}\text{Cf}(\text{S})$

154 Lewis College
Lockport, Illinois
 $\text{CSI}(\text{A})$

155 Lewis Research Center
Cleveland, Ohio 44135
 $^{239}\text{Pu}(\text{M})$

155 Lockheed Aircraft Corporation
Post Office Box 504
Missiles and Space
Sunnyvale, California 94088
 ^3H , SS

157 Lockheed Electronics Company
16811 El Carnino Real
Houston, Texas 77058
 ^{106}Ru , ^{89}Sr , ^{95}Zr

158 Lockheed-Georgia Company
Dawsonville, Georgia 30534
 ^{137}Cs , FPSS, ^{85}Kr , ^{237}Np

159 Loma Linda University Hospital
Loma Linda, California 92354
 ^{37}Ar , ^{133}Xe

160 Los Angeles, County of
Hall of Administration
Los Angeles, California 90012
 ^{133}Xe

161 Louisiana State University
Nuclear Science Center
Baton Rouge, Louisiana 70803
 $\text{CSI}(\text{A})$

162 Louisiana State University
New Orleans, Louisiana 70122
 CSI

163 Lovelace Clinic
4800 Gibson Boulevard, S. E.
Albuquerque, New Mexico 87108
 **^{241}Am , ^{243}Am , ^{133}Ba , ^{140}Ba , ^{144}Ce , ^{252}Cf ,
 ^{60}Co , MCP, ^{95}Nb , ^{239}Pu , ^{242}Pu ,
 ^{103}Ru , ^{106}Ru , ^{90}Sr , ^{182}Ta , ^{91}Y**

164 Loyola University Medical Center
P. O. Box 282
Maywood, Illinois 50153
 ^{47}Ca

165 Mallinckrodt Nuclear Company
P. O. Box 312
Caristadt, New Jersey 07072
 ^{133}Xe

166 Marquette University
1120 W. Michigan Street
Milwaukee, Wisconsin 53233
 ^{182}Ta

- 167 Yaryland, University of
College Park, Maryland 20742
HSI
- 168 Massachusetts Institute of Technology
90x 69
Cambridge, Massachusetts 02139
241Am, 239Pu, 106Ru
- 169 Massachusetts, University of
Amherst, Massachusetts 01002
28Mg(B)
- 170 Mayo Foundation
Rochester, Minnesota 55901
MCP, 89Sr
- 171 McDonnell Douglas Astronautics Company
Western Division
5301 Bolsa Avenue
Huntington Beach, California 92647
FPSS, 3H, 147Pm
- 172 McDonnell Douglas Corporation
Lambert Field, Box 516
St. Louis, Missouri 63166
252Cf
- 173 McDonnell-Douglas Astronautic Co.
Vandenberg Air Force Base
Lompoc, California 93437
182Ta(R)
- 174 McDonnell-Douglas Corp.
McDonnell-Douglas Astronautic Co.
2955 George Washington Way
Richland, Washington 99352
147Pm(R), Pu(R), 238Pu(R), Th(R)
- 175 Medical College of Georgia
Talmadge Memorial Hospital
Augusta, Georgia 30902
85Kr
- 176 Medical College of Virginia
12th and Marshall Streets
Richmond, Virginia 23219
33P
- 177 Menorah Medical Center
4949 Rockhill Road
Kansas City, Missouri 64110
86Rb
- 178 Merck and Company
Rahway, New Jersey 07065
60Co
- 179 Metropolitan Dade County
Court House on Flager Street
Miami, Florida 33131
CSI, MCP, 133Xe
- 180 Metropolitan Sanitary District of Greater Chicago
100 E. Erie
Chicago, Illinois 60611
86Sc
- 181 Miami School of Medicine, University of
1700 NW Tenth Avenue
Miami, Florida 33136
CSI
- 182 Miami University
Oxford, Ohio 45056
181Hf
- 183 Miami, University of
Post Office Box 8066
Coral Gables, Florida 33146
RSI, 89Sr
- 184 Michigan State University
East Lansing, Michigan 48823
MCP
- 185 Michigan, University of
Ann Arbor, Michigan 48104
252Cf, 235U
- 186 Minnesota Mining and Manufacturing Company
Post Office Box 3121
St. Paul, Minnesota 55101
137Cs, MCP, 95Nb, 147Pm, 210Po(M),
90Sr, 99Tc
- 187 Minnesota, University of
402 Morrill Hall
Minneapolis, Minnesota 55455
131Ba, 252Cf(S), 131I, 86Rb, 89Sr,
133Xe
- 188 Mississippi State University
Box 307
State College, Mississippi 39762
252Cf(S)
- 189 Mississippi, University of
Jackson, Mississippi 39205
85Kr, MCP, 86Rb
- 190 Missouri, University of
Columbia, Missouri 65201
91Y
- 191 Missouri, University of
General Service Building
Rolla, Missouri 55401
252Cf(S)

- 192 Monsanto Company
Post Office Box 1311
Texas City, Texas 77591

3H
- 193 Monsanto Research Corporation
Dayton Laboratory
1515 Nicholas Road
Dayton, Ohio 45407

 ^{241}Am , ^{14}C , ^{137}Cs , ^{237}Np , $^{210}\text{Po}(\text{M})$,
 ^{238}Pu , $^{238}\text{Pu}(\text{M})$, $\text{Pu}(\text{R})$, ^{204}Tl
- 134 Monsanto Research Corporation
Mound Laboratory
P. O. Box 32
Miamisburg, Ohio 45342

 ^{252}Cf , ^{244}Cm , $\text{DU}(\text{R})$, $\text{NU}(\text{R})$, ^{238}Pu ,
 $\text{Pu}(\text{R})$, $\text{RSI}(\text{D})$, ^{235}U
- 195 Nassau County Medical Center
Meadowbrook Hospital
2201 Hempstead Turnpike
East Meadow, New York 11254

 ^{47}Ca
- 196 National Bureau of Standards
Connecticut Avenue and Van Ness Street, N.W.
Washington, D. C. 20234

 ^{14}C , $^{252}\text{Cf}(\text{S})$, ^{114}In , ^{95}Nb , $\text{Pu}(\text{R})$,
 ^{230}Th
- 197 National Lead Company
Fernald, Ohio

 $^{227}\text{Ac}(\text{M})$, $\text{Th}(\text{S})$, $\text{U}(\text{S})$
- 198 National Lead Company of Ohio
Box 39158
Cincinnati, Ohio 45239

 $\text{DU}(\text{R})$, $\text{EU}(\text{R})$, $\text{NU}(\text{R})$, $\text{Th}(\text{R})$
- 199 Nevada, University of
Reno, Nevada 83507

 ^{114}In
- 200 New England Nuclear Corporation
575 Albany Street
Boston, Massachusetts 02118

 ^{241}Am , ^{137}Cs , CSI , ^3H , ^{129}I , ^{85}Kr ,
 MCP , ^{33}P , ^{147}Pm , ^{106}Ru , ^{151}Sm ,
 ^{90}Sr , ^{133}Xe , ^{95}Zr
- 201 New Hampshire, University of
Durham, New Hampshire 03824

 ^{244}Cm , $\text{RSI}(\text{B})$
- 202 New Mexico State University
Chemistry Department
Las Cruces, New Mexico 88001

 $\text{D}(\text{R})$
- 203 New York University Medical Center
550 First Avenue
New York, New York 10016

 ^{151}Sm
- 204 New York, State University of
Upstate Medical Center
766 Irving Avenue
Syracuse, New York 13210

 MCP
- 205 New York, State University of
Downstate Medical Center
450 Clarkson Avenue
Brooklyn, New York 11203

 ^{47}Ca
- 206 New York, State University of
Research Foundation
Stony Brook, New York 11790

 ^{237}Np
- 207 North American Rockwell Corp.
Los Angeles Division
Los Angeles International Airport
Los Angeles, California 90009

 $\text{Pu}(\text{R})$
- 208 North Carolina State University
P. O. Box 5935
Raleigh, North Carolina 27607

 ^{252}Cf , ^{237}Np , ^{86}Rb , ^{204}Tl
- 209 North Carolina, University of
Chapel Hill, North Carolina 27514

 RSI
- 210 North Dakota State University
College of Pharmacy
Fargo, North Dakota 58102

 $^{28}\text{Mg}(\text{B})$
- 211 Northern Illinois University
Box 185
DeKalb, Illinois 60115

 $\text{CSI}(\text{A})$
- 212 Notre Dame, University of
Notre Dame, Indiana 46556

 $\text{CSI}(\text{A})$
- 213 Nuclear Dynamics
2614 Seaman Avenue
El Monte, California 91733

