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UC-400

List of DOE Radioisotope Customers with Summary of Radioisotope Shipments, FY 1987

D. A. Lamar
N. C. Van Houten

August 1988

Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830

Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute

PNL-6657

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LIST OF DOE RADIOISOTOPE CUSTOMERS WITH SUMMARY OF RADIOISOTOPE SHIPMENTS, FY 1987

D. A. Lamar
N. C. Van Houten

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Prepared for
the U.S. Department of Energy
under Contract DE-AC06-76RL0 1830

Pacific Northwest Laboratory
Richland, Washington 99352

This document is

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Larry E. Williams

Authorizing Official

Date: *06/13/2007*

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ABSTRACT

This edition of the radioisotope customer list was prepared at the request of the Office of Health and Environmental Research (ER-73), Office of Energy Research, U.S. Department of Energy (DOE). This document describes radioisotope distribution from DOE facilities to private firms, including foreign and other DOE facilities.

The information is divided into five sections: **1)** isotope suppliers, facility contact, and isotopes or services supplied; **2)** customers, suppliers, and isotopes purchased; **3)** isotopes purchased cross-referenced with customer numbers; **4)** geographic locations of radioisotope customers; and **5)** radioisotope sales and transfers for fiscal year 1987.

ACKNOWLEDGMENTS

The compilers thank the following laboratories and the U.S. Department of Energy Area Offices for their annual data contributions from which this report was produced :

Argonne National Laboratory
Brookhaven National Laboratory
Idaho National Engineering Laboratory/EG&G Idaho, Inc.
Los Alamos National Laboratory
Oak **Ridge** National Laboratory
Pacific Northwest Laboratory
Savannah River Operations Office
Westinghouse Hanford Company

LIST OF PREVIOUS REPORTS

Previous reports in this series are listed below by report number and fiscal year that radioisotopes were received. All of these reports were published in the year following the year listed (e.g., TID-2160 reports fiscal year 1964 activities, but the report publication date was 1965).

TID-2160 (FY 1964)	BNWL-1774 (FY 1972)	PNL-3839 (FY 1980)
ORNL-IIC-6 (FY 1965)	BNWL-1824 (FY 1973)	PNL-4177 (FY 1981)
ORNL-IIC-9 (FY 1966)	BNWL-1902 (FY 1974)	PNL-4759 (FY 1982)
ORNL-IIC-13 (FY 1967)	BNWL-1993 (FY 1975)	PNL-5126 (FY 1983)
ORNL-IIC-17 (FY 1968)	BNWL-2147 (FY 1976)	PNL-5492 (FY 1984)
ORNL-IIC-27 (FY 1969)	PNL-2572 (FY 1977)	PNL-5948 (FY 1985)
ORNL-IIC-32 (FY 1970)	PNL-2930 (FY 1978)	PNL-6361 (FY 1986)
ORNL-IIC-38 (FY 1971)	PNL-3274 (FY 1979)	

Similar reports covering the U.S. Department of Energy's stable isotopes' distribution programs have also been prepared and are available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161 (telephone 703/487-4650).

STABLE ISOTOPE SALES: MOUND FACILITY CUSTOMER AND SHIPMENT SUMMARY

Report Number and Date

MLM-2718 (FY 1979)
MLM-2843 (FY 1980)
MLM-2994 (FY 1981)
MLM-3095 (FY 1982)

Report Number and Date

MLM-3234 (FY 1983)
MLM-3366 (FY 1984)
MLM-3468 (FY 1985)
MLM-3494 (FY 1986)

STABLE ISOTOPE CUSTOMER LIST AND SUMMARY OF SHIPMENTS

Report Number and Date

ORNL/TM-7214 (FY 1979)
ORNL/TM-7764 (FY 1980)
ORNL/TM-8302 (FY 1981)
ORNL/TM-8704 (FY 1982)
ORNL/TM-8979 (FY 1983)

Report Number and Date

ORNL/TM-9430 (FY 1984)
ORNL/TM-9866/RI (FY 1985)
ORNL/TM-10324 (FY 1986)
ORNL/TM-10639 (FY 1987)

CONTENTS

ABSTRACT	. iii
ACKNOWLEDGMENTS	v
LIST OF PREVIOUS REPORTS	. vii
LIST OF ABBREVIATIONS	xi
1.0 ISOTOPE SUPPLIERS, FACILITY CONTACT, AND ISOTOPES OR SERVICES SUPPLIED	1
2.0 LIST OF CUSTOMERS, SUPPLIERS, AND ISOTOPES PURCHASED	5
3.0 LIST OF ISOTOPES PURCHASED CROSS-REFERENCED TO CUSTOMER NUMBERS	. 31
4.0 GEOGRAPHIC LOCATIONS OF RADIOISOTOPE CUSTOMERS	. 37
5.0 RADIOISOTOPE SALES AND TRANSFERS - FY 1987	. 43

LIST OF ABBREVIATIONS

AG-105	Silver-105	Ci	Curie
AL-26	Aluminum-26	CM-243	Curium-243
AM-241	Americium-241	CM-244	Curium-244
AM-243	Americium-243	CM-248	Curium-248
AO	Administration Only; no shipments made from site	c0-57	Cobalt-57
AT-211	Astatine-211	c0-58	Cobalt-58
AU-195	Gold-195	c0-60	Cobalt-60
AU-196	Gold-196	CS-137	Cesium-137
AU-198	Gold-198	CSI	Cyclotron Service Irradiations
B-11	Boron-11	CSI-BNL	Cyclotron Service Irradiations by Brookhaven
BA-140	Barium-140	CSI-LANL	Cyclotron Service Irradiations by Los Alamos
BE-7	Beryllium-7		
BK-249	Berkelium-249	CU-64	Copper-64
BR-77	Bromine-77	CU-65	Copper-65
BR-82	Bromine-82	CU-67	Copper-67
C-11	Carbon-11	CU-68	Copper-68
C-14	Carbon-14	DU	Depleted Uranium
CA-47	Calcium-47	E	Enriched
CAP	Encapsulation	ES-253	Einsteinium-253
CD-109	Cadmium-109	EU	Enriched Uranium
CE-139	Cerium-139	EU-152	Europium-152
CE-144	Cerium-144	F-18	Fluorine-18
CF-249	Californium-249	FE-52	Iron-52
CF-252	Californium-252	FE-55	Iron-55

FE-59	Iron-59	mg	Milligram
FP	Fission Products	MG-28	Magnesium-28
g	Gram	MI	Miscellaneous Isotopes
GA-67	Gallium-67	MIS	Miscellaneous Quantities
GD-148	Gadolinium-148	MS	Miscellaneous Services
GD-153	Gadolinium-153	MN-54	Manganese-54
GE-68	Germanium-68	MN-57	Manganese-57
H-3	Hydrogen-3 (tritium)	NA-22	Sodium-22
HF-172	Hafnium-172	NA-24	Sodium-24
HO-163	Holmium-163	NB-95	Niobium-95
I-123	Iodine-123	NI-63	Nickel-63
I-125	Iodine-125	NP-237	Neptunium-237
I-129	Iodine-129	NP-237H	High Purity NP-237
I-131	Iodine-131	NP-237O	Oxide of NP-237
IN-111	Indium-111	NU	Natural Uranium
IR-192	Iridium-192	OS-191	Osmium-191
kCi	Kilocurie	P-33	Phosphorus-33
kg	Kilogram	PA-231	Protactinium-231
KR-85	Krypton-85	PD-109	Palladium-109
KR-85E	Enriched Krypton-85	PM-147	Promethium-147
LU-172	Lutetium-172	PO-208	Polonium-208
LU-173	Lutetium-173	PU-236	Plutonium-236
MCP	Miscellaneous Compound Preparations	PU-237	Plutonium-237
μ Ci	Microcurie	PU-238	Plutonium-238
μ g	Microgram	PU-239	Plutonium-239
mCi	Millicurie	PU-240	Plutonium-240

PU-241	Plutonium-241	TS	Technical Services
PU-242	Plutonium-242	TE-128	Tellurium-128
RB-81	Rubidium-81	TH-229	Thorium-229
RB-83	Rubidium-83	TH-230	Thorium-230
RB-86	Rubidium-86	TH-232	Thorium-232
RS ■	Reactor Service Irradiations	TH-234	Thorium-234
RU-97	Ruthenium-97	TI-44	Titanium-44
RU-103	Ruthenium-103	TM-167	Thulium-167
RU-106	Ruthenium-106	TM-170	Thulium-170
RW	Radioisotopes Withdrawn; prepared under special approval	TP	Target Preparations
SE-75	Selenium-75	TRU-SV	TRU Services
SI-31	Silicon-31	U-233	Uranium-233
SI-32	Silicon-32	U-233SP	Uranium-233 Special Services
SM-145	Samarium-145	U-234	Uranium-234
SM-151	Samarium-151	U-235	Uranium-235
SN-117	Tin-117	U-236	Uranium-236
SP	Special Processes	U-238	Uranium-238
SR-82	Strontium-82	V-48	Vanadium-48
SR-85	Strontium-85	v-54	Vanadium-54
SR-89	Strontium-89	XE-127	Xenon-127
SR-90	Strontium-90	Y-87	Yttrium-87
SS	Special Services	Y-88	Yttrium-88
TB-158	Terbium-158	Y-90	Yttrium-90
TS	Technical Service	ZN-65	Zinc-65
TC-99	Technetium-99	ZR-95	Zirconium-95

1.0 ISOTOPE SUPPLIERS, FACILITY CONTACT, AND ISOTOPES OR SERVICES SUPPLIED

This section lists suppliers of isotopes and the contact person for each DOE facility, and lists the isotopes supplied or describes the services rendered. If readers need more specific information about isotope sales or shipments for a particular facility, they should contact the person listed for that facility.

