

**REPORT OF PROPOSED ACTIVITIES
IN NON-AGREEMENT STATES**

(Please read the instructions on the cover sheet before completing this form.)

Estimated burden per response to comply with this mandatory information collection request: 16 minutes. This notification is required so that NRC may schedule inspection of the activities to ensure that they are conducted in accordance with requirements for protection of the public health and safety. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0013), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

1. NAME OF LICENSEE (Person or firm proposing to conduct the activities described below) J. L. Shepherd & Associates		2. TYPE OF REPORT <input checked="" type="checkbox"/> INITIAL MCH <input checked="" type="checkbox"/> REVISION CLARIFICATION		3. CONTROL NUMBER (Leave Blank -- Number to be assigned by NRC)	
4. ADDRESS OF LICENSEE (Mailing address or other location where licensee may be located) 1010 Arroyo Avenue San Fernando, CA 91340		5. LICENSEE CONTACT Lee Weiss		6. TELEPHONE NUMBER (Include Area Code) 818-898-2361	
		7. FACSIMILE NUMBER (Include Area Code) 818-361-8095			
8. ACTIVITIES TO BE CONDUCTED IN NON-AGREEMENT STATES UNDER THE GENERAL LICENSE GIVEN IN 10 CFR 150.20					
WELL LOGGING		<input checked="" type="checkbox"/>	LEAK TESTING AND/OR CALIBRATIONS		<input checked="" type="checkbox"/>
PORTABLE GAUGES			TELETHERAPY/IRRADIATOR SERVICE		
			OTHER (Specify) Installation of Devices - Repair - Decommission - Calibration		
RADIOGRAPHY →		TRANSPORTATION QA PROGRAM APPROVAL NO. & REV. NO.		REGISTERED AS USER OF PACKAGINGS (CERTIFICATES OF COMPLIANCE NOS.)	
9. CLIENT NAME, ADDRESS, CITY/COUNTY, STATE, ZIP CODE Various Temporary Job Sites			10. WORK LOCATION ADDRESS (Street and Number or other location. Give as complete an address or directions as possible.)		
11. CLIENT TELEPHONE NUMBER (Include Area Code)		12. WORK LOCATION TECHNICIAN AUTHORIZED TO PERFORM WORK		13. WORK LOCATION TELEPHONE NUMBER (Include Area Code)	
14. DATES SCHEDULED		15. NUMBER OF WORK DAYS		16. LOCATION REFERENCE NUMBER	
FROM 1-1-99		TO 12-31-99		LEAVE BLANK FOR INITIAL NRC FORM 241 REQUESTS NUMBER TO BE ASSIGNED BY NRC	
9901140117 981229 PDR RC * SSD PDR		180			
LIST ADDITIONAL WORK SITES ON SEPARATE SHEET TO INCLUDE ALL INFORMATION CONTAINED IN ITEMS 9-16 ABOVE.					
17. LIST RADIOACTIVE MATERIAL, WHICH WILL BE POSSESSED, USED, INSTALLED, SERVICED, OR TESTED IN NON-AGREEMENT STATES (Include description of type and quantity of radioactive material, sealed sources, or devices to be used.) various, see CA 1777-19 MCH					
18. AGREEMENT STATE SPECIFIC LICENSE WHICH AUTHORIZES THE UNDERSIGNED TO CONDUCT ACTIVITIES WHICH ARE THE SAME, EXCEPT FOR LOCATION OF USE, AS SPECIFIED IN ITEM 8. ABOVE. (Four copies of the specific license must accompany the initial NRC Form 241.)					
LICENSE NUMBER #1777-19, Amend 75		STATE California		EXPIRATION DATE 10-11-95/ Letter of Timely Renewal	
				TOTAL USAGE DAYS TO DATE 0	
19. CERTIFICATION (MUST BE COMPLETED BY APPLICANT)					
I, THE UNDERSIGNED, HEREBY CERTIFY THAT:					
a. All information in this report is true and complete.					
b. I have read and understand the provision of the general license 10 CFR 150.20 reprinted on the cover sheet of this form set, and I understand that I am required to comply with these provisions as to all byproduct, source, or special nuclear material which I possess and use in non-Agreement States or offshore waters under the general license for which this report is filed with the U.S. Nuclear Regulatory Commission.					
c. I understand that activities, including storage, conducted in non-Agreement States under general license 10 CFR 150.20 are limited to a total of 180 days in calendar year.					
d. I understand that I may be inspected by NRC at the above listed work site locations and at the Licensee home office address for activities performed in non-Agreement States or offshore waters. I am also aware that I will be responsible for any fees associated with such inspections.					
e. I understand that conduct of any activities not described above, including conduct of activities on dates or locations different from those described above or without NRC authorization, may subject me to enforcement action, including civil or criminal penalties.					
CERTIFYING OFFICER -- RSO or Management Representative (Typed/Printed Name and Title) Lee Weiss - Contract Administrator				SIGNATURE <i>Lee Weiss</i>	
				DATE 12-29-98	
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITH ITS JURISDICTION.					
FOR NRC USE ONLY		AUTHORIZING OFFICER (Typed/Printed Name and Title) M. C. Hernandez Radiation Specialist MCH		SIGNATURE <i>M. C. Hernandez</i>	
				DATE 1/4/99	



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

January 4, 1999

MEMORANDUM TO: Rita Messier
License Fee and Accounts Receivable Branch (T9 E10)

FROM: Christi Hernandez
Nuclear Materials Licensing Branch, Region IV *MCH*

SUBJECT: FEE TRANSMITTAL

A. Region IV

1. NRC FORM 241 ATTACHED

Applicant/Licensee: J.L. Shepherd and Associates
NRC Form 241 Dated: December 29, 1998
Agreement State License: CA 1777-19
Program Code(s): 03225

2. REVISION ATTACHED

Licensee:
Agreement State License:

3. CLARIFICATION ATTACHED

Licensee:
Agreement State License:

4. FEE ATTACHED

Amount: \$1100 Check: #061054

5. COMMENTS

B. LICENSE FEE AND ACCOUNTS RECEIVABLE BRANCH

- Fee Category and Amount: 16 \$1100
- Correct Fee Paid. Submittal may be processed for:
General License ☒
Revision ☐