3H
- 214 Nuclear Fuel Services, Inc.
P. O. Box 218
Erwin, Tennessee 37650

 $\text{Pu}(\text{R})$

- 215 Nuclear Fuel Services, Inc.
Box 124
West Valley, New York 14171
 ^{90}Sr , ^{233}U
- 216 Nuclear Materials and Equipment Corp.
Plutonium Laboratory
River Road at Kiskimere
Route 66
Leechburg, Pennsylvania 15656
 $\text{Pu}(\text{R})$
- 217 Nuclear Materials and Equipment Corp.
609 N. Warren Avenue
Apollo, Pennsylvania 15613
 ^{241}Am , $\text{EU}(\text{R})$, ^{238}Pu , $^{238}\text{Pu}(\text{M})$
- 218 Nuclear Measurements Corporation
2460 North Arlington Avenue
Indianapolis, Indiana 46718
CSI
- 219 Nuclear Medical Computer Corporation
1520 Midwest Plaza Building
Minneapolis, Minnesota 55402
 ^{133}Xe
- 220 Nuclear Radiation Development, Inc.
2937 Alt Blvd.
Grand Island, N. Y. 14072
 ^{241}Am , ^{14}C , $^{210}\text{Po}(\text{M})$, ^{204}Tl
- 221 Nuclear Research Corporation
Street Road and Second Street Pike
Southampton, Pennsylvania 18966
 $^{239}\text{Pu}(\text{S})$
- 222 Oak Ridge Associated Universities
Post Office Box 117
Oak Ridge, Tennessee 37330
 ^{252}Cf , ^{114}In , MCP, RSI, ^{46}Sc
- 223 Oberlin College
Oberlin, Ohio 44074
 ^{89}Sr
- 224 Ohio Agricultural Research and Development Center
Wooster, Ohio 44591
 ^{90}Sr
- 225 Ohio State University
190 North Oval Drive
Columbus, Ohio 43210
 $^{252}\text{Cf}(\text{S})$, PCP, ^{86}Rb
- 226 Ohio State University
Research Foundation
1214 Kinnear Road
Columbus, Ohio 43212
 ^{89}Sr
- 227 Ohio University
Athens, Ohio 45701
 ^{14}C , $^{252}\text{Cf}(\text{S})$, fgs
- 228 Oklahoma Medical Research Institute
825 N.E. 13th Street
Oklahoma City, Oklahoma 73104
MCP
- 229 Orange, County of
P. O. Box 564
Room 362, Engineering Building
Santa Ana, California
 ^{133}Xe
- 230 Oregon Medical School, University of
3181 S. W. Sam Jackson Park Road
Portland, Oregon 97201
 ^{133}Xe
- 231 Oregon State University
Corvallis, Oregon 97330
 ^{37}Ar , RSI(R)
- 232 Oregon, University of
Eugene, Oregon 97403
 ^{131}I
- 233 PGL, Instruments and Services for Medicine
1280 Columbus Avenue
San Francisco, California 94133
 ^{133}Xe
- 234 PPC Industries, Inc.
P. O. Box 4026
Corpus Christi, Texas 78408
 $^{106}\text{Pd}(\text{R})$, $^{103}\text{Rh}(\text{R})$, ^{99}Tc , $^{99}\text{Tc}(\text{R})$
- 235 Pacific Northwest Laboratory
Richland, Washington 99352
 ^{241}Am , ^{243}Am , ^{140}Ba , ^{249}Bk , $^{144}\text{Ce}(\text{R})$,
 $^{147}\text{Ce}+^{147}\text{Pr}(\text{H})$, ^{252}Cf , $^{252}\text{Cf}(\text{S})$, ^{244}Cm ,
 ^{246}Cm , $\text{DU}(\text{R})$, ^{253}Es , $\text{EU}(\text{R})$, $^{20}\text{Mg}(\text{B})$,
 ^{147}Nd , ^{237}Np , $^{237}\text{Np}(\text{R})$, $\text{NU}(\text{R})$,
 $^{147}\text{Pm}(\text{R})$, ^{238}Pu , $\text{Pu}(\text{R})$, $^{238}\text{Pu}(\text{R})$,
RSI(D), $^{90}\text{Sr}(\text{R})$, SS, $\text{Th}(\text{R})$, ^{236}U ,
 $^{233}\text{U}(\text{R})$, ^{95}Zr
- 236 Paimdale General Hospital
Palmdale, California 93550
 ^{133}Xe
- 237 Panametrics, Inc.
221 Crescent Street
Waltham, Massachusetts 02154
 ^{238}Pu
- 238 Parkwell Laboratories, Inc.
429 North High Street
Croton, Ohio 43013
 ^{241}Am , ^{144}Ce , ^{137}Cs

239 Pennsylvania Department of Highways
1118 State Street
Harrisburg, Pennsylvania 17105

^{46}Sc

240 Pennsylvania Hospital
8th and Spruce Street
Philadelphia, Pennsylvania 19107

^{86}Rb

241 Pennsylvania State University
University Park, Pennsylvania 16802

RSI(R), ^{89}Sr

242 Pennsylvania, University of
240 South 33rd Street
Philadelphia, Pennsylvania 19104

RSI(B)

243 Pennsylvania, University of
3025 Walnut Street
Philadelphia, Pennsylvania 19104

^{47}Ca , ^{252}Cf

244 Penrose Hospital
2215 North Cascade
Colorado Springs, Colorado 80907

^{133}Xe

245 Peter Bent Brigham Hospital
721 Huntington Avenue
Boston, Massachusetts 02115

MCP

246 Philadelphia Electric Company
1000 Chestnut Street
Philadelphia, Pennsylvania 19100

^{37}Ar , SS

247 Physics International Company
2700 Merced Street
San Leandro, California 94577

3H

248 Pittsburgh Testing Co.
826 Northwest 49th Street
Seattle, Washington 98107

RSI(P)

249 Pittsburgh, University of
Pittsburgh, Pennsylvania 15213

^{243}Am , ^{60}Co , ^{131}I , $^{210}\text{Po(M)}$, $^{239}\text{Pu(M)}$,
 ^{89}Sr

250 Potter and Brumfield
Princeton, Indiana 47570

^{85}Kr

251 Presbyterian St. Luke's Hospital
1753 West Congress Parkway
Chicago, Illinois 60612

CSI(A)

252 Princeton University
James Forrestal Campus
Princeton, New Jersey 08540

$^{20}\text{Mg(B)}$

253 Puerto Rico, University of
Puerto Rico Nuclear Center
Caparra Heights Station
San Juan, Puerto Rico 00935

^{60}Co

254 Purdue University
Pharmacy Annex
Lafayette, Indiana 47907

^{132}I , $^{20}\text{Mg(B)}$, ^{239}Pu , Pu(R) , CSI(A)

255 Radiation Machinery Corporation
25 Eastman Road
Parsippany, New Jersey 07054

^{137}Cs

256 Radiation Materials Corporation
124 Calvary Street
Waltham, Massachusetts 02154

^{140}Ba , ^{144}Ce , ^{137}Cs , ^{90}Sr

257 Radiation Resources, Inc.
24 Kulick Road
Fairfield, New Jersey 07006

^{137}Cs , FPSS

258 Reactor Experiments, Inc.
963 Terminal Way
San Carlos, California 94070

^{238}U

259 Rensselaer Polytechnic Institute
110 8th Street
Troy, New York 12181

RSI(B)

260 Republic Corporation
1960 West 139th Street
Gardena, California 90249

^{85}Kr

261 Research Triangle Institute
P. O. Box 12086
Research Triangle Park, North Carolina 27709

^{63}Ni

262 Rochester, University of
575 Elmwood Avenue
Rochester, New York 14627

^{140}Ba , ^{131}I

- 263 Rockefeller University
66th Street and York Avenue
New York, New York 10021
²⁸Mg(B)
- 264 Rollins College
Winter Park, Florida 32789
²³⁹Pu(M)
- 265 Rutgers, The State University
New Brunswick, New Jersey 08903
⁸⁹Sr
- 266 SUNY at Stony Brook
Dept. of Earth and Space Science
Stony Brook, New York 11790
RSI(B)
- 267 Sacramento State College
Sacramento, California 95819
²³⁹Pu(M)
- 268 Saint Mary's Long Reach Hospital
509 East Tenth Street
Long Beach, California 90813
¹³³Xe
- 269 Saint Vincent's Hospital
25 Winthrop Street
Worcester, Massachusetts 01610
¹³³Xe
- 270 Saint Vincent's Hospital
2131 W. Third Street
Los Angeles, California 90057
¹³³Xe
- 271 Sam Houston State University
Huntsville, Texas
²⁵²Cf(S)
- 272 San Diego State College
San Diego, California 92115
²³⁹Pu(M)
- 273 Sanders Nuclear Corporation
95 Canal Street
Nashua, New Hampshire 03060
²⁵²Cf(S), FPSS, ⁹⁰Sr
- 274 Sandia Corporation
Post Office Box 5800
Albuquerque, New Mexico 87115
²⁵²Cf, ⁸⁵Kr
- 275 Schlumberger Technology Corporation
Old Quarry Road
P. O. Box 307
Ridgefield, Connecticut 06877
²⁵²Cf(S), ³H
- 276 Schlumberger Well Services
A Division of Schlumberger Technology Corporation
Post Office Box 2175
Houston, Texas 77001
Pu(R)
- 277 Schwarz Blo-Research, Inc.
Mountain View Avenue
Orangeburg, New York 10962
³H, ³³P
- 278 Scripps Clinic and Research Foundation
476 Prospect Street
La Jolla, California 92037
¹³³Xe
- 279 Seattle University
900 Broadway
Seattle, Washington 98122
EU(R)
- 280 Shell Development Company
1410 45th Street
Emeryville, California 94608
³⁶Cl
- 281 Shell Oil Company
Houston Refinery
Post Office Box 2533
Deer Park, Texas 77536
¹⁴⁴Ce
- 282 Shepherd and Associates, J. L.
1614 Victory Boulevard
Glendale, California 91201
¹³⁷Cs, FPSS
- 283 Signetics, Incorporated
811 East Arques Avenue
Sunnyvale, California 94086
⁸⁵Kr
- 284 Sloan-Kettering Institute
425 East 68th Street
New York, New York 10021
⁴⁷Ca, ²⁵²Cf(S), ¹³³Xe, ⁹⁵Zr
- 285 Southern California Edison Company
P. O. Box 351
Los Angeles, California 90053
Pu(R)
- 286 Southwest Center for Advanced Studies
P. O. Box 30365
Dallas, Texas 75230
Pu(R)
- 287 Southwestern Medical School
5223 Harry Hines Boulevard
Dallas, Texas 75235
⁴⁷Ca