ISOTOPE SUPPLIERS, FACILITY CONTACT, AND ISOTOPES OR SERVICES SUPPLIED

<u>Isotope Supplier</u>	<u>Supplier Code</u>	<u>Facility Contact</u>	<u>Isotopes or Service</u>
Argonne National Laboratory	ANL	3. E. Grindler Chemistry Division Argonne National Laboratory 9700 South Cass Avenue Argonne, IL 60439 FTS 972-3686 Commercial (312) 972-3686	No isotopes sold directly. Isotopes produced counted in ORNL sales.
Brookhaven National Laboratory	BNL	K. S. Dahms Isotopes and Special Materials Group Brookhaven National Laboratory Upton, Long Island, NY 11973 FTS 666-4051 Commercial (516) 282-4051	AU-196, BE-7, BK-249, C-14, CO-57, CO-58, CO-60, H-3, I-125, I-131, IN-111, MI, MN-54, MN-57, NA-22, NP-237, RSI, RU-97, RU-106, SM-145, U-235, U-238
Idaho National Engineering Laboratory	INEL	J. T. Parks EG&G Idaho, Inc. Idaho National Engineering Laboratory P.O. Box 1625 Idaho Falls, ID 83415 FTS 583-4266 Commercial (208) 526-4266	CO-60, GD-153, IR-192, RS ■

<u>Isotope Supplier</u>	<u>Supplier Code</u>	<u>Facility Contact</u>	<u>Isotopes or Service</u>
Los Alamos National Laboratory	LANL	K. E. Peterson Group INC-11, Mail Stop 5514 Los Alamos National Laboratory Los Alamos, NM 87545 FTS 843-4675 Commercial (505) 667-4675	BE-7, BR-77, CD-109, CU-64, CU-67, CU-68, GE-68, NA-22, RB-83, SI-32, SM-145, SR-82, SR-85, TI-44, XE-127, Y-88
Oak Ridge National Laboratory	ORNL	T. A. Danner Isotope Distribution Office Oak Ridge National Laboratory P.O. Box X Oak Ridge, TN 37831 FTS 624-6506 Commercial (615) 574-6506	AM-241, AM-243, CAP, CE-144, CF-252, CM-244, CO-60, CS-137, CSI, FE-55, GD-153, H-3, I-129, IR-192, KR-85, KR-85E, MCP, MG-28, MIS, NI-63, NP-237, P-33, PM-147, PU-238, PU-239, PU-242, RSI, RU-106, RW, SE-75, SM-151, SP, SR-89, SR-90, SS, TC-99, TH-230, TH-232, TP, TRU-SV, TS, U-233, U-234, U-235, U-236, U-238, XE-127, Y-90
Pacific Northwest Laboratory	PNL	O. P. Amacker Safeguards Section Pacific Northwest Laboratory P.O. Box 999 Richland, WA 99352 FTS 375-2819 Commercial (509) 375-2819	No isotopes produced in FY 1987

<u>Isotope Supplier</u>	<u>Supplier Code</u>	<u>Facility Contact</u>	<u>Isotopes or Service</u>
Savannah River Plant	SRP	R. L. Chandler Process & Weapons Division Department of Energy P.O. Box A Aiken, SC 29801 FTS 239-5547 Commercial (803) 725-5547	CF-252
Westinghouse Hanford Company	WHC	R. W. Powell, Manager Engineering Development Westinghouse Hanford Company P.O. Box 1970 Richland, WA 99352 FTS 444-4529 Commercial (509) 376-4529	No isotopes sold directly. Isotopes produced counted in ORNL sales.

2.0 LIST OF CUSTOMERS, SUPPLIERS, AND ISOTOPES PURCHASED

This section is an alphabetical listing of domestic and foreign radio-isotope customers and their addresses. Each customer has a customer number that is used to cross-reference data in the other sections of the report. Isotope purchases for each customer are listed below each address, along with the supplier code for the laboratory supplying the isotopes.

ALPHABETICAL LISTING (BY COUNTRY) OF CUSTOMERS,
SUPPLIERS, AND ISOTOPES PURCHASED

UNITED STATES

<p>1 AT&T Technologies Incorporated
P.O. Box 105229
Atlanta, GA 30348

ORNL: KR-85</p> <p>2 Abbott Laboratories
P.O. Box 177
Abbott Park, IL 60064

ORNL: Y-90</p> <p>3 Accu Labs
11385 W. 48th Avenue
Wheat Ridge, CO 80033

ORNL: SP</p> <p>4 Advanced Medical Systems, Inc.
621 Factory Row
Geneva, OH 44041

ORNL: CO-60, MCP, SS</p> <p>5 Advanced Micro Devices, Inc.
P.O. Box 453
Sunnyvale, CA 94088-3453

ORNL: KR-85</p> <p>6 Advanced Power Technology, Inc.
405 S.W. Columbia Avenue
Bend, OR 97702

ORNL: KR-85</p> | <p>7 Aeonic Systems, Inc.
46 Manning Road
Billerica, MA 01821

ORNL: KR-85E</p> <p>8 Albert Einstein College of Medicine
1300 Morris Park Avenue
Bronx, NY 10461

LANL: CU-67
ORNL: CSI</p> <p>9 Amersham Corporation
Arlington Heights, IL 60005

ORNL: CM-244, TP</p> <p>10 Argonne National Laboratory
9700 South Cass Ave.
Argonne, IL 60439

BNL: NP-237, RSI, U-238
LANL: BR-77
ORNL: CSI, SP, TP</p> <p>11 Argonne National Laboratory
P.O. Box 2528
Idaho Falls, ID 83401

ORNL: KR-85, TP</p> <p>12 Atlantic Richfield Hanford Company
P.O. Box 769
Richland, WA 99352

ORNL: CAP, TP</p> |
|--|---|

<p>13 Babcock & Wilcox Company
Naval Nuclear Fuel Division
Lynchburg, VA 24505</p> <p>BNL: U-235</p>	<p>20 Bristol-Myers Company
P.O. Box 4755
Syracuse, NY 13221</p> <p>ORNL: MCP</p>
<p>14 Battelle Memorial Institute
505 King Highway
Columbus, OH 43201   ORNL: NP-237, TP, U-233,
U-235, U-238</p>	<p>21 Brookhaven National Laboratory
Isotopes & Special Metals
Group
Upton, Long Island, NY 11973   LANL: GE-68, XE-127
ORNL: CSI, SS</p>
<p>15 Bell Telephone Laboratories,
Inc.
600 Mountain Avenue
Murray Hill, NJ 07974</p> <p>BNL: U-238</p>	<p>22 Brooks AFB
San Antonio, TX 78235</p> <p>SRP: CF-252</p>
<p>16 Bendix Corporation, The
2000 East Bannister Road
Kansas City, MO 64131</p> <p>ORNL: SS</p>	<p>23 Burroughs Corporation
10850 via Frontera
San Diego, CA 92127</p> <p>ORNL: KR-85</p>
<p>17 Bionetics Research, Inc.
Biotechnology Division
1330A Piccard Drive
Rockville, MD 20850</p> <p>BNL: IN-111</p>	<p>24 CIBA-GEIGY Corporation
181 Passaic Avenue
Summit, NJ 07901</p> <p>ORNL: MG-28</p>
<p>18 Biosources, Limited
4-4 Bud Way
Nashua, NH 03063</p> <p>ORNL: GD-153</p>	<p>25 California Institute of
Technology
Pasadena, CA 91125</p> <p>ORNL: CSI</p>
<p>19 Brigham & Women's Hospital
10 Vining Street
Boston, MA 02115</p> <p>ORNL: GD-153</p>	<p>26 California State University
800 North State College Blvd.
Fullerton, CA 92634   LANL: CU-67
ORNL: CSI, MG-28</p>

<p>27 Calm VA-1 (525)
P.O. Box 2971
Austin, TX 78769

ORNL: XE-127</p> | <p>34 Continental Testing
Laboratories
8385 U.S. Highway 17-92
Fern Park, FL 32730

ORNL: KR-85</p> |
| <p>28 Case-Western Reserve
University
2220 Circle Drive
Cleveland, OH 44106

ORNL: MG-28, SP</p> | <p>35 Cornell University
Purchasing
120 Maple Avenue
Ithaca, NY 14853

BNL: CO-57</p> |
| <p>29 Catholic University of America
Administration Bldg., Room 200
Washington, DC 20064

LANL: CU-67
ORNL: CSI</p> | <p>36 Cray Research, Inc.
925 First Avenue
Chippewa Falls, WI 54729

ORNL: KR-85</p> |
| <p>30 Center for Molecular Medicine
100 Bergen Street
Newark, NJ 07103

ORNL: SR-90, Y-90</p> | <p>37 Cryogenic Rare Gas
Laboratories, Inc.
913 Commerce Circle
Hanahan, SC 29410

ORNL: KR-85</p> |
| <p>31 Children's Hospital
300 Longwood Avenue
Boston, MA 02115

BNL: RSI
ORNL: GD-153, MCP</p> | <p>38 Cytogen Corporation
201 College Road East
Princeton, NJ 08540

ORNL: Y-90</p> |
| <p>32 Columbia Presbyterian Hospital
Harkness, 2nd Floor
622 W. 168th Street
New York, NY 10032

BNL: RU-97</p> | <p>39 Digital Equipment Corp,
100 Minuteman Road
Andover, MA 01810

ORNL: KR-85</p> |
| <p>33 Consolidated Controls Corp.
P.O. Box 726
Springfield, VA 22150

ORNL: H-3</p> | <p>40 Dow Chemical Company
P.O. Box 191
Midland, MI 48640

ORNL: Y-90</p> |

- 41 Dow Chemical USA
Texas Operations
Freeport, TX 77541

ORNL: Y-90
- 42 Duke University
P.O. Box 40005
Durham, NC 27706

ORNL: CSI
- 43 Duke University Medical Center
Durham, NC 27710

LANL: GE-68
- 44 E. I. DuPont de Nemours & Company, Inc.
Experimental Station
Wilmington, DE 19898