Signed Rita Messier Date 1/11/99

Log	<i>Jan 4 241</i>
Remitter	
Check No.	<i>61054 13/27/98</i>
Amount	<i>\$1100</i>
Fee Category	
Type of Fee	<i>Appl 16</i>
Date Check Rec'd.	
Date Completed	<i>1/11/99</i>
By:	<i>rem</i>

061054

ACCOUNT NO. 7311	VENDOR USN058	CHECK NO. 61054	CHECK DATE 12-29-98
VOUCHER	INVOICE NUMBER	INVOICE DATE	REFERENCE
INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT

U S NRC REGION IV 1999 RECIPROCITY

CHECK TOTAL

J L SHEPHERD & ASSOCIATES
 1010 ARROYO STREET • SAN FERNANDO, CA 91340
 (818) 898-2361

Mellon
 1st Business Bank
 Encino Terrace Center
 15821 Ventura Blvd., 4th Floor
 Encino, CA 91436

16-3844
1220

061054

CHECK NO. CHECK DATE VENDOR NO.
 61054 12-29-98 USN058

BY

*****ELEVEN HUNDRED AND 00/100 DOLLARS*****

CHECK AMOUNT

\$1,100.00

TO THE
ORDER
OF

MATERIAL RADIATION PROTECTION SECTION
 U. S. NUCLEAR REG COMM, REGION IV
 611 RYAN PLAZA DRIVE, SUITE 400
 ARLINGTON, TX 76011-8064

VOID AFTER 90 DAYS

Stacie Freeman
 AUTHORIZED SIGNATURE

⑈061054⑈ ⑆122038442⑆ 040 600647⑈

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET

P.O. BOX 942732

SACRAMENTO, CA 94234-7320

(916) 445-0931

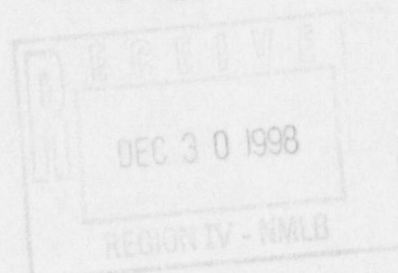
September 21, 1995



NOTICE OF RECEIPT OF RENEWAL APPLICATION FOR REVIEW

J.L. SHEPHERD & ASSOCIATES
1010 ARROYO AVENUE
SAN FERNANDO, CA 91340-8095

ATTN: J.L. SHEPHERD
RADIATION SAFETY OFFICER



DOCKET NUMBER: 0911951777

LICENSE NUMBER: 1777-70

APPLICATION DATE: SEPTEMBER 6, 1995

The above captioned renewal application has been docketed for review. Your application is deemed timely and accordingly, the license will not expire until final action has been taken by the Department. This application will be taken up in the order received.

Correspondence or other communication concerning the above referenced application must be submitted in duplicate and should make clear reference to your assigned docket number pertaining to this specific request. Future requests, not related to the above request, will be assigned a new docket number.

Thank you.

RADIOACTIVE MATERIALS LICENSING
RADIOLOGIC HEALTH BRANCH

STATE OF CALIFORNIA - HEALTH AND WELFARE AGENCY

PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET

P.O. BOX 942732

SACRAMENTO, CA 94234-7322

(916) 445-0931

February 5, 1997



Mary F. Shepherd
Vice President
J.L. Shepherd and Associates
1010 Arroyo Avenue
San Fernando, CA 91340-1822

Dear Ms. Shepherd:

This letter is to inform you that the last two numbers on your radioactive material license was changed from -70 to -19. Your license number is now 1777-19.

Sincerely,

A handwritten signature in cursive script, reading 'Frederick T. Toyama'.

Frederick T. Toyama
Health Physicist
Radiologic Health Branch

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the places(s) designated below. This license is subject to all applicable rules, regulations, and orders of the Department of Health Services now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee	J. L. Shepherd & Associates	3. License Number	1777-19	Amendment Number: 75
2. Address	1010 Arroyo Avenue San Fernando, CA 91340-1822	4. Expiration date	October 11, 1995	(1)
Attention:	J. L. Shepherd Radiation Safety Officer	5. Inspection agency	Radiologic Health Branch Los Angeles	

In response to the letter dated June 15, 1998, signed by Mary F. Shepherd with attachments thereto, and the letter dated June 29, 1998, signed by J. L. Shepherd, License Number 1777-19 is hereby amended as follows.

6. Nuclide	7. Form	8. Possession Limit
A. Any radionuclide with atomic number 3-83 inclusive.	A.-O. Sealed sources manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	A. Not to exceed possession limit specified in customer's radioactive materials license.
B. (1) Cobalt-60 (2) Cesium-137		B. Not to exceed possession limit specified in customer's radioactive materials license.
C. Cobalt-60		C. Not to exceed 1,000 curies for any one source; total not to exceed 2,000 curies.
D. Cobalt-60		D. Not to exceed 50,000 curies total.
E. Cesium-137		E. Not to exceed 100,000 curies total.
F. Californium-252		F. Not to exceed 80 millicuries for any one source; total not to exceed 537 millicuries.
G. Americium-241:Be		G. Not to exceed 25 curies for any one source; total not to exceed 60 curies.
H. Plutonium-238:Be		H. Not to exceed 25 curies for any one source, total not to exceed 60 curies.
I. Americium-241		I. Not to exceed 20 curies total.
J. Radium-226		J. Not to exceed 120 millicuries for any one source, total not to exceed 1 curie.
K. Strontium 90/ Yttrium-90		K. Not to exceed 1.2 curies for any one source; total not to exceed 10 curies.
L. Promethium-147		L. Not to exceed 10 millicuries total.
M. Thallium-204		M. Not to exceed 10 millicuries total.

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19

Amendment Number: 75

6. Nuclide	7. Form	8. Possession Limit
N. Radium-226		N. Not to exceed 1 curie for any one source, total not to exceed 5 curies.
O. Cobalt-60		O. 1 source not to exceed 20 curies.
P. Depleted Uranium	P. Coated metal	P. Not to exceed 5,000 pounds total.
Q. Cobalt-60	Q. Sealed sources (U.S. Nuclear Type 362)	Q. 1 source not to exceed 50 curies.
R. (1) Cobalt-60 (2) Cesium-137	R. Sealed sources manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	R. Not to exceed possession limit specified in customer's radioactive materials license.
S. Europium-152	S. Sealed source (Model HEG-152 Isotope Products Laboratories)	S. 1 source not to exceed 20 millicuries.