- 288 Stanford Research Institute
Menlo Park, California 94025
MCP, ^{90}Sr
- 289 Stanford University
P. O. Box 4409
Stanford, California 94305
 ^{133}Ba , ^{129}I , MCP, ^{99}Tc , Tgs
- 290 Stanford University Hospital Center
300 Pasteur Drive
Palo Alto, California 94304
 ^{133}Xe
- 291 TRW Systems Group
One Space Park
Redondo Beach, California 90277
 ^{85}Kr , ^{238}Pu (M)
- 292 Technical Operations
South Avenue
Burlington, Massachusetts 01803
 ^{137}Cs , FPSS
- 293 Teledyne Isotopes
123 Woodland Avenue
Westwood, New Jersey 07675
 ^{37}Ar , ^{239}Pu , ^{235}U , ^{238}U
- 294 Teledyne Isotopes
Nuclear Systems Division
110 W. Timonium Road
Timonium, Maryland 21093
FPSS, ^{238}Pu (M), ^{90}Sr
- 295 Teledyne, Inc.
1901 Avenue of the Stars
Los Angeles, California 90067
MCP
- 296 Tennessee Technological Institute
Cookeville, Tennessee
 ^{252}Cf (S)
- 297 Tennessee, University of
Cherokee Trail
Knoxville, Tennessee
 ^{20}Mg (B)
- 298 Tennessee, University of
Knoxville, Tennessee 37916
 ^{14}C , ^3H , RSI, ^{106}Ru
- 299 Tennessee, University of
865 Jefferson Avenue
Memphis, Tennessee 38103
 ^{252}Cf (S), ^{133}Xe
- 300 Texas A and M University
Post Office Box 44
College Station, Texas 77843
 ^{252}Cf , $^{152+154}\text{Eu}$
- 301 Texas Instruments, Inc.
Science Services Division
Post Office Box 5621
Dallas, Texas 75222
 ^3H , ^{85}Kr
- 302 Texas, University of
Austin, Texas 78712
 ^{252}Cf , ^{252}Cf (S), ^3H , Tgs
- 303 Texas, University of
M. D. Anderson Hospital and Tumor Institute
6723 Bertner Avenue
Houston, Texas 77025
MCP
- 304 Transition Electronics Corporation
168 Albion Street
Wakefield, Massachusetts 01880
 ^{85}Kr
- 30.5 Trapelo, Division/West
2030 Wright Avenue
Richmond, California 94804
CSI, ^{236}Pu
- 306 UT-AEC
Agriculture Research Laboratory
1299 Bethel Valley Road
Oak Ridge, Tennessee 37830
 ^{47}Ca
- 307 Union Carbide Corporation
Sterling Forest Research Center
Post Office Box 324
Tuxedo, New York 10987
 ^{106}Ru , ^{99}Tc , ^{95}Zr
- 308 Union Carbide Corporation, Nuclear Division
Oak Ridge Gaseous Diffusion Plant
Post Office Box P
Oak Ridge, Tennessee 37830
 ^{85}Kr
- 309 Union Carbide Corporation, Nuclear Division
Oak Ridge National Laboratory
Post Office Box X
Oak Ridge, Tennessee 37830
 ^{241}Am , ^{243}Am , ^{241}Am (R), ^{14}C , ^{14}C (R),
 ^{144}Ce , ^{144}Ce (R), ^{249}Cf , ^{252}Cf , ^{252}Cf (S),
 ^{36}Cl , ^{36}Cl (R), Cm(S), ^{60}Co (S),
 ^{137}Cs (R), CSI, DU(R), EU(R),
 ^{59}Fe (R), FPSS, ^3H , ^{181}Hf , ^{130}I ,
 ^{114}In , ^{192}Ir , ^{85}Kr , MCP, Mo(R),
 ^{95}Nb , ^{147}Nd , ^{63}Ni , ^{237}Np , NU(R),
 ^{147}Pm (R), Po+Be(M), ^{238}Pu , ^{239}Pu ,
 ^{240}Pu , ^{241}Pu , Pu(R), ^{238}Pu (R),
 ^{238}Pu (S), ^{86}Rb , RSI, ^{106}Ru ,
 ^{106}Ru (R), ^{35}S (R), ^{151}Sm , ^{90}Sr ,
 ^{90}Sr (R), SS, ^{182}Ta , Tgs, ^{230}Th ,
 ^{229}Th (M), ^{204}Tl , ^{170}Tm , ^{232}U , ^{233}U ,
 ^{235}U , ^{238}U , ^{233}U (R), ^{233}U (S),
 ^{169}Yb (S), ^{95}Zr

- 310 Union Carbide Corporation, Nuclear Division
Paducah Gaseous Diffusion Plant
Paducah, Kentucky 42002

RSI
- 311 Union Carbide Corporation, Nuclear Division
Y-12 Plant
Post Office Box Y
Oak Ridge, Tennessee 37830

 ^{252}Cf , ^{137}Cs , EU(R), FPSS, MCP,
 ^{33}P , ^{147}Pm , RSI, ^{151}Sm , SS
- 312 Unit Process Assemblies, Inc.
53 - 15 27th Avenue
Woodside, New York 11377

 ^{147}Pm
- 313 United Aircraft Corp.
Silver Lane
East Hartford, Connecticut 06118

MCP
- 314 United Nuclear Corp.
Research and Eng. Center
Grasslands Road
Elmsford, New York 10523

Pu(R)
- 315 United States Air Force
McClellan Air Force Base, California 95552

 ^{37}Ar , ^{133}Xe
- 316 United States Air Force
ASCFC-13, Building 11, Area B
Wright Patterson Air Force Base, Ohio 45433

 ^{236}Pu
- 317 United States Army
Edgewood Arsenal, Maryland 21010

 ^{85}Kr
- 318 United States Army
Walter Reed Army Medical Center
Washington, D. C. 20012

 ^{133}Xe
- 319 United States Army
Frankford Arsenal
Bridge and Tacony Streets
Philadelphia, Pennsylvania 19137

 ^{85}Kr
- 320 United States Army
Picatinny Arsenal
Dover, New Jersey 07801

 $^{252}\text{Cf}(S)$
- 321 United States Army
Materials and Mechanics Research Center
Watertown, Massachusetts 02172

 $^{252}\text{Cf}(S)$
- 322 United States Atomic Energy Commission
National Reactor Testing Station
Idaho Falls, Idaho 83401

RSI(I)
- 323 United States Atomic Energy Commission
New Brunswick Laboratory
New Brunswick, New Jersey OR903

Pu(R)
- 324 United States Atomic Energy Commission
376 Hudson Street, Fifth Floor
New York, New York 10014

 ^{140}Ba , $^{144}\text{Ce}(R)$, $^{137}\text{Cs}(R)$, MCP, ^{238}Pu ,
 $^{106}\text{Ru}(R)$, $^{125}\text{Sb}(R)$, ^{95}Zr
- 325 United States Atomic Energy Commission
Washington, D. C. 20545

 ^{238}Pu
- 326 United States Bureau of Mines
Yorgantoun, West Virginia 26505

 $^{252}\text{Cf}(S)$
- 327 United States Department of Agriculture
Oxford, Mississippi

 $^{252}\text{Cf}(S)$
- 328 United States Department of Agriculture
Research Service
P. O. Box 53326
New Orleans, Louisiana 70150

 ^{140}Ba , ^{238}Pu
- 329 United States Department of Interior
Bureau of Mines
Albany Metallurgy Research Center
Albany, Oregon 97321

NU(R)
- 330 United States Department of Interior
Geological Survey
Branch of Budget and Finance
Washington, D. C. 20242

 $^{252}\text{Cf}(S)$, RSI(A)
- 331 United States Department of Interior
Geology Survey
Bldg. 21, Denver Federal Center
Denver, Colorado 80225

 ^{86}Rb , ^{230}Th
- 332 United States Department of Interior
Bureau of Mines
Bldg. 20, Federal Center
Denver, Colorado 80225

 ^{95}Nb
- 333 United States Department of Interior
Bureau of Sport Fisheries + Wildlife
Eastern Fish Nutrition Laboratory
Cortland, New York 13045

 ^{89}Sr

- 334 United States National Aeronautics and Space Adm.
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135
 ^{252}Cf , ^3H , ^{85}Kr , SS, ^{233}U
- 335 United States National Aeronautics and Space Adm.
Goddard Space Flight Center
Glendale Road
Greenbelt, Maryland 20771
 ^{252}Cf , $^{252}\text{Cf}(\text{S})$
- 336 United States National Aeronautics and Space Adm.
Langley Research Center
Langley Station
Hampton, Virginia 23365
(^{152}Eu)
- 337 United States National Aeronautics and Space Adm.
George C. Marshall Space Flight Center
Huntsville, Alabama 35912
 ^{85}Kr
- 338 United States National Aeronautics and Space Adm.
Manned Spacecraft Center
Houston, Texas 77058
 ^{230}Th , ^{235}U
- 339 United States National Aeronautics and Space Adm.
Ames Research Center
Yoffett Field, California 94035
 ^{89}Sr , SS
- 340 United States Naval Academy
Annapolis, Maryland
 $^{252}\text{Cf}(\text{S})$
- 341 United States Navy
Chesapeake Division
Naval Facilities Engineering Command
Washington Navy Yard
8th and M Streets, S. E.
Washington, D. C. 20390
 ^{90}Sr
- 342 United States Navy
Naval Ordnance Laboratory
White Oak
Silver Spring, Maryland 20910
 ^{133}Ba , ^{137}Cs , ^{99}Tc
- 343 United States Navy
Naval Research Laboratory
Washington, D. C. 20390
 ^{137}Cs , $^{59}\text{Fe}(\text{R})$, FPSS, ^{238}Pu , ^{239}Pu , ^{235}U
- 344 United States Public Health Service
Environmental Protection Agency
Pacific Northwest Water Laboratory
400 S.W. 35th Street
Corvallis, Oregon 97330
 ^{33}P
- 345 United States Public Health Service
Post Office Box 684
4505 Maryland Parkway
Las Vegas, Nevada 89101
 ^{238}Pu
- 346 United States Public Health Service
Post Office Box 61
Montgomery, Alabama 36101
 ^{140}Ba , MCP, ^{237}Np
- 347 United States Public Health Service
National Institutes of Health, Isotope Laboratory
Building 21
Bethesda, Maryland 20014
 ^{47}Ca , ^{36}Cl , CSI, ^{131}I , MCP
- 348 United States Public Health Service
DHEW-CPEHS
Division of Accounting, AA-130
Financial Service Branch
200 C. Street, S.W.
Washington, D. C. 20204
MCP, ^{89}Sr
- 349 United States Quartermaster Laboratory
Natick, Massachusetts 01760
 $^{60}\text{Co}(\text{B})$
- 350 United States Radium Corporation
4150 Old Berwick Road
Post Office Box 380
Bloomsburg, Pennsylvania 17815
 ^3H
- 351 Unitrode Corporation
580 Pleasant Street
Watertown, Massachusetts 01970
 ^{85}Kr
- 352 Universal Radioisotopes, Inc.
635 S. 31st Street
Richmond, California 94804
 ^{241}Am , ^{137}Cs , ^{90}Sr
- 353 Upstate Medical Center
117 Monroe Street
Syracuse, New York
 $^{157}\text{Dy}(\text{B})$
- 354 Utah, University of
Purchasing Department
Salt Lake City, Utah 84112
 ^{252}Cf , $^{252}\text{Cf}(\text{S})$, MCP, RSI(R), ^{133}Xe
- 355 Vanderbilt University
Business Managers Office
Nashville, Tennessee 37203
MCP, ^{231}Pa , ^{133}Xe