ORNL: TC-99
- 45 E. I. DuPont de Nemours & Company, Inc.
Nuclide and Source Division
331 Treble Cove Road
North Billerica, MA 01862

BNL: NA-22
LANL: GE-68, NA-22, Y-88
- 46 E. I. DuPont de Nemours & Company, Inc.
NEN Products
Accounts Payable
549 Albany Street
Boston, MA 02118

ORNL: CSI, FE-55, GD-153, H-3, I-129, KR-85E, P-33, RW, TC-99, Y-9
- 47 E. I. DuPont de Nemours & Company, Inc.
Savannah River Plant
Aiken, SC 29809

LANL: Y-88
ORNL: CS-137, CSI, I-129, SP
- 48 E. R. Squibb & Sons
P.O. Box CN 5303
Princeton, NJ 08540

ORNL: CSI, GD-153, TC-99, Y-90
- 49 E. R. Squibb and Sons
Route 1 via Gate 125
New Brunswick, NJ 08902

LANL: SR-82
- 50 EG&G Idaho, Inc.
P.O. Box 1625
Idaho Falls, ID 83415

INEL: RSI
ORNL: CF-252, MIS, SP, TP
- 51 Edgerton, Germeshausen and Grier
6456 So. Escondido Avenue
Las Vegas, NV 89101

ORNL: TP, U-235, U-238
- 52 Environmental Processing, Inc.
1321 N. Plano Road
Richardson, TX 75801

ORNL: KR-85

53 Fairchild Camera & Instrument
Corporation
Discrete Division
4300 Redwood Highway
San Rafael, CA 94903

ORNL: KR-85

54 Fairchild Camera & Instrument
Corporation
Linear Division
P.O. Drawer 7282
Mt. View, CA 94042

ORNL: KR-85

55 Fairchild Semiconductor
Corporation
P.O. Box 5000
Puyallup, WA 98373-0900

ORNL: KR-85

56 Fairchild Semiconductors
333 Western Avenue
Portland, ME 04106

ORNL: KR-85

57 Fermi National Accelerator
Lab.
Batavia, IL 60510

BNL: U-238

58 Florida State University
Tallahassee, FL 32306

ORNL: SS

59 Frontier Technology Corp.
1641 Burnett Drive
Xenia, OH 45385

ORNL: CAP, CF-252, MIS, TS
SRP: CF-252

60 GNI Incorporated
P.O. Box 57638
Webster, TX 77598

ORNL: CS-137, GD-153, MCP

61 Gamma Industries, Inc.
2255 Ted Dunham Avenue
Baton Rouge, LA 70802

ORNL: IR-192

62 General Electric Company
P.O. Box 254
San Jose, CA 95103

ORNL: AM-241, CAP, CF-252,
CO-60, SR-89, TRU-SV,
TS

63 General Electric Company
Vallecitos Nuclear Company
Vallecitos Road
Pleasanton, CA 94566

INEL: CO-60
SRP: CF-252

64 General Ionex Corporation
19 Graf Road
Newburyport, MA 01950

ORNL: TP

65 Genicom Corporation
One General Electric Drive
Waynesboro, VA 22980

ORNL: KR-85

66 George Washington University
801 22nd Street, N.W.
Washington, DC 20052

ORNL: MCP, Y-90

<p>67 Georgia Institute of Technology
225 North Avenue, N.W.
Atlanta, GA 30332</p> <p>ORNL: KR-85</p>	<p>74 Hunter College
695 Park Avenue
New York, NY 10021</p> <p>LANL: CU-67</p>
<p>68 Gollob Analytical Service Corporation
47 Industrial Road
Berkeley Heights, NJ 07922</p> <p>ORNL: H-3, KR-85</p>	<p>75 Hybritech, Incorporated
9850 Distribution Avenue
San Diego, CA 92121   LANL: Y-88
ORNL: CSI, Y-90</p>
<p>69 Grumman Aerospace Corp.
South Oyster Bay Road
Bethpage, NY 11714</p> <p>BNL: RSI</p>	<p>76 IBM Corporation
P.O. Box 9452
New Haven, CT 06534-0452</p> <p>ORNL: CSI, RSI, TP</p>
<p>70 Harris Semiconductor
P.O. Box 883
Melbourne, FL 32901</p> <p>ORNL: KR-85</p>	<p>77 IBM Research Center
Kitchawan Road, Route 134
Yorktown, NY 10598</p> <p>LANL: CU-67</p>
<p>71 High Rel Burn-In
1710 Ringwood Avenue
San Jose, CA 95131</p> <p>ORNL: KR-85</p>	<p>78 ICN Biomedicals, Inc.
P.O. Box 19536
Irvine, CA 92714   ORNL: CS-137, H-3, KR-85,
RU-106, SE-75</p>
<p>72 Hughes Aircraft Company
P.O. Box 92907
Los Angeles, CA 90009</p> <p>ORNL: KR-85</p>	<p>79 Illinois Power Company
500 South 27th Street
Decatur, IL 62525</p> <p>ORNL: KR-85</p>
<p>73 Humanoid Systems
17022 Montanero Street
Carson, CA 90746</p> <p>ORNL: TH-232, TP</p>	<p>80 Immunomedics, Inc.
100 Bergen Street
Newark, NJ 07103   LANL: CU-67
ORNL: CSI, Y-90</p>

- 81 Industrial Nuclear Company
1428 Park Avenue
Hoboken, NJ 07030
ORNL: XR-192
- 82 Intersil, Inc.
10600 Ridgeview Court
Cupertino, CA 95014
ORNL: KR-85
- 83 Iotech, Inc.
11080 Irma Drive
Northglenn, CO 80233
ORNL: CO-60, CS-137
- 84 Iowa State University
Ames Laboratory
Ames, IA 50011
ORNL: SP
- 85 Isotope Products Laboratories
404 South Luke Street
Burbank, CA 91502
LANL: BE-7, CD-109, GE-68,
NA-22, SI-32, SM-145,
Y-88
ORNL: CAP, CE-144, CF-252,
CSI, GD-153, I-129,
KR-85, NP-237, PM-147,
RU-106, SP, SS, TC-99,
TH-230, TP, U-235, Y-90
- 86 J. L. Shepherd and Assoc.,
Inc.
1010 Arroyo St.
San Fernando, CA 91348
INEL: CO-60
ORNL: CO-60, CS-137, MCP, RSI
- 87 John Muir Cancer & Aging
Research Institute
2055 N. Broadway
Walnut Creek, CA 94596
ORNL: Y-90
- 88 KMS Fusion, Inc.
3941 S. Research Park Drive
P.O. Box 1567
Ann Arbor, MI 48106
ORNL: H-3
- 89 Kaman Instrumentation Corp.
P.O. Box 7463
Colorado Springs, CO 80933
ORNL: CSI, H-3, RSI, TP
- 90 Knolls Atomic Power Laboratory
P.O. Box 1072
Schenectady, NY 12301
ORNL: U-238
- 91 LSI Logic Corporation
1551 McCarthy Boulevard
Milpitas, CA 95035
ORNL: KR-85
- 92 Lamont-Doherty Geological
Observatory
Palisades, NY 10964
ORNL: SP, U-233
- 93 Lawrence Livermore National
Laboratory
Box 808
Livermore, CA 94550
BNL: BK-249
LANL: RB-83
ORNL: MIS, SP, TP, TS

<p>94 Leach Corporation
Relay Division
5915 Avalon Boulevard
Los Angeles, CA 90003</p> <p>ORNL: KR-85</p>	<p>100 Los Alamos National Laboratory
P.O. Box 1663
Los Alamos, NM 87545   BNL: NA-22, RSI
LANL: BE-7, CD-109, CU-64,
CU-67, RB-83
ORNL: I-129, NP-237, PU-239,
RSI, SP, TC-99, TP</p>
<p>95 Lehigh University
Matl's Science & Eng.
264 Whitaker Lab #5
Bethlehem, PA 18015</p> <p>BNL: RSI</p>	<p>101 Lovelace Biomedical & Environ-
mental Research Institute,
Incorporated
Bldg. 9217, Area Y
Kirtland, NM 87115   LANL: BE-7
ORNL: CSI</p>
<p>96 Litton Industries
Guidance and Control Systems
5500 Conoga Avenue
Woodland Hills, CA 91365</p> <p>ORNL: KR-85</p>	<p>102 Mallinckrodt Nuclear
P.O. Box 5840
St. Louis, MO 63134</p> <p>ORNL: CSI</p>
<p>97 Lockheed Aircraft Corporation
P.O. Box 504
Sunnyvale, CA 94088</p> <p>ORNL: KR-85</p>	<p>103 Mallinckrodt, Inc.
2703 Wagner Place
Maryland Heights, MO 63043</p> <p>ORNL: CSI, SE-75, XE-127</p>
<p>98 Lockheed Missles & Space Co.
Product Assessment Lab
Bldg. 150 - Column D7
Sunnyvale, CA 94088</p> <p>BNL: NA-22</p>	<p>104 Manufacturing Sciences Corp.
804 Kerr Hollow Road
Oak Ridge, TN 37831</p> <p>BNL: U-238</p>
<p>99 Long Island Lighting Company
Shoreham Nuclear Power Station
250 Old Country Road
Mineola, NY 11501</p> <p>BNL: RSI</p>	<p>105 Marine Biological Laboratory
Wood Hole, MA 02543</p> <p>ORNL: MG-28</p>