9. Authorized Use

- A. To be used for installation, relocation, maintenance, repair, sealed source removal and/or replacement, and preparation for shipment of beam and self-contained calibrators and irradiators manufactured by J. L. Shepherd and Associates and U.S. Nuclear Corporation. (See Condition 21 for limitations.)
- B. To be used in the removal of teletherapy heads containing sealed sources from Keleket, Picker, and Westinghouse teletherapy units and preparation of heads for shipment in accordance with Department of Transportation regulations. Removal of sealed sources from head of teletherapy units is not authorized.
- C. To be used for dismantling, reinstallation, and preparation for shipment of Automation Industries (Budd Company) projectors Models 1060 and 1061.
- D.-M. & S. To be used for research and development; survey instrument calibration; maintenance, repair, sealed source removal and/or replacement, manufacture, and distribution of devices to specific licensees of the Nuclear Regulatory Commission Agreement States.
- N. To be received as radioactive waste and used incidental to re-encapsulation of "normal form" sealed sources into "special form" sealed sources and transfer to specific licensees of Agreement States for disposal.
- O. To be used in a Tech/Ops projector Model 471 for storage only.
- P. To be used for shielding in calibrators, irradiators, teletherapy heads, and shipping containers and distribution to specific licensees of the Nuclear Regulatory Commission or Agreement States.
- Q. To be used in the removal of teletherapy heads containing sealed sources from Bar-Ray teletherapy units (used for medical purposes) and preparation of heads for shipment in accordance with Department of Transportation regulations. Removal of sealed sources from heads of teletherapy units is not authorized.
- R. To be used for installation, removal and transfer of sealed sources at customer's wet well facilities.

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19Amendment Number: 75LICENSE CONDITIONS

10. Radioactive material shall be used only at the following locations:
- (a) 1010 Arroyo Avenue, San Fernando, CA
 - (b) 840/850 Arroyo Avenue, San Fernando, CA (Sub-item P and long term storage of radioactive waste).
 - (c) Customer's facilities at temporary job sites of the licensee in areas not under exclusive federal jurisdiction throughout the State of California (See Conditions 21, 23, 24, and 36 for limitations).
11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in items 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 100425 of the California Health and Safety Code.
12. (a) Radioactive material used in all Allied Cave operations including tertiary encapsulation of sealed sources and removal and/or replacement of sealed sources (containing greater than one curie of Cobalt-60 or three curies of Cesium-137 or a maximum of 25 curies per neutron source) from devices at temporary job sites may be used by, or under the direction supervision, and in the physical presence of, the following individuals:
- (1) J. L. Shepherd
 - (2) Ralph Jacobs
 - (3) James D. Fuzzell
 - (4) David G. Cadena, Jr.
 - (5) Roy C. Craft, CHP
- (b) Radioactive material used in operations at the licensee's facility other than described in Condition 12(a) may be used by, or under the supervision of, the following individuals:
- (1) J.L. Shepherd
 - (2) Ralph Jacobs
 - (3) James D. Fuzzell
 - (4) David G. Cadena, Jr.
 - (5) Roy C. Craft, CHP
- (c) Radioactive material used in removal and/or replacement of sealed sources (Containing less than one curie of Cobalt-60 or three curies of Cesium-137) from devices, and for device maintenance and/or repair at temporary job sites may be used by, or under the direct supervision and in the physical presence of, individuals who have satisfactorily completed the licensee's personnel training program described Condition 13 (a) of this license.
- (d) Radioactive material used in the installation and/or relocation of devices, not involving source removal and/or replacement, at temporary job sites may be used by, or under the direct supervision and in the physical presence of individuals who have satisfactorily completed the licensee's personnel training program described in Condition 13 (a) of this license.

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19Amendment Number: 75

13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with the statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- (a) The letters with attachments dated May 23, 1986 and April 22, 1987, and October 24, 1988, all signed by J. L. Shepherd, regarding the radioactive materials license renewal, including the Quality Assurance Procedures, Number QA-RM-001-A, Revision 2 and the J. L. Shepherd and Associates Radiological Safety Control Manual dated October 24, 1988, Revision Number 1 (excluding Appendices F and F-1), modified by the letter dated January 30, 1989.
 - (b) The letters dated May 18, 1988, and August 5, 1988, both signed by J. L. Shepherd, regarding irradiation of electronic components.
 - (c) The application with attachments dated March 31, 1988, the letter with attachments dated May 16, 1988, and the letter dated July 15, 1988, all signed by J. L. Shepherd, regarding re-encapsulation of radium sources for disposal.
 - (d) The letter dated August 21, 1987, November 23, 1987, and January 27, 1988, with attached hot cell design specifications, modified by the letter with attached hot cell diagrams dated November 8, 1988, all signed by J. L. Shepherd.
 - (e) The letters with attachments dated January 20, 1987, and June 10, 1987, both signed by J. L. Shepherd, regarding installation, servicing, source removal and/or replacement of calibrators and irradiators at temporary job sites (customer's facilities).
 - (f) The letter dated June 11, 1975, signed by J. L. Shepherd, regarding teletherapy head removal.
 - (g) The letter dated June 10, 1975, signed by J. L. Shepherd, regarding dismantling Automation Industries projectors Models 1060 and 1061.
 - (h) The letter with attachments dated March 23, 1989, signed by J. L. Shepherd.
 - (i) The letters with attachments dated April 12, 1989 and June 1, 1989, both signed by J. L. Shepherd.
 - (j) The letters with attachments dated January 12, February 24, and March 30, 1989, all signed by J. L. Shepherd, regarding commitments in the manufacture of devices.
 - (k) The letter with attachments dated June 15, 1989, signed by J. L. Shepherd.
 - (l) The letter with attachments dated March 13, 1990, signed by J. L. Shepherd regarding shipment from G.E.
 - (m) The letters with source removal/replacement procedures for wet wells dated March 6, 1991 and March 28, 1991, both signed by J. L. Shepherd.
 - (n) The letters dated December 8, 1994 and April 6, 1995, both signed by Mary F. Shepherd, regarding the facility at 503 Jessie Street, Unit C, San Fernando, CA.
 - (o) The letters with attachments dated April 18, 1995, June 21, 1995 and September 5, 1995, all signed by Mary F. Shepherd, relative to use of Allied Cave Facility to perform tertiary encapsulation of sealed sources.