- 356 Veterans Administration Center
Wood, Wisconsin 53193
 ^{133}Xe
- 357 Veterans Administration Hospital
2100 Ridgecrest Drive S.E.
Albuquerque, New Mexico
 $^{20}\text{Mg(B)}$
- 358 Veterans Administration Hospital
C. I. Research Lab
West Haven, Connecticut
 $^{20}\text{Mg(B)}$
- 359 Veterans Administration Hospital
150 South Huntington Avenue
Boston, Massachusetts 02130
 ^{129}I
- 360 Veterans Administration Hospital
3801 Junipero Serra Blvd.
Palo Alto, California 94304
MCP, ^{133}Xe
- 361 Veterans Administration Hospital
1055 Clermont Street
Denver, Colorado 80220
 ^{133}Xe
- 362 Veterans Administration Hospital
Fulton Street and Erwin Road
Durham, North Carolina 22705
MCP
- 363 Veterans Administration Hospital
300 East Roosevelt Road
Little Rock, Arkansas 72206
MCP
- 364 Veterans Administration Hospital
Sepulveda, California 91343
 ^{115}In , MCP, ^{99}Tc
- 365 Veterans Administration Hospital
Syracuse, New York 13210
MCP
- 366 Victoreen Instrument Division
10101 Woodland Avenue
Cleveland, Ohio 44104
 ^{133}Xe
- 367 Virginia Associated Research Campus
12070 Jefferson Avenue
Neuport News, Virginia 23606
MCP
- 368 Virginia Hospital, University of
Charlottesville, Virginia 22901
 ^{133}Xe
- 369 Virginia, University of
Charlottesville, Virginia 22903
 ^{85}Kr , ^{133}Xe
- 370 UADCD (A Division of Westinghouse)
P. O. Box 1970
Richland, Washington 99352
 ^{140}Ba , ^{237}Np , ^{238}Pu , ^{239}Pu , ^{240}Pu ,
 ^{241}Pu , ^{235}U , ^{238}U , ^{95}Zr
- 371 Washington Hospital Center
110 Irving Avenue, N.W.
Washington, D. C. 20014
 ^{87}Ca
- 372 Washington State University
Comptroller's Office
Pullman, Washington 99163
 $^{252}\text{Cf(S)}$
- 373 Washington University
Lindell and Skinker
St. Louis, Missouri 63130
 $^{20}\text{Mg(B)}$
- 374 Washington, University of
400 Administration Building
Seattle, Washington 98105
 $^{252}\text{Cf(S)}$, ^{60}Co , ^3H , RSI(R) , RSI(A) ,
Tgs
- 375 Wayne State University
Detroit, Michigan 48202
 $^{252}\text{Cf(S)}$, ^{129}I
- 376 West Virginia University
Administration Building
Morgantown, West Virginia 26506
CSI
- 377 Western Electric Company
100 Central Avenue
Kearny, New Jersey 07032
 ^{137}Cs
- 378 Western Electric Company
P. O. Box 241
Reading, Pennsylvania 19603
 ^{85}Kr
- 379 Western Electric Company, Inc.
P. O. Box 1409
Laurence, Massachusetts 01842
 ^{85}Kr
- 380 Western Electric Company, Inc.
555 Union Boulevard
Ailentown, Pennsylvania 18103
 ^{85}Kr

381 Western Electric Company, Inc.
777 North Blue Parkway
Lee's Summit, Missouri 64063

⁸⁵Kr

382 Western New York Nuclear Research Center
Service Center Building
Stores Drive
Buffalo, New York 14214

Pu(R)

383 Westinghouse Electric Corporation
Bettis Atomic Power Laboratory
Post Office Box 79
West Mifflin, Pennsylvania 15122

²⁴³Am, ¹³⁷Cs, ³H, ²³⁷Np, Tgs, ²³⁸U

384 Westinghouse Electric Corporation
Research and Development Center
Beulah Road, Churchill Borough
Pittsburgh, Pennsylvania 15235

Th+Y(R), ²³⁸U

385 Westinghouse Electric Corporation
Post Office Box 284
Elmira, New York 14902

EU(R)

386 Westinghouse Electric Corporation
Atomic Power Divisions
P. O. Box 355
Pittsburgh, Pennsylvania 15230

Pu(R)

387 William Beaumont Hospital
3601 W. Thirteen Mile Road
Royal Oak, Michigan

MCP

388 Wisconsin, University of
750 University Avenue
Yadison, Wisconsin 53706

³H, MCP

389 Wyoming, University of
Laramie, Wyoming 82070

²⁵²Cf(S)

390 Yale University
20 Ashmun Street
New Haven, Connecticut 06520

¹⁴⁰Ba, ⁶⁰Co, ³H, RSI(B), ⁸⁹Sr

391 Yale-New Haven Hospital
P. O. Box 1001
New Haven, Connecticut 06504

¹³¹Ba, MCP

392 Zirconium Company of America
P. O. Box 39217
31501 Solon Road
Solon, Ohio 44139

Th+Y(R)

B. Foreign

AUSTRALIA

393 Australian Consulate General
636 Fifth Avenue
New York, New York 10020

²³⁵U

394 Australian National University
P. O. Box 4
Canberra, A. C. T., Australia

³⁷Ar

AUSTRIA

395 International Atomic Energy Agency
Kerntnerring 11-13
A-1010 Vienna, Austria

³³P, ²⁴²Pu, ¹⁸²Ta, ²³³U, ²³⁵U

BELGIUM

396 Albert Nils
266B Av. de Tervueren
Bruxelles 15, Belgium

⁸⁵Kr, ¹⁴⁷Pm, ¹³³Xe

397 Bruxelles, Universite Libre de
Brussels 5, Belgium

²⁵²Cf

398 EURATOM
51-53 Rue Belliard
Brussels, Belgium

²⁴³Am, ²³⁹Pu, ²⁴⁰Pu, ²⁴¹Pu, ²⁴²Pu, ²³⁴U

399 European Atomic Energy Commission
Central Bureau for Nuclear Measurements
Geel, Belgium

MCP, ²⁴²Pu, ²³³U, ²³⁶U

CANADA

400 Alberta, University of
Edmonton, Alberta, Canada

⁹⁹Tc, ¹³³Xe

401 Atomic Energy of Canada Limited
Tunney's Pasture
Ottawa, Ontario, Canada

¹³⁷Cs, FPSS, ³H, MCP, ¹⁴⁷Pm, ⁸⁹Sr

402 Atomic Energy of Canada Limited
Chalk River, Ontario, Canada

⁴⁷Ca, ¹³⁷Cs, DU(R), FPSS, ³H,
NU(R), ²⁴²Pu, Pu(R), RSI(R), ⁴⁴Sc

403 British Columbia, University of
Vancouver 8, B.C., Canada

⁴⁷Ca, ³H

404 Canada Dept. of Agriculture
Research Branch, University Campus
Saskatoon, Saskatchewan, Canada

33P

405 Charles E. Frosst and Co.
16717 Transcanada Highway
Kirkland, Canada

$^{28}\text{Mg}(\text{B})$

406 Ecole Polytechnique
2500 Avenue Marie-Guyard
Montreal 250, Canada

^{23}U , ^{236}U

407 Guelph, University of
Guelph, Ontario, Canada

^{99}Mo

408 Hospital for Sick Children
555 University Avenue
Toronto 2, Ontario, Canada

$^{28}\text{Mg}(\text{B})$

409 McGill University
Montreal 2, P.Q., Canada

^{133}Xe

410 McMaster University
Hamilton, Ontario, Canada

^{85}Kr , ^{151}Sm , ^{89}Sr , ^{99}Tc

411 Microsystems International Ltd.
P. O. Box 3529 Station C
Ottawa, Ontario, Canada

^{85}Kr

412 Montreal, Universite de
Montreal, Canada

^3H

413 Queens University
Kingston, Ontario, Canada

^{85}Kr

414 Simon Fraser University
Burnaby 2, B. C., Canada

^{111}Ag , ^{129}I

415 Toronto General Hospital
101 College Street
Toronto 2, Ontario, Canada

$^{28}\text{Mg}(\text{B})$, ^{133}Xe

416 Winnipeg General Hospital
700 Bannatyne Avenue
Winnipeg 3, Manitoba, Canada

CSI, ^{133}Xe

CHINA

417 Chinese Government Procurement
2224 R. Street, N. W.
Washington, D. C. 20008

^{106}Ru , ^{95}Zr

418 Chinese Government Procurement and Service Mission
61 Broadway
New York 6, New York 10006

^{14}C

CZECHOSLOVAKIA

419 CHEMAPOL
Foreign Trade Corporation
Panska 9
Praha 1, Czechoslovakia

^{241}Am

DENMARK

420 Atomic Energy Commission
Research Establishment Riso
Isotope Division
Roskilde, Denmark

^{252}Cf , $^{166}\text{Ho}(\text{S})$

421 Embassy of Denmark
3200 Whitehaven Street, N. W.
Washington, D. C. 20008

^{240}Pu , ^{241}Pu , ^{242}Pu

422 Kobenhavns Universitet
Riso Pr.
Roskilde, Denmark

^{243}Am , ^{244}Cm

ENGLAND

423 Alfred Chester Beatty Body Dynamics Lab
Brooksden, Cranbrook,
Kent, England

$^{28}\text{Mg}(\text{B})$

424 British Embassy
3100 Massachusetts Avenue, N. W.
Washington, D. C. 20008

^{242}Pu , ^{244}Pu , ^{238}U

425 Cambridge, University of
The Physiological Laboratory
Cambridge, England

$^{28}\text{Mg}(\text{B})$

426 Micro-Bio Labs.
46, Pembridge Road
London, W. 11, England

$^{28}\text{Mg}(\text{B})$

427 Radiochemical Centre
Buckinghamshire, England

$^{238}\text{Pu}(\text{M})$

428 United Kingdom Atomic Energy Establishment
Harwell, Didcot, Berkshire
England

$^{238}\text{Pu}(\text{M})$

429 United Kingdom Treasury and Supply Delegation
25 Broadway
New York, New York 10004

^{241}Am , ^{243}Am , ^{140}Ba , ^{144}Ce , ^{252}Cf , ^{36}Cl ,
 ^{137}Cs , FPSS , ^3H , ^{129}I , ^{85}Kr , MCP,
 ^{147}Pm , ^{106}Pu , ^{89}Sr , ^{90}Sr , SS,
 ^{99}Tc , ^{91}Y , ^{95}Zr