106 Martin Marietta Energy Systems
Oak Ridge Gaseous Diffusion
Plant
Post Office Box P
Oak Ridge, TN 37830

ORNL: KR-85, TC-99

107 Martin Marietta Energy Systems
Y-12 Plant
P.O. Box Y
Oak Ridge, TN 37831

ORNL: GD-153, IR-192, SS

108 Massachusetts General Hospital
Physics Research Laboratory
Fruit Street
Boston, MA 02114

ORNL: MCP

109 Massachusetts Institute of
Technology
Box 69
Cambridge, MA 02139

BNL: RSI

ORNL: MCP

110 Measurex Corporation
10475 Imperial Avenue
Cupertino, CA 95014

ORNL: KR-85E

111 Medi-Physics, Incorporated
P.O. Box 289
Paramus, NJ 07653-0289

ORNL: GD-153

112 Medical & Scientific
Enterprises Incorporated
75 Union Avenue
Sudbury, MA 01776

ORNL: GD-153

113 Medical Research Foundation
181-A Upper Riverdale Road
Riverdale, GA 30274

ORNL: Y-90

114 Memorex Corporation
P.O. Box 4757
Santa Clara, CA 95054

ORNL: KR-85

115 Metalrace, Inc.
13715 Rider Trail North
Earth City, MO 63045

ORNL: SP

116 Minn. Mining & Mfg. Co.
Twin Cities Army Ammo Plant
Bldg. 590
New Brighton, MN 55112

BNL: SM-145

117 Minnesota Mining and
Manufacturing Co.
P.O. Box 33121
St. Paul, MN 55133

ORNL: GD-153, KR-85, KR-85E,
SS

118 Misericordia Hospital
54th Street and Cedar Avenue
Philadelphia, PA 19143

ORNL: KR-85

<p>119 Mission Research Corp.
1720 Randolph Road
Albuquerque, NM 87106</p> <p>BNL: NA-22</p>	<p>126 National Semiconductor Corp.
2900 Semiconductor Drive
Santa Clara, CA 95051-8090</p> <p>ORNL: KR-85</p>
<p>120 Monolithic Memories, Inc.
2175 Mission College Blvd.
Santa Clara, CA 95054</p> <p>ORNL: KR-85</p>	<p>127 National Semiconductor Corp.
5901 S. Calle Santa Cruz
Tucson, AZ 85706</p> <p>ORNL: KR-85</p>
<p>121 Moravek Biochemicals, Inc.
577 Mercury Lane
Brea, CA 92621</p> <p>ORNL: H-3</p>	<p>128 Naval Air Propulsion Center
1440 Parkway Avenue
Trenton, NJ 08628</p> <p>ORNL: KR-85</p>
<p>122 Motorola, Inc.
3501 Ed Bluestein Boulevard
Austin, TX 78721</p> <p>ORNL: KR-85</p>	<p>129 Naval Research Laboratory
4555 Overlook Avenue, S.W.
Washington, DC 20375</p> <p>BNL: MN-54, MN-57, NA-22</p>
<p>123 Motorola, Inc.
5005 East McDowell Road
Phoenix, AZ 85008</p> <p>ORNL: KR-85</p>	<p>130 Naval Weapons Support Center
Bldg. 2087
Code 60541
Crane, IN 47522</p> <p>BNL: NA-22</p>
<p>124 Mount Sinai Hospital
Fifth Avenue and 100th Street
New York, NY 10029</p> <p>BNL: H-3</p>	<p>131 NeoRx Corporation
410 West Harrison Road
Seattle, WA 98119   LANL: CU-67
ORNL: CSI</p>
<p>125 NASA Space Center
Building 420
Houston, TX 77058</p> <p>BNL: RSI</p>	<p>132 Neutron Products, Inc.
P.O. Box 68
Mt. Ephraim Road
Dickerson, MD 20753   INEL: CO-60
ORNL: MCP, RSI, SR-89</p>

- 133 New York State Department of Health
Division of Labs and Res.
Empire State Plaza
Albany, NY 12201

BNL: RSI
- 134 New York University Medical Center
550 First Avenue
New York, NY 10016

ORNL: MCP
- 135 North Carolina Memorial Hospital
101 E. Weaver St.
Carrboro, NC 27510

ORNL: XE-127
- 136 North Shore University Hospital
300 Community Drive
Manhasset, NY 10030

BNL: 1-125, RU-97
ORNL: CSI
- 137 Nuclear Radiation Developments
2937 Alt Boulevard North
Grand Island, NY 14072

ORNL: AM-241, CAP
- 138 Nuclear Sources and Services
P.O. Box 14023
Houston, TX 77021

ORNL: KR-85
- 139 Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37830

LANL: GE-68, TI-44
ORNL: CSI, MCP, MIS, Y-90
- 140 Oak Ridge National Laboratory
P.O. Box X
Oak Ridge, TN 37831-6015

BNL: RSI, U-238
INEL: GD-153, IR-192, RSI
LANL: BE-7, SR-85
ORNL: CAP, CF-252, CM-244, CS-137, CSI, GD-153, I-129, MCP, MIS, RW, SP, SS, TC-99, TP
- 141 Ohio State University Medical Center
Doan Hall, N163
410 West 10th Avenue
Columbus, OH 43210

BNL: I-125
- 142 Ohio State University Research Foundation
1314 Kinnear Road
Columbus, OH 43212

ORNL: H-3
- 143 Oregon State University
Corvallis, OR 97330

BNL: AU-196, NA-22
ORNL: RW
- 144 Overhoff Technology Corp.
1160 U.S. Route 50
P.O. Box 182
Milford, OH 45150-9705

ORNL: KR-85E

<p>145 Pacific Northwest Laboratory
Battelle-Northwest
P.O. Box 999
Richland, WA 99352</p> <p>LANL: Y-88
ORNL: CAP, CSI, NP-237, SS</p> <p>146 Pathfinder Laboratories, Inc.
11542 Fort Mims
St. Louis, MO 63141</p> <p>ORNL: H-3</p> <p>147 Pett Electronics
858 Hanley Industrial Ct.
St. Louis, MO 63144</p> <p>LANL: GE-68</p> <p>148 Potter and Brumfield
Princeton, IN 47570</p> <p>ORNL: KR-85</p> <p>149 Precision Monolithics, Inc.
1500 Space Park Drive
Santa Clara, CA 95050</p> <p>ORNL: KR-85</p> <p>150 Princeton University
Plasma Physics Laboratory
P.O. Box 451
Princeton, NJ 08544</p> <p>ORNL: CF-252, MIS</p> <p>151 Production Data, Incorporated
P.O. Box 3266
Bakersfield, CA 93385</p> <p>ORNL: KR-85</p> | <p>152 Purdue University
West Lafayette, IN 47907</p> <p>ORNL: CSI</p> <p>153 Questron Corporation
10020 Sorrento Road
San Diego, CA 92121</p> <p>BNL: NA-22</p> <p>154 RCA
Raritan, NJ 08869</p> <p>ORNL: KR-85</p> <p>155 Radiation Sterilizers, Inc.
3000 Sand Hill Road
Building 4, Suite 245
Menlo Park, CA 94025</p> <p>ORNL: CO-60, RSI</p> <p>156 Raytheon Company
350 Ellis Street
Mountain View, CA 94042</p> <p>ORNL: KR-85</p> <p>157 Raytheon Company
350 Lowell Street
West Andover, MA 01810</p> <p>ORNL: KR-85</p> <p>158 Reactor Experiments, Inc.
963 Terminal Way
San Carlos, CA 94070</p> <p>ORNL: TP, U-235</p> |
|---|--|

- 159 Rensselaer Polytechnic
Institute
110 8th Street
Troy, NY 12181

BNL: NA-22
ORNL: CSI, FIG-28
- 160 Research and Education
Institute, Inc.
Harbor-UCLA Medical Center
1124 West Carson Street
Torrance, CA 90502-2064

ORNL: MCP
- 161 Reuter-Stokes, Inc
Edison Park
8499 Darrow Road
Twinsburg, OH 44087

ORNL: CAP, TP, U-234, U-235
- 162 Rockwell International
Rocketdyne Division
8900 DeSoto Avenue
Canoga Park, CA 91304

BNL: RSI
- 163 Rockwell International Elect.
Opns.
3400 E. LaPalma Avenue
Anaheim, CA 92803

BNL: NA-22
- 164 SUNY at Albany
Physics Department
1400 Washington Avenue
Albany, NY 12222

BNL: NA-22
- 165 Safety Light Corporation
4150-A Old Berwick Road
Bloomsburg, PA 17815

ORNL: H-3, KR-85
- 166 San Francisco State University
Physics & Astronomy Department
1600 Holloway Avenue
San Francisco, CA 94132

BNL: BE-7
- 167 Sandia Corporation
P.O. Box 5800
Albuquerque, NM 87115

ORNL: MIS, TP, U-235
- 168 Sandia National Laboratory
Div. 2126, Bldg. 891
1515 Eubank SE
Albuquerque, NM 87123

BNL: MN-54, MN-57, NA-22
- 169 Saunders-Roe
Saunders-Roe Developments,
Incorporated
P.O. Box 5536
2580 Landmark Drive
Winston-Salem, NC 27103

ORNL: H-3
- 170 Schlumberger Technology Corp.
Old Quarry Road
P.O. Box 307
Ridgefield, CT 06877

ORNL: H-3

- 171 **Self-Powered Lighting, Ltd.**
8 Westchester Plaza
Elmsford, NY 10523

ORNL: H-3
- 172 Signetics Corporation
1275 South 800 East
Orem, UT 84057

ORNL: KR-85
- 173 Signetics Incorporated
811 East Arques Avenue
P.O. Box 3409
Sunnyvale, CA 94088-3409

ORNL: KR-85
- 174 Siliconix, Inc.
2201 Laurelwood Road
Santa Clara, CA 95054

ORNL: KR-85
- 175 Sloan-Kettering Cancer Center
411 East 67th Avenue
New York, NY 10021

LANL: GE-68
- 176 Sloan-Kettering Institute
425 East 68th Street
New York, NY 10021

ORNL: CSI
- 177 Sprague Solid State
3900 Welsh Road
Willow Grove, PA 19090

ORNL: KR-85
- 178 State University of New York
at Stony Brook
Research Foundation
Stony Brook, NY 11794

BNL: I-125, I-131, RSI
ORNL: SP
- 179 Systems Energy Resources, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

ORNL: KR-85
- 180 TRW Systems Group
One Space Park
Redondo Beach, CA 90277

ORNL: KR-85, SS
- 181 TYCO Laboratories
General Nucleonics Division
2811 Metropolitan Place
Pomona, CA 91767