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19Amendment Number: 75

- (p) The letter dated August 31, 1995 signed by Mary F. Shepherd, with attached resumes.
 - (q) The letters with attachments dated October 18, 1995, October 24, 1995 and November 3, 1995 all signed by Mary F. Shepherd relative to addition of long term storage locations at 1010 Arroyo Avenue and 503 Jessie Street, Unit C facilities.
 - (r) The letter with attachments dated June 20, 1996, signed by J. L. Shepherd, as modified by the letter dated June 25, 1996, signed by Mary F. Shepherd, regarding authorization of a special one time shipment of a Cobalt-60 teletherapy source.
 - (s) The letter dated May 30, 1996, signed by Mary F. Shepherd, Vice President, regarding authorization to perform leak tests at customer facilities.
 - (t) The letter dated July 5, 1996, signed by Mary F. Shepherd, regarding new storage area for depleted Uranium.
 - (u) The letter dated January 21, 1997, signed by Mary F. Shepherd regarding tertiary encapsulation of neutron sources and Rem bail calibration procedures.
 - (v) The letter dated March 19, 1997, signed by Mary F. Shepherd, with attachments thereto, regarding procedures for in-house calibration of neutron meters, and the letter dated June 9, 1997, signed by Mary F. Shepherd, with attachments thereto, regarding authorization for David Cadena and Ralph Jacobs to perform internal audits as referenced in Condition 33 of the License.
 - (w) The letters dated December 30, 1997, January 12, 1998 and January 15, 1998 all signed by Mary F. Shepherd, with attachments thereto, regarding the decommissioning plan for the sealed sources and the pool irradiator as part of the DOE funded remediation project located at UC Davis.
- 14. The Radiation Safety Officer in this program shall be J. L. Shepherd.
 - 15. Sealed sources described in this license shall be tested for leakage and/or contamination at intervals not to exceed 6 months, following the test method described in Condition 13 (a).
 - 16. Except for alpha sources, the periodic leak test required by Condition 15 does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.
 - 17. Any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
 - 18. The licensee is authorized to perform tests for leakage and/or contamination of sealed sources. The following tests may be performed for sources possessed under this license or on J. L. Shepherd devices as a customer service:
 - (a) Collection of wipe test samples from sealed sources and devices containing sealed sources.
 - (b) Analysis of materials collected by the licensee as stated in (a) above for the amount of radioactivity. Reports to customers of analysis shall be in microcuries.

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License Number: 1777-19Amendment Number: 75

19. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the Department of Health Services, Radiologic Health Branch, 601 N. 7th Street, P.O. Box 942732 - MS 178, Sacramento, CA 94234-7320, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.
20. The licensee shall conduct a physical inventory every six (6) months to account for all sealed sources that are excepted from periodic leak testing as described in Condition 15 of this license. Records of the inventories shall be maintained for inspection, and may be disposed of following Department inspection.
21. The license is authorized to perform the following operations at customer's facilities (dry well facilities only) as temporary job sites of the licensee throughout the State of California except those areas under exclusive federal jurisdiction:
- (a) For removal and/or replacement of sealed sources containing 10 curies through 1,000 curies of Cobalt-60 or 30 curies through 3,000 curies of Cesium-137, the licensee shall comply with the following provisions:
- (1) A detailed written plan, including operating and emergency procedures based on the nature of the facility, source sizes, and operations to be performed shall be prepared prior to initiating the operation. The plan shall be maintained for inspection by the Department.
 - (2) The licensee shall submit written notification such as to reach the Department's Compliance Section (Radiologic Health Branch - Sacramento for Northern California, Radiologic Health Branch - Berkeley for Central California, and Radiologic Health Branch - Los Angeles for Southern California) at least 3 days prior to engaging in such operation. The notification shall indicate the date, time, and location of the operation.
- (b) No individual shall be allowed to act as an assistant during any operation until that individual has been instructed in, and has demonstrated understanding of, the procedures required for the operation, as well as the fundamentals of radiation safety as set forth in Section 30335(a) of the California Radiation Control Regulations.
- (1) No operation shall be initiated unless the licensee has in his possession detailed blueprints and written instructions for the operation, such blueprints and instructions being specific for the manufacturer and model number of the device and for the type of operation involved.
 - (2) The licensee shall notify the Department by telephone and confirming telegram should any malfunction occur, unsafe conditions be discovered, or difficulty arise which might lead to be radiation exposure of any individual above the limits specified in Section 30265 of the California Radiation Control Regulations.
 - (3) Sealed sources shall be transported only in DOT/NRC-approved shipping containers.
- (c) For maintenance and/or repair of devices containing more than 1000 curies of Cobalt-60 or Cesium-137, the licensee shall comply with the following provisions:
- (1) No individual shall act as an authorized supervisor during any operation described in Condition 21 (b) until that individual has been instructed in, and has demonstrated understanding of, the procedures required for the operation, as well as the fundamentals of radiation safety as set forth in Section 30335 (a) of the

RADIOACTIVE MATERIAL LICENSE

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California Radiation Control Regulations in accordance with the license's personnel training program described in Condition 13 (a) of this license.