430 University College Hospital Medical School
Department of Medical Physics
London, England

$^{28}\text{Mg}(\text{B})$

FRANCE

431 C. E. A.
1346 Connecticut Avenue, N. W.
Washington, D. C. 20036

^{238}U

432 C.E.A. New York Office
972 Fifth Ave.
New York, New York 10021

^{241}Am , ^{37}Ar , ^{140}Ba , ^{252}Cf , ^{137}Cs ,
MCP, ^{237}Np , ^{147}Pm , ^{90}Sr , SS, ^{99}Tc ,
 ^{91}Y

GERMANY

433 American Hoechst Corporation
P. C. Box 2500
Somerville, New Jersey 08876

^{85}Kr

434 Buchler and Company
Frankfurter Str. 294
Braunschweig, Germany

^{252}Cf , MCP, ^{237}Np , ^{147}Pm , ^{90}Sr ,
 ^{238}U

435 Buchler and Company
Untermainkai 34
6 Frankfurt M. 1, Germany

^{252}Cf

436 EURATCY
Institute des Transuraniens
7501 Leopold Shafen
Reaktorstation, Germany

$\text{Pu}(\text{R})$

437 EURATOM 'Transuranium Institute
P. O. Box 452
75 Karlsruhe, West Germany

$^{252}\text{Cf}(\text{S})$, ^{99}Tc

438 Gesellschaft fur Kernforschung M.B.H.
Institute fuer Angeuandte Reaktor Physik
Weberstrasse 5
75 Karlsruhe
West Germany

^{241}Am , ^{243}Am , ^{244}Cm , MCP, ^{237}Np , ^{147}Pm ,
 ^{244}Pu , $^{238}\text{Pu}(\text{M})$

439 Giessen, Universitat
6300 Giessen, Germany

^{252}Cf

440 Hahn-Meitner-Institut
fur Kernforschung Berlin, Sektion Kernphysik
Berlin, Germany

^{252}Cf

441 Kernforschung Sanlage
Postfach 365
517 Julich, Germany

^{237}Np

442 Koln, Univrsitat
Zulpicher Str. 47
5 Koln 1, Germany

^{238}U

443 Marburg/Lahn, Universitat
Marburg/Lahn, Germany

^{252}Cf

444 Munchen, Technischen Hoahschule
Arcistrasse 21
8 Munchen 2
Germany

^{241}Am , ^{140}Ba , MCP, ^{237}Np , ^{147}Pm ,
 ^{151}Sm , Tgs, ^{133}Xe

445 Tuebingen University
West Germany

^{252}Cf

INDIA

446 Educational Services, Inc.
55 Chapel Street
Newton, Massachusetts 02160

CSI

ISRAEL

447 Embassy of Israel
1621-22nd Street, N. W.
Washington, D. C. 20008

^3H , ^{95}Nb , ^{237}Np

448 Government of Israel
Ministry of Defense
850 Third Avenue
New York, New York 10022

^3H , ^{129}I , ^{63}Ni

449 Israel Atomic Energy Commission
Hakirya, Tel Aviv, Israel

$^{238}\text{Pu}(\text{M})$

ITALY

450 Euratom C.C.R.
Ispra (Varese), Italy
 $^{252}\text{Cf}(\text{S})$

451 Fabbrica Italiana Magneti Marelli
Casella Postale 66
20099 Sesto S. Giovanni
Milan, Italy
 ^{137}Cs

452 General Generale Radiologica Spa
Via Monte Albano, 9
Monza, Italy
FPSS

453 Meyer Line
Brooklyn, New York
 $\text{Th}(\text{S})$, $\text{U}(\text{S})$

JAPAN

454 Japan Atomic Energy Research Institute
Tokai Research Establishment
Tokai-Mura; Naka-Gun, Ibaraki-Ken
Japan
 ^{242}Pu

455 Japan Atomic Energy Research Institute
1-1, Shinbashi, Minato-Ku
Tokyo, Japan
 $\text{Pu}(\text{R})$

456 Japan Radioisotope Association
Hon-Komagome 2 Chome 28
Runkyo-Ku
Tokyo, Japan
 ^{85}Kr

457 Mitsubishi International Corporation
277 Park Avenue
New York, New York 10017
 ^{243}Am , ^{140}Ba , ^{252}Cf , ^{244}Cm , ^{137}Cs , FP ,
FPSS, ^{63}Ni , ^{147}Pm , ^{89}Sr , ^{90}Sr ,
 ^{95}Zr

458 Power Reactor and Nuclear Fuel Development Corp.
9-13, I-Chome, Akasaka, Minato-ku
Tokyo, Japan
 ^{233}U

459 Sumitomo Shoji America, Inc.
345 Park Avenue, 14th Floor
New York, New York 10022
 ^{85}Kr

MEXICO

460 Comision Nacional de Energia Nuclear
Miguel Angel de Quevedo 530A
Mexico 21, D. F.
 ^{137}Cs , FPSS

NETHERLANDS

461 N. V. Philips-Duphar
P. O. Box 2
Weesp, The Netherlands
 ^{204}Tl

462 Reactor Centrum Nederland
Petten N. H., The Netherlands
 ^{147}Pm

463 Rijksinkoopbureau
(Netherlands Govt. Purchasing Office)
55 A Laan van Meerdervoort
The Hague, Netherlands
 ^{133}Xe

NORWAY

464 Institut for Atomenergi
Kjeller, Norway
 ^{238}U

SOUTH AFRICA

465 Well Organization (Pty.) Ltd.
P. O. Box 10924
Johannesburg, South Africa
 ^{252}Cf

SWEDEN

466 Aktiebolaget Atomenergi
Studsvik,
Nykoping, Sweden
 ^{241}Am , ^{85}Kr , $^{24}\text{Mg}(\text{B})$, ^{235}U

467 Forskningsradens Laboratorium
Studsvik
Nykoping, Sweden
 ^{103}Ru

SWITZERLAND

468 Eidg. Institut fur Reaktorforschung
Urenlingen, Switzerland
 ^{241}Am , ^{129}I , ^{237}Np

469 Embassy of Switzerland
2900 Cathedral Avenue, N.W.
Washington, D.C. 20008
 ^{235}U

470 Merz and Bentelli AG
Bumplizstrasse 91
3018 Bern, Switzerland
 ^{147}Pm

471 Radium-Chemie
A. Zeller and Company
9053 Teufen / Ar
Switzerland
 $^{3\text{H}}$, ^{147}Pm

II. ALPHABETICAL LIST OF ISOTOPES,
CROSS-REFERENCED TO CUSTOMER NUMBERS

A. Domestic

Actinium 227		Cerium+Praseodymium 147
197		235
Americium		Cesium 137
79		1, 8, 16, 18, 94, 108, 138, 158, 186, 193, 200, 238, 255, 256, 257, 282, 292, 309, 311, 324, 342, 343, 352, 377, 383
Americium 241		Chlorine 036
10, 48, 49, 79, 81, 103, 108, 117, 138, 144, 163, 168, 193, 200, 217, 220, 235, 238, 309, 352		36, 134, 147, 280, 309, 347
Americium 243		Cobalt 060
47, 79, 163, 235, 249, 309, 389		59, 104, 138, 163, 178, 249, 253, 309, 349, 374, 390
Antimony 122		Cur um
30, 119		79, 309
Antimony 125		Cur um 244
324		10, 47, 48, 49, 146, 194, 201, 235
Argon 037		Curium 246
159, 231, 246, 293, 315		10, 25, 49
Barium 131		Curium 248
187, 391		10, 47, 48, 49, 235
Barium 133		Cyclotron Service Irradiations
1, 92, 131, 163, 289, 342		33, 48, 120, 128, 138, 162, 179, 181, 200, 218, 305, 309, 336, 347, 376
Barium 140		Depleted Uranium
10, 81, 83, 163, 235, 256, 262, 324, 328, 346, 370, 390		16, 49, 116, 194, 198, 235, 309
Berkelium 249		Deuterium
10, 47, 48, 49, 81, 235		202
Bismuth 204		Dysprosium 157
141		353
Calcium 047		Einsteinium 253
34, 59, 60, 134, 164, 195, 205, 243, 284, 287, 306, 347, 371		10, 48, 49, 81, 235
Californium 249		Enriched Uranium
47, 49, 309		10, 11, 16, 78, 103, 112, 116, 131, 198, 235, 279, 309, 311, 385
Californium 252		
9, 10, 26, 34, 42, 46, 47, 48, 49, 59, 62, 72, 79, 81, 84, 86, 87, 88, 92, 94, 96, 113, 131, 139, 142, 149, 151, 153, 163, 172, 185, 187, 188, 191, 194, 196, 208, 222, 225, 227, 235, 243, 271, 273, 274, 275, 284, 296, 299, 300, 302, 309, 311, 320, 321, 326, 327, 330, 334, 335, 340, 354, 372, 374, 375, 389		Europium 152
Carbon 014		108, 300
1, 45, 92, 100, 117, 193, 196, 220, 227, 309		Fission Prod Source Spec Ser
Cerium 144		8, 94, 113, 138, 158, 171, 257, 273, 282, 292, 294, 309, 311, 343
16, 131, 138, 163, 235, 238, 256, 281, 309, 324		