ORNL: KR-85
- 182 Technical Operations
South Avenue
Burlington, MA 01803

ORNL: IR-192
- 183 Teledyne Isotopes
123 Woodland Avenue
Westwood, NJ 07675

BNL: RSI
ORNL: XE-127

184 Texas A and M Research
Foundation
P.O. Box H
College Station, TX 77843

ORNL: CSI

185 Texas A&M University
P.O. Box 44
College Station, TX
77843-3261

LANL: CU-67

186 Texas Instruments Incorporated
Semiconductor Group
P.O. Box 225012 M/S 6
Dallas, TX 75265

ORNL: KR-85

187 The Applied Radiant Energy
Corporation
2432 Lakeside Drive
Lynchburg, VA 24501

ORNL: CO-60

188 The Source
2889 Industrial Road
Santa Fe, NM 87501

ORNL: PU-239, SP, TH-230

189 Thomson Components-Mostek
Corporation
P.O. Box 115039
M.S. 2330
Carrollton, TX 75006-5039

ORNL: KR-85

190 Tracero Corporation
5763 Underwood Road
Pasadena, TX 77507

ORNL: KR-85

191 Trio-Tech International
355 Parkside Drive
San Fernando, CA 91340

ORNL: KR-85

192 Tru-Tec Incorporated
P.O. Box 1908
La Porte, TX 77571

ORNL: KR-85

193 U.S. Air Force
Kirtland Air Force Base
Albuquerque, NM 87117

BNL: BE-7, NA-22

194 U.S. Army
Finance & Accounting Division
Commercial Accounts Section
Stop 102, Building 219
Fort Belvoir, VA 22060-5606

ORNL: SS

195 U.S. Department of Agriculture
Grand Forks Human Nutrition
Center
2420 Second Avenue, North
Grand Forks, ND 58202

LANL: CU-67

196 U.S. Department of Agriculture
Research Service
P.O. Box 53326
New Orleans, LA 70150

ORNL: CSI

- 197 U.S. Department of Energy
New Brunswick Laboratory
Building 350
9800 South Cass Avenue
Argonne, IL 60439

ORNL: AM-241, MIS, SP, TP
- 198 U.S. Environmental Protection
Agency
P.O. Box 3009
Montgomery, AL 36109

LANL: RB-83
- 199 U.S. Geological Survey
National Center, Room 1447-A
12201 Sunrise Valley Drive
Reston, VA 22092

ORNL: CSI, H-3
- 200 U.S. National Bureau of
Standards
Rec. Room, Bldg. 301
Route 270, Quince Orchard Road
Gaithersburg, MD 20899

ORNL: MIS, TP, U-233, U-238
- 201 U.S. National Institute of
Health
9000 Rockville Pike
Bethesda, MD 20892

LANL: Y-88
ORNL: CSI, MCP, SE-75,
XE-127, Y-90
- 202 U.S. Navy
Naval Electronics Lab Center
271 Catalina Boulevard
San Diego, CA 92152-5122

ORNL: CF-252, MIS
- 203 U.S. Public Health Environment
Accounting Operations Office
Durham
Research Triangle Park, NC
27706

ORNL: CSI
- 204 Unisys Corporation
310.1 Goddard Space Flight
Center
Greenbelt, MD 20771

ORNL: KR-85
- 205 Universal Energy Systems, Inc.
4401 Dayton Xenia Road
Dayton, OH 45432

ORNL: SP, U-238
- 206 University Hospitals of
Cleveland
2074 Abington Road
Cleveland, OH 44106

LANL: GE-68
ORNL: CSI
- 207 University of
Alabama-Birmingham
1919 Seventh Avenue, South
Birmingham, AL 35486

LANL: BR-77
ORNL: CSI
- 208 University of California
900 Veteran Avenue
Los Angeles, CA 90024

ORNL: MG-28

- 209 University of California
Davis Medical Center
4301 X Street;
Sacramento, CA 95817

LANL: CU-67
ORNL: CSI
- 210 University of California
Lawrence Berkeley Laboratory
P.O. Box 528
Berkeley, CA 94720

BNL: BE-7, CO-58, NA-22
LANL: BR-77, SR-82
ORNL: CSI, HI-3, SP, TP, U-234
- 211 University of California San
Diego
Accounting Office (Q-027)
La Jolla, CA 92093

ORNL: MCP
- 212 University of Chicago
Office of the Comptroller
1525 E. Hyde Park Boulevard
Chicago, IL 60615

BNL: CO-60
LANL: CU-68
ORNL: CSI
- 213 University of Cincinnati
Purchasing Department
Cincinnati, OH 45221

ORNL: TC-99
- 214 University of Connecticut
Health Center
Farmington, CT 06032

LANL: GE-68
ORNL: CSI
- 215 University of Connecticut
Physical Sciences Building
Central Warehouse
Storrs, CT 06268

BNL: BE-7
- 216 University of Florida
Gainesville, FL 32611

BNL: U-238
ORNL: AM-243, PU-242
- 217 University of Lowell Research
Foundation
450 Aiken Street
Lowell, MA 01854

ORNL: TP
- 218 University of Maryland
College Park, MD 20742

ORNL: H-3, TP
- 219 University of Massachusetts
Dept. of Physics & Astronomy
Amherst, MA 01003

ORNL: MCP
- 220 University of Michigan
Accounts Payable
3036 Administrative Services
Building
Ann Arbor, MI 48109

LANL: GE-68, NA-22
ORNL: CSI
- 221 University of Minnesota
Business Office
1919 University Avenue
St. Paul, MN 55104

ORNL: CSI

<p>222 University of Minnesota
W-172 Boynton Health Services
410 Church St.
Minneapolis, MN 55455</p> <p>LANL: CU-67</p>	<p>229 University of Texas at Dallas
P.O. Box 30365
Dallas, TX 75230   LANL: CU-67
ORNL: CSI, GD-153</p>
<p>223 University of North Carolina
Chapel Hill, NC 27514</p> <p>ORNL: SP, TH-230</p>	<p>230 University of Utah
Purchasing Department
Salt Lake City, UT 84112</p> <p>ORNL: Y-90</p>
<p>224 University of Pennsylvania
3451 Walnut Street
Philadelphia, PA 19104-6281   LANL: GE-68
ORNL: CSI</p>	<p>231 University of Wisconsin
750 University Avenue
Madison, WI 53706</p> <p>ORNL: H-3, Y-90</p>
<p>225 University of Rochester
Medical Center
575 Elmwood Avenue
Rochester, NY 14627   LANL: GE-68
ORNL: CSI</p>	<p>232 V. A. Hospital, Madison
P.O. Box 2973
Austin, TX 78769</p> <p>ORNL: CSI</p>
<p>226 University of South Carolina
Accounts Payable Department
516 S. Main Street
Columbia, SC 29208</p> <p>ORNL: SP</p>	<p>233 V. A. Hospital, Palo Alto
CALM-VA-4 (640)
P.O. Box 2974
Austin, TX 78769</p> <p>ORNL: Y-90</p>
<p>227 University of Tennessee
Knoxville, TN 37916   LANL: GE-68
ORNL: RU-106</p>	<p>234 Washington University
499 S. Euclid
St. Louis, MO 63110</p> <p>LANL: CU-67</p>
<p>228 University of Tennessee
Hospital
1924 Alcoa Highway
Knoxville, TN 37920</p> <p>ORNL: CSI</p>	<p>235 Washington University
Lindell and Skinker
St. Louis, MO 63130   LANL: BR-77, GE-68
ORNL: CSI</p>

<p>236 West Valley Nuclear Service Company, Inc.
Accounts Payable
P.O. Box 191
West Valley, NY 14171-0191

ORNL: I-129, KR-85</p> <p>237 West Virginia University
Physics Department
P.O. Box 6023
Morgantown, WV 26506

BNL: NA-22</p> <p>238 Western Kentucky University
Bowling Green, KY 42101

ORNL: CF-252, MIS</p> <p>239 Westinghouse Electric Company, Inc.
Bettis Atomic Power Laboratory
P.O. Box 79
West Mifflin, PA 15122

ORNL: MIS</p> <p>240 Westinghouse Electric Corporation
Research and Development Center
Beulah Road, Churchill Borough
Pittsburgh, PA 15235

ORNL: TH-232, TP, U-235</p> <p>241 Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352

ORNL: TP</p> | <p>242 William Middleton Memorial
Veteran's Hospital
2500 Overlook Terrace
Madison, WI 53705

LANL: GE-68</p> <p>243 Woods Hole, Oceanographic
Institute
Woods Hole, MA 02543

ORNL: SP</p> <p>244 Wright State University
7751 Colonel Glenn Highway
Dayton, OH 45431

ORNL: MG-28</p> <p>245 Yale University
20 Ashmun Street
New Haven, CT 06520

BNL: RSI
ORNL: MCP, SP</p> <p>246 Zilog
2601 11th Avenue North
Nampa, ID 83651

ORNL: KR-85</p> <p>247 Zilog, Incorporated
10460 Bubb Road
Cupertino, CA 95014

ORNL: KR-85</p> |
|--|--|

AUSTRALIA

248 Australian Nuclear Science
& Technology
Australian Radioisotopes
Building 23B, New Illawarra
Road
Lucas Heights NSW 2234
AUSTRALIA