- (2) No individual shall be allowed to act as an assistant during any operation until that individual has been instructed in, and has demonstrated understanding of, the procedures required for the operation, as well as the fundamentals of radiation safety as set forth in Section 30335 (a) of the California Radiation Control Regulations.
 - (3) No operation shall be initiated unless the licensee has in his possession detailed blueprints written instructions for the operation, such blueprints and instructions being specific for the manufacturer and model number of the device and for the type of operation involved.
 - (4) The license shall notify the Department by telephone and confirming telegram should any malfunction occur, unsafe conditions be discovered, or difficulty arise which might lead to the radiation exposure of any individual above the limits specified in Section 30265 of the California Radiation Control Regulations.
 - (5) Sealed sources shall be transported only in DOT/NRC-approved shipping container.
 - (6) Records of such operations shall be maintained for inspection by the Department.
22. The licensee is authorized to use the Allied Cave Model S-4040 limited to handling up to 25 curies of Cobalt-60, up to 1,000 curies of Cesium-137, and up to 5 curies of Radium-226 in accordance with procedures described in Condition 13 of this license.
23. The licensee is authorized to perform installation, relocation, maintenance, and repair operations of calibrators and irradiators only. No operation shall be initiated unless the licensee had in his possession detailed blueprints and instructions being specific for the manufacturer and model of the device and for the type of operation involved.
24. The licensee is authorized to perform removal and/or replacement of sealed sources contained in shipping containers, calibrators, and irradiators only. No operation shall be initiated unless the licensee has in his possession detailed blueprints and written instructions for the operation, such blueprints and written instructions being specific for the manufacturer and model of the device and for the operation involved.
25. The licensee is authorized to perform renovation (refurbishment and repairs that modify devices) on only calibrators and irradiators under the following provisions:
- (a) No operation shall be initiated unless the licensee has in his possession detailed blueprints and written instructions for the operations, such blueprints and instructions being specific for the manufacturer and model number of the device and for the type of operation involved.
 - (b) There shall be no reduction in the original safety systems of any device.
 - (c) Records of all modifications shall be maintained for inspection by the Department and include manufacturer and model number of device, source manufacturer, model number, and activity, age of device and source, and detailed blueprints and written engineering specifications describing the modification.
 - (d) The license shall not distribute/transfer any device to a customer until the customer has received authorization to receive such modified device by the Nuclear Regulatory Commission of Agreement State.

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26. The license shall provide written notification to customers informing them of the following:

- (a) ANY modification made by the licensee to any device; and
- (b) The requirement of the customer to notify the appropriate regulatory agency of the modification for licensing purpose.

Records of such notification shall be maintained for inspection by the Department.

27. The license is authorized to remove sealed sources from one device and install such sources in another device provided:

- (a) Such operations involve irradiators and calibrators only.
- (b) Sealed sources shall be compatible with these devices as specified in the USNRC Registry of Sealed Sources and Devices; and
- (c) The licensee shall maintain records documenting all sealed sources and devices involved in these operations including:
 - (1) manufacturer and model number of all sealed sources and devices;
 - (2) dates of source transfers;
 - (3) quality assurance tests performed on sealed sources;
 - (4) age of all sealed sources removed and/or installed.
- (d) The licensee shall notify customers in writing when a "recycled" sealed source is placed into their device.

28. The licensee is authorized to calibrate radiation detection instruments for his own use. Each calibration of a radiation detection instrument shall include not less than 2 points other than zero (separated by 50 percent of full scale) for each scale of the instrument certified by the licensee.

29. The licensee shall distribute only sealed sources and/or devices for which a Sealed Source and Device Registry Certificate has been issued by the California Department of Health Services, the U.S. Nuclear Regulatory Commission, or other Agreement State. Sealed sources and/or devices distributed must adhere to the design specifications described in the Sealed Source and Device Registry Certificate. Any changes in the design or specifications of these sealed sources and/or devices require the manufacturer to apply for and receive an amendment to the Sealed Source and Device Registry Certificate prior to distribution. The licensee may distribute sources and/or devices without a Sealed Source and Device Registry Certificate provide the recipient is authorized to possess such items by license condition or applicable State or Federal regulations and laws.

30. This license does not authorize distribution of radioactive material pursuant to Title 17, California Code of Regulations, Sections 30180 and 30192 through 30192.6 or equivalent provisions of the U.S. Nuclear Regulatory Commission or Agreement States.

31. The licensee shall comply with all requirements of Title 17, California Code of Regulations, Section 30373 when transporting or delivering radioactive materials to a carrier for shipment. These requirements include: (packaging, marking, labeling, loading, storage, placarding, monitoring, and accident reporting). Shipping papers shall be maintained for inspection pursuant to the U.S. Department of Transportation requirements (Title 49, Code of Federal Regulations, Part 172, Sections 172.200 through 172.204).

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19Amendment Number: 75

32. Except for plutonium contained in a medical device designed for individual human application, no plutonium, regardless of form, shall be transported in an aircraft unless contained in packages the design of which the U.S. Nuclear Regulatory Commission has specifically approved for transport of plutonium by air.
33. The licensee shall have quarterly internal audits of his radiation safety program performed by a qualified individual subject to the Department's approval to include, but not limited to, the following:
- (a) Radioactive material inventory
 - (b) Incoming and outgoing package surveys
 - (c) Leak tests
 - (d) Radiation surveys
 - (e) Personnel dosimetry
 - (f) Equipment and instrument calibrations
 - (g) Operating and emergency procedures
 - (h) Initial and refresher employee training
 - (i) Customer Training
 - (j) Q.A. Program

Records of these audits shall be maintained for inspection by the Department.

34. The license is authorized to "recycle" sealed sources removed from generally licensed gauges and install such sources in another device provided:
- (a) Such operations involve installation into irradiators and calibrators only;
 - (b) Sealed sources shall be compatible with these devices as specified in the USNRC Registry of Sealed Sources and Devices;
 - (c) Sealed sources shall not be older than 20 years from the dated of manufacturing; and
 - (d) The licensee shall maintain records documenting all sealed sources and devices involving in these operations including:
 - (1) manufacturer and model number of all sealed sources and devices;
 - (2) dates of source transfer;
 - (3) quality assurance tests performed on sealed sources;
 - (4) age of all sealed sources removed and/or installed.
 - (e) The licensee shall notify customers in writing when a "recycled" sealed source is placed into the device.
 - (f) Such operations are in accordance with Condition 12 (a) and 22 for Cesium-137 and Cobalt-60.
35. Notwithstanding Condition 24 of this license, the licensee is authorized to remove teletherapy heads containing sealed sources. No operation shall be initiated unless the licensee has in his possession detailed blueprints and instructions for the operation, such blueprints and instructions being specific for the manufacturer and model of the device and for the type of operation involved.