Fission Products

108

Gallium 072

44

Hafnium 181

27, 34, 48, 53, 103, 108, 182, 309

Hydrogen 003

10, 29, 30, 34, 45, 49, 51, 56, 73, 75,
138, 148, 156, 171, 192, 200, 213, 247, 275,
277, 298, 301, 302, 309, 334, 350, 374, 383,
388, 390

Indium 114

44, 147, 196, 199, 222, 309, 364

Iodine 129

48, 88, 103, 108, 134, 138, 200, 289, 359,
375

Iodine 130

309

Iodine 131

41, 63, 187, 232, 249, 262, 347

Iodine 132

254

Iridium 197

20, 309

Iron 059

19, 104, 309, 343

Krypton 085

4, 6, 7, 15, 17, 21, 25, 64, 65, 71, 90,
91, 98, 100, 101, 105, 107, 109, 113, 126,
129, 130, 131, 137, 138, 143, 158, 175, 189,
200, 250, 260, 274, 283, 291, 301, 304, 308,
309, 317, 319, 334, 337, 351, 369, 378, 379,
380, 381

Magnesium 028

39, 40, 57, 72, 92, 113, 127, 169, 210, 235,
252, 254, 263, 297, 357, 358, 373

Misc Compound Preparation

13, 18, 34, 44, 47, 49, 53, 54, 59, 60, 76,
81, 82, 92, 102, 109, 113, 115, 123, 140,
147, 163, 170, 179, 184, 186, 189, 200, 204,
222, 225, 228, 245, 288, 299, 295, 303, 309,
311, 313, 324, 346, 347, 348, 354, 355, 360,
362, 363, 364, 365, 367, 387, 388, 391

Molybdenum

309

Neodymium 147

235, 309

Neptunium 237

10, 16, 23, 34, 48, 49, 81, 103, 116, 131,
149, 158, 193, 206, 208, 235, 309, 346, 370,
383

Nickel 063

28, 125, 138, 261, 309

Niobium 095

44, 163, 186, 196, 309, 332

Normal Uranium

10, 16, 49, 116, 194, 198, 235, 309, 329

Palladium 106

234

Palladium 109

43, 81

Phosphorus 033

176, 200, 277, 311, 344

Plutonium

2, 10, 11, 16, 19, 22, 26, 49, 68, 70, 77,
78, 80, 81, 103, 113, 116, 131, 152, 174,
193, 194, 195, 207, 214, 216, 235, 254, 276,
285, 286, 309, 314, 323, 382, 386

Plutonium 236

79, 103, 131, 142, 305, 316

Plutonium 238

10, 16, 26, 49, 77, 79, 81, 97, 99, 114,
116, 131, 142, 174, 193, 194, 217, 235, 237,
291, 294, 309, 324, 325, 328, 343, 346, 370

Plutonium 239

5, 10, 16, 34, 48, 79, 85, 93, 114, 121,
122, 131, 142, 145, 149, 155, 163, 168, 221,
249, 254, 264, 267, 272, 293, 309, 343, 370

Plutonium 240

10, 48, 49, 131, 309, 370

Plutonium 241

10, 47, 49, 79, 131, 309, 370

Plutonium 242

10, 34, 47, 48, 79, 113, 131, 163

Plutonium 244

10, 103

Polonium 208

10

Polonium 210

10, 186, 193, 220, 249

Polonium+Beryllium

309

Promethium 147

30, 48, 49, 77, 138, 171, 174, 186, 200,
309, 311, 312

Protactinium 231

355

Reactor Service Irradiations

10, 11, 34, 38, 57, 59, 69, 72, 74, 78,
113, 131, 147, 167, 183, 194, 201, 209, 222,
231, 235, 241, 242, 248, 259, 266, 298, 309,
310, 311, 354, 374, 390

Phen um 185

108

Phod um 103

234

Fubidium 086

10, 14, 44, 45, 92, 134, 177, 187, 189, 208,
225, 240, 309, 331

Ruthenium 103

10, 108, 163

Puthenium 106

10, 34, 47, 53, 108, 131, 138, 157, 163,
200, 298, 307, 309, 324

Ruthenium+Rhodium 106

309

Samarium 151

27, 53, 138, 200, 203, 309, 311

Scandium 046

180, 223, 239

Silicon

10, 43, 58, 60, 61, 87, 95, 133, 135, 136,
151, 154, 161, 211, 212, 251, 254, 330, 374

Silver 111

53

Special Services

3, 27, 48, 49, 72, 81, 96, 102, 156, 235,
246, 309, 311, 334, 339

Strontium 089

12, 67, 72, 111, 113, 150, 157, 170, 183,
187, 223, 226, 241, 249, 265, 333, 339, 348,
390

Strontium 090

16, 113, 138, 163, 186, 200, 215, 224, 235,
256, 273, 288, 294, 309, 341, 352

Sulfur 035

309

Tantalum 182

163, 166, 173, 309

Target Preparation Radiosotope

48, 73, 227, 289, 302, 309, 3749 383

Technetium 099

10, 34, 132, 186, 234, 289, 307, 342, 364

Thallium 204

193, 208, 220, 309

Thorium

16, 77, 78, 116, 174, 197, 198, 235

Thorium 229

34, 48, 309

Thor um 230

49, 52, 140, 149, 196, 309, 331, 338

Thor um 232

49

Thorium+Yttrium

10, 34, 384, 392

Thulium 170

309

Tungsten 185

10, 108

Uranium

24, 47, 197

Uranium 232

34, 48, 55, 79, 309

Uranium 233

16, 79, 116, 131, 215, 235, 309, 334

Uranium 234

10, 49

Uranium 235

10, 31, 46, 47, 48, 52, 79, 92, 103, 131,
140, 142, 185, 194, 293, 309, 338, 343, 370

Uranium 236

10, 19, 47, 79, 235

Uranium 238

10, 19, 48, 49, 81, 103, 112, 140, 258, 293,
309, 370, 383, 384

Xenon 133

3, 10, 23, 30, 35, 43, 44, 45, 47, 50, 61,
62, 66, 82, 103, 110, 113, 124, 138, 151,
159, 160, 165, 179, 187, 200, 219, 229, 230,
233, 236, 244, 268, 269, 270, 278, 284, 290,
299, 315, 318, 354, 355, 356, 360, 361, 366,
368, 369