ORNL: SP, TH-230

AUSTRIA

249 International Atomic Energy
Agency
Wagramerstrasse 5
P.O. Box 100
A-1400 Vienna
AUSTRIA

ORNL: SP, U-236

BRAZIL

250 Brazilian Center for Physical
Research
Rio de Janeiro
BRAZIL

ORNL: GD-153

CANADA

251 Atomic Energy of Canada Ltd.
Chalk River Nuclear
Laboratories
Chalk River, Ontario K0J 1J0
CANADA

INEL: RSI
LANL: GE-68, TI-44
ORNL: CSI, H-3, SP

252 Atomic Energy of Canada, Ltd.
Radiochemical Co.
P.O. Box 13500
Kanata, Ontario K2K 1X8
CANADA

ORNL: CS-137, MCP, XE-127

253 Atomic Energy of Canada, Ltd.
Whiteshell Nuclear Research
Establishment
Pinawa, Manitoba R0E 1L0
CANADA

ORNL: SP, U-233

254 Dr. Gati & Associates
Laboratories, Ltd.
P.O. Box 563
Winterburn, Alberta T0E 2N0
CANADA

ORNL: H-3

255 Fisheries and Oceans
Freshwater Institute
501 University Crescent
Winnipeg, Manitoba R3T 2N6
CANADA

LANL: CD-109
ORNL: CSI

256 Hospital for Sick Children
555 University Avenue
Toronto, Ontario M5G 1X8
CANADA

LANL: CU-67
ORNL: CSI

257 McMaster University
Hamilton, Ontario
CANADA

ORNL: H-3

258 Royal Ontario Museum
100 Queens Park
Toronto, Ontario M5s 2c6
CANADA

ORNL: SP, U-234, U-236

259 TRIUMF
4004 Westbrook Mall
Vancouver, BC V6T-2A3
CANADA

LANL: NA-22

260 Toronto General Hospital
101 College Street
Toronto 2, Ontario
CANADA

ORNL: Y-90

261 University of British Columbia
2075 Westbrook Mall
Vancouver, British Columbia
V6T 1Z1
CANADA

ORNL: H-3, MG-28

CHINA (PEOPLE'S REPUBLIC OF)

262 China Business Enterprises,
Inc.
109 East 15th Street
New York, NY 10003

ORNL: CS-137, MCP, NI-63

263 Shanghai Medical University
School of Pharmacy
138 Yi Xue Yuan Road
Shanghai 200032
CHINA (PEOPLE'S REPUBLIC OF)

ORNL: TC-99

FEDERAL REPUBLIC OF GERMANY

264 Amersham Buchler GmbH &
Company KG
1 Gieselweg
3300 Braunschweig
West Germany
FEDERAL REPUBLIC OF GERMANY

ORNL: I-129

265 Nuclear Research Center
Institut für Medizin
Jülich 5170
Postfach 1913, West Germany
FEDERAL REPUBLIC OF GERMANY

BNL: C-14

266 Osram GmbH LOG/TRE
Postfach 90 06 20
8000 München 90, West Germany
FEDERAL REPUBLIC OF GERMANY

ORNL: KR-85

267 University of Kiel
Institute of Inorganic
Chemistry
23 Kiel, Germany, West Germany
FEDERAL REPUBLIC OF GERMANY

ORNL: TC-99

FRANCE

268 C.E.A. - SCAC
31-33 Rue de la Federation
75015 Paris 15
FRANCE

ORNL: AM-243

269 Commissariat A L'Energie
Atomique
Office Des Rayonnements
Ionisants
Purchasing Department
B.P. 21
91190 Gif-Sur-Yvette
FRANCE

ORNL: SP, U-236

270 Commissariat A L'Energie
Atomique
c/o Embassy of France/Nuclear
Office
4101 Reservoir Road NW.
Washington, DC 20007-2180
FRANCE

ORNL: CAP, CF-252, TS

271 Compagnie Oris Industrie
B.P. 21
91190 Gif-Sur-Yvette
FRANCE

LANL: GE-68
ORNL: CS-137, CSI, MCP

272 Transnucleaire
Cedex
FRANCE

SRP: CF-252

ISRAEL

273 Landseas Corporation
1212 Avenue of the Americas
New York, NY 10036
ISRAEL

ORNL: SM-151

ITALY

274 CNR Instituto Di Fisiologia
Clinica
Via Savi, 8
56100 Pisa
ITALY

LANL: GE-68
ORNL: CSI

JAPAN

275 Japan Atomic Energy Research
Institute
2-2, Uchisaiwai-Cho 2-Chome
Chiyoda, Tokyo 100
JAPAN

ORNL: CAP, CM-244, PU-238

276 Japan Radioisotope Association
Hon-Komagome 2 Chome 28
Bunkyo-Ku
Tokyo
JAPAN

ORNL: H-3, TP

KOREA

277 Hyundai Electronics America
4401 Great America Parkway
Santa Clara, CA 95054
KOREA

ORNL: KR-85

SPAIN

278 Compiber, S. A.
C. Sierra de Segara, 2
San Fernando de Henares
Madrid
SPAIN

ORNL: H-3

SWITZERLAND

- 279 Eidg. Institut für
Reaktorforschung
Würenlingen
SWITZERLAND

ORNL: SP
- 280 MB-Microtec, Inc.
Freiburgstrasse 624
CH-3172 Niederwangen/Berne
SWITZERLAND

ORNL: H-3
- 281 Radium-Chemie Limited
CH-9053 Teufen
SWITZERLAND

ORNL: H-3
- 282 Swiss Institute for
Nuclear Research
5234 Villigen
SWITZERLAND

LANL: GE-68
ORNL: CSI, TC-99
- 283 Vacotec SA
c/o A. H. Natural
CH-2500
Bienne,
SWITZERLAND

BNL: RU-106

TURKEY

- 284 Turkey, Embassy of
1606 23rd Street, NW.
Washington, DC 20008
TURKEY

ORNL: TC-99

UNITED KINGDOM

- 285 Amersham International PLC
Amersham Bucks England
Great South West Road
East Bedfont
Feltham, Middlesex TW14 8NJ
UNITED KINGDOM

LANL: BE-7, Y-88
- 286 Amersham International, Ltd.
White Lion Road Amersham
Buckinghamshire England
HP7 9LL
UNITED KINGDOM

ORNL: CAP, CE-144, CF-252,
CM-244, CO-60, CS-137,
CSI, GD-153, H-3,
KR-85, KR-85E, MCP,
PM-147, RSI, RW, SS,
TC-99, TS
SRP: CF-252
- 287 Brandhust Co., Ltd.
Wellington Road
High Wycombe, Bucks
HP12 3PS England
UNITED KINGDOM

ORNL: H-3
- 288 British Embassy
3100 Massachusetts Ave., N.W.
Washington, DC 20008
UNITED KINGDOM

ORNL: CM-244, TP
- 289 Hammersmith Hospital
Ducane Road
London, W12 OHS, England
UNITED KINGDOM

LANL: GE-68
ORNL: CSI

290 Panalpina, Inc.
UKDPO Representative
1389 2-13894 Redskin Drive
Herndon, VA 22071
UNITED KINGDOM

ORNL: SR-90

291 Saunders-Roe Developments,
Ltd.
Millington Road
Hayes, Middlesex, England
UB3 4NB
UNITED KINGDOM

ORNL: H-3

292 Semiconductor Devices, Ltd.
65 Wong Chuk Hang Road
Gee Chang Hong Centre
16./F1., Flat D, Aberdeen
Hong Kong
UNITED KINGDOM

ORNL: KR-85

293 Sinotra Company Limited
Sui Ying Bldg., 1/F Flat 'F'
1 Yuk Yat Street, Lik Shan
Road
Kowloon, Hong Kong
UNITED KINGDOM

ORNL: FE-55

294 Surelite Limited
Priors Court
Priors Hall Road
Weldon, Northants NN171J6
England
UNITED KINGDOM

ORNL: H-3, SP

295 University of London
Royal Holloway and Bedford New
College
Department of Geology
Egham Hill
Egham, Surrey, England
TW20 OEX
UNITED KINGDOM

ORNL: SP, U-236

3.0 LIST OF ISOTOPES PURCHASED CROSS-REFERENCED TO CUSTOMER NUMBERS

This section contains an index of alphabetically listed isotopes cross-referenced to customer numbers. This list provides a quick reference of the number of customers purchasing a particular isotope.

ISOTOPES PURCHASED CROSS-REFERENCED TO CUSTOMER NUMBERS

Americium-241	62 137 197
Americium-243	216 268
Berkelium-249	93
Beryllium-7	85 100 101 140 166 193 210 215 285
Bromine-77	10 207 210 235
Cadmium-109	85 100 255
Californium-252	22 50 59 62 63 85 140 150 202 238 270 272 286
Carbon-14	265
Cerium-144	85 286
Cesium-137	47 60 78 83 86 140 252 262 271 286
Cobalt-57	35
Cobalt-58	210
Cobalt-60	4 62 63 83 86 132 187 212 286
Copper-64	100
Copper-67	8 26 29 74 77 80 100 131 185 195 209 222 229 234 256
Copper-68	212
Curium-244	9 140 275 286 288
Cyclotron Service Irradiations	8 10 21 25 26 29 42 46 47 48 75 76 80 85 89 101 102 103 131 136 139 140 145 152 159 176 184 196 199 201 203 206 207 209 210 212 214 220 221 224 225 228 229 232 235 251 255 256 271 274 282 286 289
Encapsulation	12 59 62 85 137 140 145 161 270 275 286
Gadolinium-153	18 19 31 46 48 60 85 107 111 112 117 140 229 250 286
Germanium-68	21 43 45 85 139 147 175 206 214 220 224 225 227 235 242 251 271 274 282 289

Gold-196	143
Indium-111	17
Iodine-125	136 141 178
Iodine-129	46 47 85 100 140 236 264
Iodine-131	178
Iridium-192	61 81 107 140 182
Iron-55	46 293
Krypton-85	1 5 6 11 23 34 36 37 39 52 53 54 55 56 65 67 68 70 71 72 78 79 82 85 91 94 96 97 106 114 117 118 120 122 123 126 127 128 138 148 149 151 154 156 157 165 172 173 174 177 179 180 181 186 189 190 191 192 204 236 246 247 266 277 286 292
Krypton-85E	7 46 110 117 144 286
Magnesium-28	24 26 28 105 159 208 244 261
Manganese-54	129 168
Manganese-57	129 168
Misc. Compounds	4 20 31 60 66 86 108 109 132 134 139 140 160 201 211 219 245 252 262 271 286
Misc. Quantities	50 59 93 139 140 150 167 197 200 202 238 239
Neptunium-237	10 14 85 100 145
Nickel-63	262
Phosphorus-33	46
Plutonium-238	275
Plutonium-239	100 188
Plutonium-242	216
Promethium-147	85 286
Radioisotopes Withdrawn	46 140 143 286