RADIOACTIVE MATERIAL LICENSE

License Number: 1777-19Amendment Number: 75

36. The licensee is authorized to perform removal, replacement and transfer of sealed sources containing less than 30,000 curies of Cobalt-60 and/or Cesium-137 at the customer's facilities (wet well facilities only) as temporary job sites of the licensee throughout the State of California except those areas under exclusive federal jurisdiction with the following provisions:

- (1) A detailed written plan, including operating and emergency procedures, based on the nature of the facility, source sizes, and operations to be performed shall be submitted to the Department of Health Services, Radiologic Health Branch for approval and authorization prior to initiation of operations.
- (2) At least three (3) days prior to the initiation of such operation, the licensee shall inform the Department of the date, time, and location of the operations.
- (3) No individual shall be allowed to act as an assistant during any operation until that individual has been instructed in, and has demonstrated understanding of, the procedures required for the operation, as well as the fundamentals of radiation safety as set forth in Section 30335 (a) of the California Radiation Control Regulations.
- (4) No operation shall be initiated unless the licensee has in his possession detailed blueprints and written instructions for the operation, such blueprints and instructions being specific for the manufacturer and model number of the device and for the type of operation involved.
- (5) The licensee shall notify the Department by telephone and confirming telegram should any malfunction occur, unsafe conditions be discovered, or difficulty arise which might lead to the radiation exposure of any individual above the limits specific in Section 30265 of the California Radiation Control Regulations.
- (6) Sealed sources shall be transported only in DOT/NRC-approved shipping containers.

For the State Department of Health ServicesDate: September 3, 1998By: David Wesley

Radiologic Health Branch

P.O. Box 942732-MS 178, Sacramento, CA 94234-7320

J.L. SHEPHERD & ASSOCIATES

NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES - 1999

ALABAMA

	S/N	Model
U.S. Army Missile Command TMDE Activity Bldg 5435 Redstone Arsenal, AL 35898	7085	Model 81-16Q Calibrator 10Ci-2CiCs-137 5Ci-10mCi Cobalt-60
U.S. Army Missile Command Building 5437 Redstone Arsenal, AL 35898	8218	Model 89-400 Calibrator 400Ci & 130mCi Cesium-137
U.S. Army TMDE Activity Redstone Arsenal, AL 35898	None Available	Model 179 Neutron Howitzer 10Ci PuBe-238
U.S. Army Missile Command TMDE Activity Redstone Arsenal, AL 35898	12020	Model 149-D20 40ugm Cf-252
Anniston Army Depot Anniston, Alabama	8204	Model 89-400 Calibrator 400Ci & 130mCi Cesium-137
U. S. Army Missile Command Building 8022 Redstone Arsenal, AL 35898	7134	Model 81-18T Calibrator w/3,000Ci, 200Ci Cs-137 & 1,000CiCo-60
U.S. Army Missile Command TMDE Activity AMSMI-TMDE-SS Building 5435 Redstone Arsenal, AL	7144	Model 81-12 (AN/UDM01A) Calibrator 150Ci 100mCi Cs-137
U.S. Army TMDE Activity Building 5417 Redstone Arsenal, AL 35898-5400	6014	142-10 Panoramic Irradiator w/ 1.2Ci Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES - 1999

ARIZONA

USDA-PBWRF 3645 E. Chipman Phoenix, Arizona 85040	S/N 3026	Model 109-68 (GR-12) Irradiator w/4,500Ci Co-60 as of 5/93
USDA-PBWRF 3645 E. Chipman Phoenix, Arizona 85040	650	109-68 Irradiator 4,100Ci Co-60 as if 4/87
USDA-ARS, PWS, Western Cotton Research Phoenix, AZ 85040-8830	1069	Gammator 38-3 1,350Ci Cs-137
USDA-REE-ARS-PWA, 4317 E. Broadway Road Phoenix, AZ 85040-8807		

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

ARKANSAS

	S/N	Model
National Center for Toxicological Research NCTR Drive Jefferson, Arkansas 72079	3018	109-A Irradiator 1,200Ci Co-60

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NUCLEAR REGULATORY COMMISSION- RECIPROCITY STATES 1999

CALIFORNIA

	S/N	Model
McClellan Air Force Base 4235 Forcum Avenue Building 620 Room 136 Sacramento, CA 95652	7125	484 Irradiator 2/Ea 9,500CiCo 1/Ea 200CiCo All Srcs Co-60
McClellan Air Force Base 4235 Forcum Avenue Building 620 Room 136 Sacramento, CA 95652	7133	484 Irradiator 100Ci Co-60 130Ci Cs-137
Sacramento Army Depot AMXTM-CW-SA Sacramento, CA 95813-5035	EC-3188	AN/UDM-1A Calib 130Ci Cs-137
Marine Corps Logistic Base Calibration Lab Bldg 598 Yermo, CA 92398	7084	81-10 Calib 130Ci Cs-137
Marine Corps Logistic Base Calibration Lab Bldg 598 Yermo, CA 92398	6055	142-5S Calib 5Ci Cs-137
Naval Hospital/San Diego San Diego, CA 92134	2060	143-45B Irrad 2,360Ci Cs-137
NISE West -Code 346 RADIAC Bldg 3 North 4297 Pacific Highway San Diego, CA 92110-3288	7118	Model 81-10 Calibration Sys 130Ci, 2Ci, 30mCi
Naval Station, San Diego Main & Vesta S.E. San Diego, CA 92135	20	AN/UDM-1A-Decom Calibrator w/ 49Ci Cs-137 as of Nov 1997

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NUCLEAR REGULATORY COMMISSION- RECIPROCITY STATES 1999

CONNECTICUT

	S.N.	MODEL #
Yale University Dept. Therapeutic Radiology 333 Cedar Street. WWW 229 New Haven, CT. 06510	1075	Mark I-68A Irradiator 6,100Ci Cs-137
Boehringer Ingleheim 175 Briar Ridge Ridgefield, CT, 06877	1015	Mark I-68 Irradiator 6,000Ci Cs-137
Navysubsupfac-New London Building 105 Groton, CT 06329	tbd	Model 81-10 Calibration Sys 130Ci, 2Ci, 30mCi Cs-137
Electric Boat 75 Eastern Point Rd Groton, CT 06340	tbd	Model 81-10

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

DELAWARE

	S/N	Model
DuPont Merck Research & Development, Experimental Station, Bldg E336 Route 141 & Henry Clay Road Wilmington, DE 19880	59	Model GC-40 Irradiator w/ 2,556Ci Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