Ytterbium 169

309

Yttrium 091

30, 163, 190

Zirconium 095

10, 23, 30, 32, 49, 81, 131, 157, 200, 235,
284, 307, 309, 324, 370

Zirconium+Niobium 095

104

B. Foreign

Americium 241

419, 429, 432, 438, 444, 466, 468

Americium 243

398, 422, 429, 438, 457

Argon 037

394, 432

Barium 140

429, 432, 444, 457

Calcium 047

402, 403

Californium 252

397, 420, 429, 432, 434, 435, 437, 439, 440,
443, 445, 450, 457, 465

Carbon 014

418

Cerium 144

429

Cesium 137

401, 402, 429, 432, 451, 457, 460

Chlorine 036

429

Curium 244

422, 438, 457

Cyclotron Service Irradiations

416, 446

Depleted Uranium

402

Fission Prod Source Spec Ser

401, 402, 429, 452, 457, 460

Fission Products

457

Holmium 166

420

Hydrogen 003

401, 402, 403, 412, 429, 447, 448, 471

Iodine 129

414, 429, 448, 468

Krypton 085

396, 410, 411, 413, 429, 433, 456, 459, 466

Magnesium 029

405, 408, 415, 423, 425, 426, 430, 466

Misc Compound Preparation

399, 401, 429, 432, 434, 438, 444

Molybdenum 099

407

Neptunium 237

432, 434, 438, 441, 444, 447, 468

Nickel 063

448, 457

Niobium 095

447

Normal Uranium

402

Phosphorus 033

395, 404

Plutonium

402, 436, 455

Plutonium 238

427, 428, 438, 449

Plutonium 239

398

Plutonium 240

398, 421

Plutonium 241

398, 421

Plutonium 242

395, 398, 399, 402, 421, 424, 454

Plutonium 244

424, 430

Promethium 147

396, 401, 429, 432, 434, 438, 444, 457, 462,
470, 471

Reactor Service Irradiations

402

Ruthenium 103

467

Ruthenium 106

417, 429

Samarium 151

410, 444

Scandium 046

402

Silver 111

414

Special Services

429, 432

Strontium 089

401, 410, 429, 457

Strontium 090

429, 432, 434, 457

Tantalum 182

395

Target Preparation Radiosotope

444

Technetium 099

400, 410, 429, 432, 437

Thallium 204

461

Thorium

453

Uranium

453

Uranium 233

395, 399, 458

Uranium 234

398, 406

Uranium 235

393, 395, 466, 469

Uranium 236

399, 406, 434

Uranium 238

442, 464

Xenon 133

396, 400, 403, 415, 416, 444, 463

Yttrium 091

429, 432

Zirconium 095

417, 429, 457

III. ALPHABETICAL LIST OF STATES AND COUNTRIES CROSS-REFERENCED TO CUSTOMER NUMBERS

A. Domestic

Alabama	346	Massachusetts	9, 32, 33, 87, 118, 119, 129, 168, 169, 200, 237, 245, 256, 269, 292, 304, 321, 349, 351, 359, 379
Arizona	7, 2	Michigan	123, 145, 184, 185, 375, 387
Arkansas	13, 14, 122, 363	Minnesota	125, 170, 186, 187, 219
California	2, 19, 21, 29, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 56, 75, 88, 99, 103, 109, 113, 114, 126, 128, 138, 139, 142, 143, 146, 156, 159, 160, 171, 173, 207, 213, 229, 233, 236, 247, 258, 260, 267, 268, 270, 272, 278, 280, 282, 283, 285, 288, 289, 290, 291, 295, 305, 315, 339, 352, 360, 354	Mississippi	70, 188, 189, 327
Colorado	65, 66, 79, 148, 244, 331, 332, 361	Missouri	28, 172, 177, 190, 191, 373, 381
Connecticut	24, 69, 275, 313, 358, 390, 391	Nevada	74, 199, 345
District of Columbia	52, 55, 110, 196, 318, 325, 330, 341, 343, 348, 371	New Hampshire	201, 273
Florida	35, 92, 97, 98, 130, 179, 181, 183, 264	New Jersey	3, 4, 27, 50, 64, 76, 165, 178, 252, 255, 257, 265, 293, 320, 323, 377
Georgia	111, 158, 175	New Mexico	49, 84, 91, 163, 202, 274, 357
Idaho	11, 131, 132, 322	New York	18, 349, 51, 57, 72, 86, 104, 106, 127, 195, 203, 204, 205, 206, 215, 220, 259, 262, 263, 266, 277, 284, 307, 312, 314, 324, 333, 353, 365, 382, 395
Illinois	1, 10, 15, 57, 58, 59, 60, 68, 73, 89, 95, 133, 134, 135, 154, 164, 180, 211, 251	North Carolina	82, 208, 209, 261, 362
Indiana	136, 212, 218, 250, 254	North Dakota	210
Iowa	140, 141	Ohio	23, 26, 54, 61, 62, 63, 100, 101, 107, 112, 117, 121, 124, 137, 144, 155, 182, 193, 194, 197, 198, 223, 224, 225, 226, 227, 238, 316, 334, 366, 392
Kansas	149, 150	Oklahoma	71, 152, 153, 228
Kentucky	151, 310	Oregon	230, 231, 232, 329, 344
Louisiana	94, 161, 162, 328	Pennsylvania	5, 17, 20, 25, 53, 83, 102, 115, 216, 217, 221, 239, 240, 241, 242, 243, 246, 249, 319, 350, 378, 380, 383, 384, 386
Maine	90	Puerto Rico	253
Maryland	147, 167, 294, 317, 335, 340, 342, 347	Rhode Island	36

South Carolina

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Tennessee

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Texas

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Utah

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Virginia

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West Virginia

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Czechoslovakia

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France

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Germany

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Mexico

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Netherlands

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Norway

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South Africa

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Sweden

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Switzerland

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IV. RADIOISOTOPE SALES - FY 1971

A = Argonne National Laboratory
 B = Brookhaven National Laboratory
 D = Douglas-United Nuclear, Inc.
 I = Idaho Nuclear Corp.
 M = Mound Laboratory

R = Richland Operations Office, including Atlantic Richfield Hanford Co., Douglas Laboratories, Pacific-Northwest Laboratories, and WADCO Corp.
 S = Savannah River Plant

(Where "withdrawn" items were sold, special approval was granted by the Commission.)

Isotope	Domestic			Foreign			Project, ^{a/} AEC			Total		
	Ship-ments	Millicuries, unless noted	Dollars	Ship-ments	Millicuries, unless noted	Dollars	Ship-ments	Millicuries, unless noted	Dollars	Ship-ments	Millicuries, unless noted	Dollars
Actinium-227(M)	-	-	-	-	-	-	1	10.0	-	1	10.0	-
Americium(S)	-	-	-	-	-	-	11	249 g	-	11	249 g	-
Americium-241	43	338 g	64,310	30	506 g	75,994	14	325 g	36,138	87	1,169 g	176,442
Americium-241(R)	1	0.008 µCi	-	-	-	-	1	9 µCi	-	2	9.008 µCi	-
Americium-243	1	1.0 mg	100	5	32.0 mg	3,200	6	3,376.0 mg	-	12	3,409.0 mg	3,300
Antimony-122	2	6.0	61	-	-	-	-	-	-	2	6.0	61
Argon-37	6	6.9	426	4	1.3	145	-	-	-	10	8.2	571
Barium-131	3	7.0	1,285	-	-	-	-	-	-	3	7.0	1,285
Barium-133	6	12.7	1,900	-	-	-	1	1.0	150	7	13.7	2,050
Barium-140	10	166.1	638	23	250.0	1,838	5	15.0	150	38	431.1	2,626
Berkelium-249	-	-	-	-	-	-	9	13.7 mg	-	9	13.7 mg	-
Bismuth-204(B)	2	18.0	200	-	-	-	-	-	-	2	18.0	200
calcium-47	75	72.5	18,638	2	2.5	625	6	3.5	875	83	78.5	20,138
Californium-249	-	-	-	-	-	-	3	0.4 mg	-	3	0.4 mg	-
Californium-252	18	-	2,844	19	-	2,833	42	152.8 mg	3,105	79	152.8 mg	8,782
Californium-252(S)	3	3.01mg	41,395	1	1.05mg	12,050	42	97.0 mg	-	46	101.06mg	53,445
Carbon-14	13	927.1	2,808	1	5.0	33	2	0.5	36	16	932.6	2,877
Carbon-14(R)	-	-	-	-	-	-	4	345 Ci	-	4	345 Ci	-
Cerium-144	27	37,006.0	350	2	5,000.0	50	3	12.0	150	32	42,018.0	550

Isotope	Domestic			Foreign			Project, a/ AEC			Total		
	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars
Cerium-144(R)	-	-	-	-	-	-	16	21,782,284 Ci	-	16	21,782,284 Ci	-
Cesium-137	35	43,432 Ci	19,841	19	251,325 Ci	38,729	2	20 Ci	11	56	294,777 Ci	58,581
Cesium-137(R)	-	-	-	-	-	-	3	433,525 Ci	-	3	433,525 Ci	-
Chlorine-36	5	2.4	849	1	20.0	7,000	2	4.0	47	8	26.4	7,896
Chlorine-36(R)	-	-	-	-	-	-	1	20 Ci	-	1	20 Ci	-
Cobalt-60 metal	-	-	-	-	-	-	1	8,865 Ci	975	1	8,865 Ci	975
Cobalt-60 processed	7	94.0	445	-	-	-	1	1.0	25	8	95.0	470
Cobalt-60(B)	-	-	-	-	-	-	1	10,000 Ci	-	1	10,000 Ci	-
Cobalt-60(R)	1	40.0	-	-	-	-	-	-	-	1	40.0	-
Cobalt-60(S)	-	-	-	-	-	-	2	30,253 Ci	-	2	30,250 Ci	-
Curium(S)	-	-	-	-	-	-	14	820 g	-	14	820 g	-
Curium-244	1	1.0 mg	-	4	26.0 mg	2,600	11	30,910.0 mg	-	16	30,937.0 mg	2,600
curium-246	-	-	-	-	-	-	3	2.0 mg	-	3	2.0 mg	-
Curium-248	-	-	-	-	-	-	6	2.3 mg	15	6	2.3 mg	15
Deuterium(R)	1	200 g	-	-	-	-	-	-	-	1	200 g	-
Dysprosium-157(B)	8	200.0	1,200	-	-	-	-	-	-	8	230.0	1,200
Einsteinium-253	-	-	-	-	-	-	12	0.5 mg	-	12	0.5 mg	-
Europium-152-154	2	4.0	85	-	-	-	-	-	-	2	4.0	85
Fermium-255	-	-	-	-	-	-	3	-	-	3	-	-
Fermium-257	-	-	-	-	-	-	1	-	-	1	-	-
Fission Products	2	2.0	50	2	10.0	55	-	-	-	4	12.0	105
Gallium-72	-	-	-	-	-	-	1	-	60	1	-	60
Hafnium-181	7	115.0	375	-	-	-	5	33.0	125	12	148.0	500
Holmium-166(S)	-	-	-	1	1.0	-	-	-	-	1	1.0	-
Indium-114	5	10.1	125	-	-	-	3	5.5	55	8	15.6	180
Iodine-129	12	12,598 mg	7,344	6	5,751 mg	4,689	1	850 mg	638	19	19,199 mg	12,671
Iodine-130	-	-	-	-	-	-	1	150.0	25	1	150.0	25

Isotope	Domestic			Foreign			Project, a/ AEC			Total	
	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted
Iodine-131	55	5,595.0	5,660	-					-	55	5,595.0
Iodine-132	2	20.0	100	-	-				-	2	20.0
Iridium-192				-			1	10.0	25	1	10.0
Iridium-19(R)	5	89 Ci		-					-	5	89 Ci
Iron-59(R)				-			1	600 Ci	-	1	600 Ci
Krypton-85	77	2,064 Ci	48,771	26	1,768 Ci	40,686	12	504 Ci	8,722	115	4,336 Ci
Magnesium-28(B)	60	5.7	7,980	19	1.7	2,380		-	-	79	7.4
Molybdenum-99	-		-	1	20.0	25	-		-	1	20.0
Neodymium-147	-			-	-	-	4	43.0	2,159	4	43.0
Neptunium-237	8	6 g	1,755	13	548 g	123,318	21	425 g	39,572	42	979 g
Neptunium-237(R)	-			-			7	1,235 g	-	7	1,235 g
Nickel-63	3	228.0	1,303	3	3,079.0	16,975	4	1,196.0	6,232	10	4,503.0
Niobium-95	17	85.0	2,125	2	1,001.0	50	3	19.0	475	22	1,105.0
Palladium-106(R)	1	0.41 g	333	-	-			-	-	1	0.41 g
Palladium-109	1	10.0	30	-	-		2	40.0	120	3	50.0
Phosphorus-33	25	1,065.2	12,721	3	104.0	1,140	3	3.0	105	31	1,172.2
Plutonium(R)	39	293.6kg	11,145,366	3	3.1 kg	125,981	225	536 kg	-	267	832.7kg
Plutonium-236	3	-	378	-	-		6		2,045	9	-
Plutonium-238	14	274 g	177,581	-			13	2 g	27	27	276 g
Plutonium-238(M)	-	-	-	6	413	5,542	76	48,717 g	1,300	82	48,721 g
Plutonium-238(R)		-	-	-			15	332 g	-	15	332 g
Plutonium-238(S)	-	-	-	-	-		10	12.84 kg	-	10	12.84 kg
Plutonium-239	9	22 g	493	1	1 g	160	14	78 g	33	24	101 g
Plutonium-239(M)	-	-	-	-	-		16	4,359 g	1,723	16	4,359 g
Plutonium-239(S)		-	-	-			1	Negligible	-	1	Negligible
Plutonium-240	-	-	-	3	170.0 mg	508	8	90,337.0 mg	-	11	90,507.0 mg
Plutonium-241	-	-	-	3	150.0 mg	1,197	11	1,776.0 mg	-	14	1,926.0 mg