Reactor Service Irradiation	10 31 50 69 76 86 89 95 99 100 109 125 132 133 140 155 162 178 183 245 251 286
Rubidium-83	93 100 198
Ruthenium-106	78 85 227 283
Ruthenium-97	32 136
Samarium-145	85 116
Samarium-151	273
Selenium-75	78 103 201
Silicon-32	85
Sodium-22	45 85 98 100 119 129 130 143 153 159 163 164 168 193 210 220 237 259
Special Processes	3 10 28 47 50 84 85 92 93 100 115 140 178 188 197 205 210 223 226 243 245 248 249 251 253 258 269 279 294 295
Special Services	4 16 21 58 85 107 117 140 145 180 194 286
Strontium-82	49 210
Strontium-85	140
Strontium-89	62 132
Strontium-90	30 290
TRU Services	62
Target Preparation	9 10 11 12 14 50 51 64 73 76 85 89 93 100 140 158 161 167 197 200 210 217 218 240 241 276 288
Technetium-99	44 46 48 85 100 106 140 213 263 267 282 284 286
Technical Services	59 62 93 270 286
Thorium-230	85 188 223 248
Thorium-232	73 240
Titanium-44	139 251

Tritium	33	46	68	78	88	89	121	124	142	146	165	169	170
	171	199	210	218	231	251	254	257	261	276	278	280	281
	286	287	291	294									
Uranium-233	14	92	200	253									
Uranium-234	161	210	258										
Uranium-235	13	14	51	85	158	161	167	240					
Uranium-236	249	258	269	295									
Uranium-238	10	14	15	51	57	90	104	140	200	205	216		
Xenon-127	21	27	103	135	183	201	252						
Yttrium-88	45	47	75	85	145	201	285						
Yttrium-90	2	30	38	40	41	46	48	66	75	80	85	87	113
	139	201	230	231	233	260							

4.0 GEOGRAPHIC LOCATIONS OF RADIOISOTOPE CUSTOMERS

This section is an index showing geographic distribution of radioisotope customers. State names and foreign countries are listed alphabetically, along with the customer numbers of customers located within each state or country .

GEOGRAPHIC LOCATIONS OF CUSTOMERS BY CUSTOMER NUMBER

DOMESTIC

Alabama

198 207

Arizona

123 127

California

5 23 25 26 53 54 62 63 71 72 73 75 78 82 85 86 87
91 93 94 96 97 98 110 114 120 121 126 149 151 153 155 156 158
160 162 163 166 173 174 180 181 191 202 208 209 210 211 247

Colorado

3 83 89

Connecticut

76 170 214 215 245

Delaware

44

District of Columbia

29 66 129

Florida

34 58 70 216

Georgia

1 67 113

Idaho

11 50 246

Illinois

2 9 10 57 79 197 212

Indiana

130 148 152

Iowa

84

Kentucky

238

Louisiana

61 196

Maine
56

Maryland
17 132 200 201 204 218

Massachusetts
7 19 31 39 45 46 64 105 108 109 112 157 182 217 219 243

Michigan
40 88 220

Minnesota
116 117 221 222

Mississippi
179

Missouri
16 102 103 115 146 147 234 235

Nevada
51

New Hampshire
18

New Jersey
15 24 30 38 48 49 68 80 81 111 128 150 154 183

New Mexico
100 101 119 167 168 188 193

New York
8 20 21 32 35 69 74 77 90 99 124 133 134 136 137 159 164
171 175 176 178 225 236

North Carolina
42 43 135 169 203 223

North Dakota
195

Ohio
4 14 28 59 141 142 144 161 205 206 213 244

Oregon
6 143

Pennsylvania
95 118 165 177 224 239 240

South Carolina
37 47 226

Tennessee
104 106 107 139 140 227 228

Texas
22 27 41 52 60 122 125 138 184 185 186 189 190 192 229 232 233

Utah
172 230

Virginia
13 33 65 187 194 199

Washington
12 55 131 145 241

West Virginia
237

Wisconsin
36 231 242

FOREIGN

AUSTRALIA
248

AUSTRIA
249

BRAZIL
250

CANADA
251 252 253 254 255 256 257 258 259 260 261

CHINA (PEOPLE'S REPUBLIC OF)
262 263

FEDERAL REPUBLIC OF GERMANY
264 265 266 267

FRANCE
268 269 270 271 272

ISRAEL
273

ITALY

274

JAPAN

275 276

KOREA

277

SPAIN

278

SWITZERLAND

279 280 281 282 283

TURKEY

284

UNITED KINGDOM

285 286 287 288 289 290 291 292 293 294 295

5.0 RADIOISOTOPE SALES AND TRANSFERS - FY 1987

This section summarizes the fiscal year 1987 radioisotope shipment activities of the DOE laboratory facilities listed in Section 1.0. Isotopes are listed alphabetically with their suppliers. Data on shipments, quantities (including units of measure), and dollar values of each isotope are listed under domestic, foreign, and DOE categories. The value of the radioisotopes sold in fiscal year 1987 was \$10.8 million.

RADIOISOTOPE SALES AND TRANSFERS - FY 1987

Isotope	sup- plier	Domestic				Foreign				DOE				Total			
		No. of Ship.	quantity	Unit	\$ Value	No. of Ship.	quantity	Unit	\$ Value	No. of Ship.	Quantity	Unit	\$ Value	Ship.	quantity	Unit	\$ Value
Americium-241	ORNL	1	10.00	g	16700	0	---	g	0	1	1.00	g	1330	2	11.00	g	17030
Americium-243	ORNL	1	1.00	mg	100	1	---	mg	100	0	---	mg	0	2	1.66	mg	200
Berkelium-249	BNL	1	1700.00	mCi	0	0	---	mCi	0	0	---	mCi	0	1	1700.00	mCi	0
Beryllium-7	BNL	5	2.02	mCi	0	0	---	mCi	0	0	---	mCi	0	6	2.02	mCi	0
Beryllium-7	LANL	2	22.00	mCi	863	6	105.00	mCi	2684	3	38.90	mCi	663	10	163.90	mCi	4010
Bromine-77	LANL	2	66.00	mCi	860	0	---	mCi	0	4	300.00	mCi	3777	6	356.00	mCi	4637
CSI-BNL	ORNL	7	4342.00	-	37066	0	---	-	0	2	205.00	-	6041	9	4647.00	-	43107
CSI-LANL	ORNL	76	6093.00	-	216387	16	546.00	-	22380	24	3101.00	-	81120	116	9739.00	-	318887
Cadmium-109	LANL	1	119.00	mCi	1843	1	200.00	mCi	3198	1	1.14	mCi	0	3	320.14	mCi	6041
Californium-252	ORNL	7	18662.00	μg	186226	3	21087.00	μg	273176	6	194471.00	μg	0	15	234120.00	μg	469400
Californium-252	SRL	2	16.20	mg	141660	2	21.60	mg	229883	0	---	mg	0	4	36.80	mg	371443
Carbon-14	BNL	0	---	mCi	0	1	245.00	mCi	0	0	---	mCi	0	1	246.00	mCi	0
Cerium-144	ORNL	2	146.00	mCi	1620	1	20.00	mCi	240	0	---	mCi	0	3	186.00	mCi	1860
Cesium-137	ORNL	12	64120.00	Ci	31900	7	296217.00	Ci	30474	2	0.70	Ci	908	21	369337.70	Ci	63274
Cobalt-67	BNL	1	26.00	mCi	0	0	---	mCi	0	0	---	mCi	8	1	26.00	mCi	0
Cobalt-68	BNL	1	0.09	mCi	0	0	---	mCi	0	0	---	mCi	8	1	0.09	mCi	0
Cobalt-60	BNL	1	1.00	mCi	0	0	---	mCi	0	0	---	mCi	8	1	1.00	mCi	0
Cobalt-60	INEL	6	479129.00	Ci	287600	0	---	Ci	0	0	---	Ci	8	5	479129.00	Ci	287600
Cobalt-60	ORNL	3	27276.00	Ci	36420	1	16452.00	Ci	26309	0	---	Ci	8	4	42727.00	Ci	61729
Copper-64	LANL	0	---	mCi	0	0	---	mCi	0	2	13.10	mCi	8	2	13.10	mCi	0
Copper-67	LANL	26	817.00	mCi	3442	2	10.00	mCi	231	19	1596.77	mCi	8	46	2423.77	mCi	3673
Copper-68	LANL	2	10.00	mCi	667	0	---	mCi	0	0	---	mCi	8	2	10.00	mCi	667
Curium-244	ORNL	1	20.00	mg	2000	8	1820.00	mg	182680	1	1.00	mg	300	8	1841.00	mg	184980
Encapsulation	ORNL	3	3996.00	-	242167	0	---	-	1046172	1	---	-	48276	4	3996.00	-	1336604
Gadolinium-163	INEL	1	100.00	Ci	70000	0	---	Ci	0	0	---	Ci	0	1	100.00	Ci	70000
Gadolinium-153	ORNL	46	218.00	Ci	1037218	13	140.00	Ci	644000	3	6.00	Ci	27800	61	364.00	Ci	1709018
Germanium-68	LANL	18	630.40	mCi	26802	6	140.00	mCi	8767	6	123.00	mCi	6376	30	793.40	mCi	41934