DISTRICT OF COLUMBIA

	S/N	Model
Walter Reed Army Medical Center Blood Bank 6825 16TH Street. N.E. Washington, D.C.	2044	143-45 Irradiator 4/EA 550Ci Cs-137
Georgetown University Lombardi Cancer Center 3800 Reservoir Road N.W. Washington, D.C. 20007	131	Gammacell 1000
Naval Research Laboratory Research Bldg 3970 Reservoir Road Washington, D.C. 20375	7002	81-18B Irradiator 200Ci Co-60
Georgetown University Research Building 3970 Reservoir Road N.W. Washington, D.C. 20007	1096	Mark I-30 Irradiator 200Ci Cs-137
George Washington University I Street & 24th NW Washington, DC 20037	1041	Mark I-25 Irradiator 5,000Ci Cs-137 as of 9-2-86

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

FLORIDA

	S/N	Model
Patrick Air Force Base Building 981 - PMEL/E Patrick AFB, FL 32925	7059	81-10 Calibrator w/130Ci Cs-137
Naval Training Center Bldg 602-Herndon Annex Orlando, FL 32813	7096	81-10 Calibrator w/130Ci, 2Ci & 70mCi Cs-137
USDA, ARS SR, Insect Affecting Man Research Laboratory 1600 SW 23rd Drive Gainesville, FL 32604	1072	Model M-38-35 Irradiator w/ 2,800Ci Cs-137 as of 2/71
USDA, ARS Subtropical Horticulture Research Station 13601 Old Cutler Road Miami, FL 33158	911	Model GR-12 Irradiator w/ 4,500Ci Co-60 as of 12/68
USDA, ARS Subtropical Horticulture Research Station 13601 Old Cutler Road Miami, FL 33158	193	Model GC-220 Irradiator w/ 26,000Ci Co-60 as of 1/83
NISE East Det Mayport Bldg 1380, Naval Station Mayport, FL 32220-0087	7115	Model 81-10 Calibration Sys 130Ci, 2Ci, 30mCi Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

GEORGIA

USDA, ARS Insect, Biology & Population Management Davis Road Tifton, GA 31794	S/N 3017	Model US Nuclear GR12 Irradiator 4,500Ci CO-60 as of 3/92
Dwight D. Eisenhower Army Medical Center Building 300 Fort Gordon, GA 30905	8157	89-130 Calib w/130Ci & 130mCi Cs-137
Marine Corps Logistics Base Building 2700, Repair Division Albany, GA 31704-5000	7070	81-10 Calib w/130Ci Cs-137
USDA-ARS-SPIRD 3401 Edwin Street Savannah, GA 31405	NN 1995	Grain Irradiator 640Ci Co-60 Decommissioned

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

HAWAII

Tripler Army Medical Center Tripler, Hawaii	S/N 2054	Model 143-45A Irradiator w/2,200CiCs-137
USDA, Animal & Plant Health Inspection Service Hawaii Fruit Fly Rearing Facility 41-650 Ahiki Street Waimanalo, HI 96795	007	Model Isomedix 521-A Husman Irradiator w/ 42,000Ci Cs-137
USDA, Animal & Plant Health Inspection Service Hawaii Fruit Fly Rearing Facility 41-650 Ahiki Street Waimanalo, HI 96795	008	Model Isomedix 521-A Husman Irradiator w/ 40,000Ci Cs-137
Pearl Harbor Naval Shipyard Building 214 Code 952E Pearl Harbor, HI 09860-5350	7116	81-10 Calibration Sys 130Ci, 2Ci, 30mCi Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

IDAHO

	S/N	Model
Naval Reactor Facility Scoville Site, Bldg BB10A Idaho Falls, ID 83401	7121	81-10 Calib Sys 130Ci, 2Ci 30mCiCs137
Alpha-Idaho 101 Technology Drive Bay # 4 Idaho Falls, ID 83401	9004	81-10 Calib w/ 110Ci & 500mCiCs137 As of TBD

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

ILLINOIS

	S/N	Model
Edward Hines Jr. VA Hospital Building 200 - Room A-107 BB Hines, Illinois	2055	143-45 600Ci Cs-137
U.S. Naval Service School Command Radiac, Bldg. 621 Great Lakes, IL 60088-5400	7096	81-10 Calib Sys 130Ci, 2Ci 70mCiCs137
U.S. Naval Service School Command Great Lakes, IL 60088-5400	Unknown	TS-1216 Calibrator w/20CiCs137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

INDIANA

	S/N	Model
Indiana University Biology Department Jordan Hall Bloomington, Indiana 47405	1076	Mark I-68A Irradiator 6,000Ci Cs-137
Purdue University REM CIVL B 173 West Lafayette, Indiana 47907	10220	28-10 Calibrator 65CiCs-137
U S Naval Weapons Support Center Crane, IN 47522-5002	7071	484 Irrad 2/Ea 4,000 Ci,10Ci,1Ci Cobalt-60
U S Naval Weapons Support Center Building 64 Crane, IN 47522-5011	85	Gammacell 220
U S Naval Surface Warfare Center Building 2088 Crane, IN 47522-5011	5	Gammacell 220 w/ 21,000CiCo60

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

IOWA

	S/N	Model
V A Medical Center Highway 6 West Iowa City, Iowa	1003	Mark I-22 Irradiator 2,000Ci Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

KENTUCKY

	S/N	Model
Blue Grass Army Depot 5751 Briar Hill Road Lexington, KY 40512-4063	C151	AECL GC-5 37CiCo-60
VA Medical Center 800 Zorn Avenue Louisville, KY 40206	Unknown	Decommed Bar Ray Cobalt-60 Irradiator w/7.14Ci

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MARYLAND

	S/N	Model
U.S. Army Aberdeen Proving Grounds Edgewood Area Building 3554 Aberden Proving Grounds, MD 21005	5070	78-2Beam Calib w/130Ci & 130mCi Cs-137
Aberdeen Proving Grounds US Army Combat Systems Test Activity Aberdeen Proving Grounds, MD 21005-5059	3006	109-68 Irradiator 24,000Ci Co-60
Aberdeen Proving Grounds Edgewood, MD 21010	Unknown	149 w/10Ci 241AmBe
National Cancer Institute Frederick Cancer R&D Center Bldg 248, Ft. Detrick Frederick, MD	1016	Mark I-68A Irradiator 6,696 Ci Cs-137
Naval Surface Warfare Center Carderock Division 9500 MacArthur Blvd. West Bethesda, MD 20817	5134	Mark IV-SR Calibrator w/10mCi Sr-90
Naval Surface Warfare Center Carderock Division 9500 MacArthur Blvd. West Bethesda, MD 20817	5104	Mark IV-H Calibrator w/20Ci Cs-137
Naval Surface Warfare Center Carderock Division Bldg 19, Room C3A 9500 MacArthur Blvd. West Bethesda, MD 20817	7073	81-10 Calibrator w/120CiCo-60 & 30Ci Cs-137
Naval Surface Warfare Center Carderock Division 9500 MacArthur Blvd. West Bethesda, MD 20817	6070	142-S Mini Irradiator w/ 600mCi Cs-137
Naval Surface Warfare Center Carderock Division 9500 MacArthur Blvd. West Bethesda, MD 20817	7148	81-12 Calibrator w/120Ci Cs-137