Isotope	Domestic			Foreign			Project, ^{a/} AEC			Total		
	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars
Plutonium-242	2	1000.1 mg	2	7	149.8 mg	2,380	8	16,233.3 mg	1,236	17	17,383.2 mg	3,618
Plutonium-242(S)					-		1	141 g		1	141 g	-
Plutonium-244	1			2	1.1 mg	200	1			4	1.1 mg	200
Polonium-208/209(M)		-			-		2	<0.1	300	2	<0.1	300
Polonium-210(M)	24	997 Ci	78,186		-		1	5 Ci		25	1,002 Ci	78,186
Promethium-147	22	112,735 Ci	24,983	47	13,806 Ci	5,157	3	320 Ci	350	72	126,861 Ci	30,490
Promethium-147(R)	2	100,000 Ci			-	-	10	3,340,020 Ci		12	3,440,020 Ci	
Protactinium-231	2				-		-			2		-
Rhenium-186	1	4.0	25	-	-					1	4.0	25
Rhodium-103(R)	1	0.45 g	333		-					1	0.45 g	333
Rubidium-86	18	679.1	511		-	-	7	238.0	195	25	917.1	706
Ruthenium-103	2	11.0	275	1	3.0	75	1	1.0	25	4	15.0	375
Ruthenium-106	12	51.5	1,315	2	20.0	290	7	13.0	325	21	84.5	1,930
Ruthenium-Rhodium-106 (R)	-				-		1	70 Ci		1	70 Ci	-
Samarium-151 (Sm as Sm ₂ O ₃)	7	121 mg	4,595	2	15 mg	540	3		792	12	136 mg	5,927
Scandium-46	5	81.0	160	1	5.0	25	1	12.5	25	7	98.5	210
Strontium-89	33	244.4	3,423	15	156.0	2,106				48	400.4	5,529
Strontium-89(R)	-	-			-		1	10,000 Ci		1	10,000 Ci	
Strontium-89-90(R)		-			-	-	1	8,103 Ci		1	8,100 Ci	-
Strontium-90	30	1,197,625 Ci	243,981	5	11,225 Ci	3,638	4	1.5 mc	30	39	1,208,850 Ci	247,649
Strontium-90 silicate	4	1 Ci	26	-	-		-			4	1 Ci	26
Strontium-90(R)	-				-		4	656,222 Ci	-	4	656,222 Ci	-
Sulfur-35(R)					-		1	80 Ci	-	1	80 Ci	-
Tantalum-182	2	4.5	50	1	5.0	50	1	1.0	25	4	10.5	125
Tantalum-182(R)	6	3,727 Ci	-		-					6	3,727 Ci	-
Technetium-99	7	14.5 g	848	8	72 g	3,935	4	1 g	64	19	87.5 g	4,897
Technetium-99(R)	1	1.0 g	333	-	-					1	1.0 g	333

Isotope	Domestic			Foreign			Project, ^{a/} AEC			Total		
	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars
Thallium-204	4	935.0	701	1	40.0	30	1	1.0	20	6	976.0	751
Thorium(R)	1	2 kg	40	-	-	-	13	1,358 kg	-	14	1,360 kg	40
Thorium(S)	-	-	-	-	-	-	6	129,000 lb	-	6	129,000 lb	-
Thorium-229	-	-	-	-	-	-	2	4.5 mg	-	2	4.5 mg	-
Thorium-229(M)	-	-	-	-	-	-	3	13.0 mg	-	3	13.0 mg	-
Thorium-230	2	60.0 mg	1,384	-	-	-	10	1,661.3 mg	3,033	12	1,721.3 mg	4,417
Thorium-232(M)	-	-	-	-	-	-	2	2,745 g	-	2	2,745 g	-
Thorium-Yttrium(R)	1	276 µCi	-	-	-	-	15	258 µCi	-	16	534 µCi	-
Thulium-170	-	-	-	-	-	-	1	1.0	150	1	1.0	150
Tritium	127	97,707 Ci	93,875	25	57,252 Ci	54,087	33	6,314 Ci	6,417	185	161,273 Ci	154,379
Tungsten-185	1	3.0	25	-	-	-	1	-	-	2	3.0	25
Uranium, depleted(R)	1	111 kg	-	1	1 kg	-	21	8,079 kg	-	23	8,191 kg	-
Uranium, depleted(S)	-	-	-	-	-	-	1	7 g	-	1	7 g	-
Uranium, enriched(R)	16	2,511.9 kg	-	-	-	-	121	30,321.7 kg	-	137	32,833.6 kg	-
Uranium, enriched(S)	-	-	-	-	-	-	10	5,462 kg	-	10	5,462 kg	-
Uranium, normal(R)	1	26 kg	-	1	107 kg	-	42	3,381 kg	-	44	3,514 kg	-
Uranium, normal(S)	-	-	-	-	-	-	6	2,771 kg	-	6	2,771 kg	-
Uranium-232	1	0.2 mg	10	-	-	-	7	127,638.4 mg	-	8	127,638.6 mg	10
Uranium-233	1	50.0 mg	129	3	2,010.0 mg	2,650	4	5,500.0 mg	258	8	7,560.0 mg	3,037
Uranium-233(R)	-	-	-	-	-	-	21	591.2 kg	-	21	591.2 kg	-
Uranium-233(S)	-	-	-	-	-	-	8	219 kg	-	9	219 kg	-
Uranium-234	-	-	-	2	210.0 mg	1,747	4	650.0 mg	-	5	860.0 mg	1,747
Uranium-235	10	677,298.0 mg	8,171	4	50,170.0 mg	187	25	216,185.0 mg	17	39	943,653.0 mg	8,375
Uranium-236	1	30,000.0 mg	-	2	120.0 mg	158	6	692.0 mg	-	9	30,812.0 mg	158
Uranium-238	7	125,048.7 mg	3,595	2	125,680.0 mg	2,725	21	687,463.3 mg	8	30	938,192.0 mg	6,318
Xenon-133	1,337	1,640 Ci	88,840	95	128 Ci	6,445	41	26 Ci	1,955	1,473	1,794 Ci	97,240

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Isotope	Domestic			Foreign			Project, ^{a/}			Total		
	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars	Ship- ments	Millicuries, unless noted	Dollars
Ytterbium(S)				-			1	10.0		1	10.0	
Yttrium-91	4	5,508.0	7,791	6	56.0	619	-	-	-	10	5,564.0	8,410
Zirconium-95	8	35.5	233	16	252.0	1,366	16	5,799.1	848	40	6,086.6	2,467
Cyclotron Service Irr. ^{b/}	82	60.0	122,901	2	2.0	822	3	3.0	1,089	87	85.0	124,812
Cyclotron Service Irr. (A) ^{b/}	182	-	19,706	-	-	-	53	-	-	235	-	19,706
Reactor Service Irr. ^{c/}	24	23.0	2,660	-	-	-	46	34.0	7,588	70	57.0	10,248
Reactor Service Irr. (A) ^{c/}	48	-	9,702	-	-	-	135	-	-	183	-	9,702
Reactor Service Irr. (B) ^{c/}	100	-	11,307	-	-	-	964	-	20,000	1,064	-	31,307
Reactor Service Irr. (D) ^{c/}				-	-	-	27	13,000 Ci	47,800	27	13,000 Ci	47,800
Reactor Service Irr. (I) ^{c/}	5	258,025.0	1,952	-	-	-	14	252,131.0	2,313	19	510,156.0	4,265
Reactor Service Irr. (R) ^{c/}	14	10 Ci	-	1	1.6 Ci	-	10	21 Ci	-	25	32.6 Ci	-
Reactor Service Irr. (S) ^{c/}				-	-	-	1	2.5 g	-	1	2.5 g	-
Special Services ^{d/}	300	15.5	286,387	5	-	45,264	109	1,501.6	47,769	414	1,517.1	379,420
Heavy Element Tech. Chgs. ^{e/}		-	41,905	-	-	23,038	-	-	125,979	-	-	190,922
Total	3,075	-	12,630,215	460	-	625,407	2,559	-	373,720	6,094	-	13,629,342

^{a/} Materials are sometimes transferred between AEC sites without dollars or at costs other than normal.

^{b/} Radioisotopes produced by cyclotron service irradiations: ^{234,235,236,237,243,246,247}Am, ^{133m}Ba, ²⁴²Bk, ^{205,206,207}Bi, ¹¹C, ^{129,134}Cs, ^{56,57,61}Co, ⁶⁴Cu, ^{243,244}Cm, ^{249,250,251,252}Es, ^{149,153}Eu, ¹⁸F, ¹⁵³Gd, ^{67,69,70}Ga, ^{67,68}Ge, ¹⁹⁷Au, ¹⁷³Hf, ¹¹¹In, ¹²³I, ^{187,190,191}Ir, ¹³³La, ¹⁷⁴Lu, ⁹⁹Mo, ^{236,237,238}Np, ⁵⁷Ni, ^{184,185}Os, ²³⁹Pu, ¹⁴⁸Pm, ¹⁸⁹Re, ⁹⁹Rh, ^{83,84}Rb, ^{95m,99m}Tc, ¹⁶⁸Tm, ¹²⁴Sn, ^{87,88}Y, ¹⁰⁵Ag, ¹⁷³Ta, ⁸⁹Zr.

^{c/} Radioisotopes produced by reactor service irradiations: ²⁴¹Am, ⁷⁶As, ^{80,80m}Br, ¹⁴¹Ce, ^{60m}Co, ⁵¹Cr, ^{163,165,169,171}Er, ¹⁶⁶Ho, ^{187,192m}Ir, ⁵⁹Fe, ^{81m}Kr, ⁸³Kr, ^{54,56}Mn, ^{238,239}Np, ²³³Pa, ²¹⁰Po, ¹⁰³Ru, ^{152,153,155}Sm, ²⁴Na, ¹⁸²Ta, ¹²²Te, ¹⁵⁵Tb, ¹⁷⁰Tm, ^{124,125}Sn, ²³⁷U, ¹²⁸Xe, ⁶⁹Zn.

^{d/} Includes such items as target fabrication, source encapsulation, and preparation of special chemical forms.

^{e/} Includes such items as fabricating, plating, and encapsulating sources; rolling foils; and handling.