24

Isotope	Sup plier	No. of Ship.	Domestic			No. of Ship.	Foreign			No. of Ship.	DOE			No. of Ship.	Total		
			quantity	Unit	\$ Value		quantity	Unit	\$ Value		quantity	Unit	\$ Value		Quantity	Unit	\$ Value
Gold-198	BNL	1	0.01	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	1	0.01	■Ci	0
Indium-111	BNL	1	4.00	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	1	4.00	■Ci	0
Iodine-123	BNL	1	6.00	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	1	6.00	■Ci	0
Iodine-126	BNL	7	7.70	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	7	7.70	■Ci	0
Iodine-129	ORNL	8	3280.00	■g	19880	1	200.00	■g	1200	3	260.00	■g	1600	10	3730.00	■g	22380
Iodine-131	BNL	1	2.00	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	1	2.00	■Ci	0
Iridium-192	INEL	9	460000.00	■Ci	317700	0	---	■Ci	0	0	---	■Ci	0	9	460000.00	■Ci	317700
Iridium-192	ORNL	71	463326.00	■Ci	496306	0	---	■Ci	0	7	1057.00	■Ci	1868	78	464382.00	■Ci	497173
Iron-66	ORNL	2	4668.00	■Ci	17086	1	300.00	■Ci	1126	0	---	■Ci	0	3	4868.00	■Ci	18210
Krypton-86	ORNL	162	4974.80	■Ci	284083	8	411.00	■Ci	29231	3	700.20	■Ci	40628	181	8088.00	■Ci	363842
Krypton-85E	ORNL	8	388.80	■Ci	119688	3	311.00	■Ci	90719	0	---	■Ci	0	11	899.80	■Ci	210307
Yagnesium-28	ORNL	22	6600.00	■Ci	12610	6	460.00	■Ci	1820	0	---	■Ci	0	27	6960.00	■Ci	14330
Yanganese-64	BNL	2	0.80	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	2	0.80	■Ci	0
Yanganese-67	BNL	2	0.80	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	2	0.80	■Ci	0
Yisc. Compounds	ORNL	0	---	-	2108	0	---	-	0	0	-1.00	-	0	0	-1.00	-	2108
Yisc. Isotopes	BNL	88	---	-	3686	2	---	-	90	0	---	-	0	70	---	-	3856
Yisc. Services	ORNL	0	---	-	23048	0	---	-	0	0	---	-	98011	0	---	-	119067
Neptunium-237	BNL	1	0.01	■Ci	0	0	---	■Ci	0	0	---	■Ci	0	1	0.01	■Ci	0
Heptunium-237	ORNL	1	1.00	■g	600	0	---	■g	0	1	---	■g	-2068	2	1.00	■g	-1668
Neptunium-237H	ORNL	2	7.00	■g	7	0	---	■g	0	0	---	■g	0	2	7.00	■g	7
Nickel-63	ORNL	0	---	■Ci	0	1	6.00	■Ci	16000	0	---	■Ci	0	1	6.00	■Ci	15000
Phosphorus-33	ORNL	2	226.00	■Ci	10200	0	---	■Ci	0	0	---	■Ci	0	2	226.00	■Ci	10200
Plutonium-238	ORNL	0	---	■g	0	1	3000.00	■g	13360	0	---	■g	0	1	3000.00	■g	13360
Plutonium-239	ORNL	2	3016.00	■g	1830	0	---	■g	0	0	---	■g	0	2	3015.00	■g	1830
Plutonium-242	ORNL	1	1.00	■g	100	0	---	■g	0	0	---	■g	0	1	1.00	■g	100
Promethium-147	ORNL	1	28.00	■Ci	200	1	9207.00	■Ci	13891	0	---	■Ci	0	2	9236.00	■Ci	14091
Radioisotopes Wi.	ORNL	4	182.00	-	6480	3	470.00	-	14100	2	4.00	-	500	9	868.00	-	20060

Isotope	Sup	No. of Ship.	Domestic			No. of Ship.	Foreign			No. of Ship.	DCE			No. of Ship.	Total		
			quantity	Unit	\$ Value		quantity	Unit	\$ Value		quantity	Unit	\$ Value		quantity	Unit	\$ Value
Reactor Serv. Ir.	BNL	54	---	-	40836	0	---		0	0	---	-	0	64	---	-	40835
Reactor Serv. Ir.	INEL	0	---	-	0	0	---		0	0	---	-	0	0	---	-	0
Reactor Serv. Ir.	ORNL	22	944176.00	-	416059	6	295306.00	-	87367	0	---		0	27	1239481.00	-	503426
Rubidium-83	UNL	1	0.10	mCi	102	0	---	mCi	0	3	22.40	mCi	226	4	22.60	mCi	328
Ruthenium-106	BNL	0	---	mCi	0	1	0.60	mCi	0	0	---	mCi	0	1	0.50	mCi	0
Ruthenium-106	ORNL	6	48.00	mCi	6760	0	---	mCi	0	0	---	mCi	0	6	48.00	mCi	5760
Ruthenium-97	BNL	5	166.82	mCi	0	0	---	mCi	0	0	---	mCi	0	5	166.62	mCi	0
Samarium-145	BNL	1	10.00	mCi	0	0	---	mCi	0	0	---	mCi	0	1	10.00	mCi	0
Samarium-145	UNL	1	152.00	mCi	0	0	---	mCi	0	0	---	mCi	0	1	152.00	mCi	0
Samarium-151	ORNL	0	---	g	0	1	1.00	g	300	0	---	g	0	1	1.00	g	300
Selenium-76	ORNL	4	1660.00	mCi	3300	0	---	mCi	0	1	100.00	mCi	200	6	1760.00	mCi	3500
Sodium-22	BNL	27	178.74	mCi	0	0	---	mCi	0	0	---	mCi	0	27	178.74	mCi	0
Sodium-22	LANL	3	1280.00	mCi	11617	1	99.00	mCi	1736	0	---	mCi	0	4	1379.00	mCi	13253
Sodium-24	BNL	1	---	mCi	0	0	---	mCi	0	0	---	mCi	0	1	---	mCi	0
Special Processes	ORNL	6	4.20	-	4896	1	1.00	-	3170	6	200211.00	-	9167	11	200218.20	-	17232
Special Services	ORNL	1	30.00	-	79765	1	196.60	-	312910	2	2.00	-	44418	4	228.60	-	437081
Strontium-82	LANL	0	---	mCi	0	0	---	mCi	0	2	400.00	mCi	6804	2	400.00	mCi	6804
Strontium-85	LANL	0	---	mCi	0	0	---	mCi	0	1	806.00	mCi	4726	1	805.00	mCi	4725
Strontium-89	ORNL	1	-1000.00	mCi	3760	0	---	mCi	0	0	---	mCi	0	1	-1000.00	mCi	3760
Strontium-90	ORNL	1	---	Ci	200	1	0.40	Ci	300	0	---	Ci	0	2	0.40	Ci	600
TRU Services	ORNL	0	---	-	12115	0	---		0	0	---	-	0	0	---	-	12115
Target Prep.	ORNL	2	---	-	75818	0	---	-	7855	2	1.00	-	101869	4	1.00	-	185342
Technetium-99	ORNL	8	67.00	g	4032	4	85.00	g	4940	4	15.00	g	1367	16	167.00	g	10329
Technical Service	ORNL	0	---	-	32612	0	---	-	46930	0	---	-	4440	0	---	-	82982
Thorium-230	ORNL	3	23.00	mg	769	1	1.00	mg	23	0	---	mg	0	4	24.00	mg	782
Thorium-232	ORNL	2	34000.00	g	20	0	---	g	0	0	---	g	0	2	34000.00	g	20
Titanium-44	UNL	0	---	mCi	0	1	0.03	mCi	880	1	0.20	mCi	17500	2	0.23	mCi	18180
Tritium	BNL	1	0.50	mCi	0	0	---	mCi	0	0	---	mCi	0	1	0.50	mCi	0
Tritium	ORNL	89	620163.00	Ci	692418	48	1147487.00	Ci	1262843	1	10000.00	Ci	7494	136	1777630.00	Ci	1962555

Isotope	sup plier	Domestic				Foreign				DOE				Total			
		No. of Ship.	quantity	Unit	\$ Value	No. of Ship.	quantity	Unit	\$ Value	No. of Ship.	quantity	Unit	\$ Value	No. of Ship.	quantity	Unit	\$ Value
Uranium-233	ORNL	2	67.00	kg	147	1	100.00	kg	268	1	1000.00	kg	2660	4	1167.00	kg	2986
Uranium-233 Sp.	ORNL	0	---		0	0	---		604660	0	---		0	0	---		604660
Uranium-234	ORNL	2	6000.20	kg	223600	1	30.00	kg	1290	1	20.00	kg	664	4	6060.20	kg	226464
Uranium-236	BNL	6	166.00	kg	0	0	---	kg	0	0	---	kg	0	6	166.00	kg	0
Uranium-236	ORNL	7	166677.00	kg	10468	0	---	kg	0	2	124.00	kg	0	9	166701.00	kg	10468
Uranium-236	ORNL	0	---	kg	0	4	3085.00	kg	1368	0	---	kg	0	4	3086.00	kg	1388
Uranium-238	BNL	6	4029.01	kg	0	0	---	kg	0	0	---	kg	0	8	4029.01	kg	0
Uranium-238	ORNL	2	1013.00	kg	101	0	---	kg	0	2	2616.00	kg	6660	4	3629.00	kg	6661
Xenon-127	LANL	0	---	kg	0	0	---	kg	0	4	9122.00	kg	16331	4	9122.00	kg	16331
Xenon-127	ORNL	10	11922.00	kg	69496	1	600.00	kg	2830	6	1107.00	kg	6636	17	13629.00	kg	68963
Yttrium-88	LANL	4	47.00	kg	1796	2	65.00	kg	1851	2	1.10	kg	266	8	113.10	kg	3936
Yttrium-90	ORNL	<u>93</u>	606343.00	kg	33800	<u>1</u>	100.00	kg	360	<u>9</u>	800.00	kg	6660	<u>103</u>	606243.00	kg	40800
TOTAL		963			636666	162			4689860	139			660936	1264			10606362

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