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	S/N	Model
National Institute of Standards & Technology I-270 @ Quince Orchard Road Gaithersburg, MD 20899	7116	Models 81-10 Calibrator Service For US Navy
National Institute of Standards I-270 @ Quince Orchard Road Gaithersburg, MD 20899	7132	81-12Q Calib 125Ci, 6.0Ci 0.3Ci, 15mCi 1.0mCiCs-137
Frederick Cancer/NCI @ Bldg 248 - Fort Detrick Frederick, MD	1062	Mark I-68A Irradiator 6,000Ci Cs-137
U S Army - Fort Detrick Frederick, MD	612	81-16 Panoramic Irradiator 60CiCo-60
National Cancer Institute Fort Detrick Bldg/Loc: 426 140 Frederick, MD	133	Nuclear Assoc. Gamma Survey Instrument Aprx 60mCiCs137 Model 64-764
Uniformed Services University of the Health Sciences 4301 Jones Bridge Road Bethesda, MD 20814	653	109-85 Self-Contained Irradiator 7,600Ci Co-60
U S AFRRI Armed Forces-Radiobio 8901 Wisconsin Avenue, Bldg. 42 Bethesda, MD 20889-5603	8147	89-130 Calib 130Ci & 130mCiCs-137
Walter Reed Army Institute of Reseach Walter Reed Army Medical Ctr Annex Building # 172 Forest Glen, MD 20907 - On Receipt of License	1006	Mark I-68A Irradiator 9,000CiCs-137 as of 9-1-81
Naval Medical Research Institute 8901 Wisconsin Avenue, Bldg. Bethesda, MD 20889		Decomm Best Ind. Gamma- Irradiator 100 w/2,090Cs-3/83

J.L. SHEPHERD & ASSOCIATES

NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES - 1999

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National Institute of Health 9000 Rockville Pike Building 37 Room 1B22 Bethesda, MD	671	143-45 Irradiator 1,050Ci Cs-137
National Institute of Health 9000 Rockville Pike Building 37 Room 1B25 Bethesda, MD	669	Mark I-68 Irradiator 6,000Ci Cs-137
National Institute of Health 12441 Parklawn Drive Rockville, MD	1072	Mark I-68 Irradiator 5,000Ci Cs-137
U.S. Army-Fort Detrick 1425 Porter Street Room AR109 Frederick, MD	154	GC 220R Irradiator 24,000Ci Co-60
USDA Agricultural Research Service Building-1040, Room-100 BARC-East Beltsville, MD 20705	1111	Model M-38-3 Irradiator 2,800Ci Cs-137 as of 10/69
AFRRI Armed Forces Radiobio Research Institute Bldg. 42 Bethesda, MD 20814	9021	Model 78-5 Calibrator 120mCi 2.5mCi Cesium-137
National Naval Medical Center 8901 Wisconsin Avenue Bldg. 55, Room R-14 Bethesda, MD 20089	840001	Best Industries Model 100 Gamma Irradiator
Armed Forces Radiobiology Research Institute (AFRRI) National Naval Medical Center Exposure Room 4 (ER-4) Bldg. 45 8901 Wisconsin Avenue Bethesda, MD 20089	7151	81-18Irradiator w/100Ci Co-60
U.S. Army Fort Detrick 1425 Porter Street Room AR109 Frederick, MD	34	Gammacell 40 w/

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

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Walter Reed Army Institute of Research Forest Glen, MD 20907	3047	109-68 Irradiator w/ 24,000CiCo-60
Perrimune, Inc. Rockville, MD	tbd	Gammacell 40
NCI-Frederick Cancer Research Fort Detrick Bldg 376 Room 100A Frederick, MD	tbd	Gammacell 40

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

MICHIGAN

	S/N	Model
University of Michigan Cancer & Geriatrics Center Bldg. 1400 E. Medical Center Drive Room 2121B Ann Arbor, MI. 48109	1032	Mark I-25 Irradiator W/780Ci Cs-137 as of 12-8-84
Michigan Community Blood Center 1036 Fuller N.E., Grand Rapids. 49501	3029	109-C Laboratory Irradiator W/4,000Ci Co-60
Henry Ford Hospital 2799 West Grand Avenue Detroit, MI.	1048	Mark I-68 Irradiator W/5,000Ci Cs-137
University of Michigan Ann Arbor, MI	1012	Mark I-25 Irradiator W/4,000Ci Cesium-137
Karmanos Cancer Institute 110 East Warren Avenue Detroit, MI 48201	1010	Mark I-68 Irradiator w/10,000CiCs-137
Oakland University Department of Chemistry Rochester, MI 48309-4401	3008	GR-9 Irradiator w/4,500Ci Co-60

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

MINNESOTA

	S/N	Model
University Of Minnesota 314 Lions Research Bldg. 2001 6th Street Room 382 S.E. Minneapolis	1092	Mark I-25 Irradiator W/1,100Ci Cs-137
University Of Minnesota 1445 Gortner Avenue. Room 343 St. Paul, MN. 55108	671	143-45 Irradiator W/1,050Ci Cs-137
Control Data Corp. 3101 E. 80Th St. RM C2 Bloomington, MN.	7079	484 Irradiator W/6011Ci Co-137
Mayo Foundation Hilton Building 2nd St. & 2nd Ave SW Rochester, MN. 55905	2034	143-68 Irrad W/4,000Ci Cs-137
Mayo Foundation Rochester, MN 55905	1077	Mark I-25 Irrad W/5,000Ci Cs-137
Mayo Foundation Rochester, MN 55905	672	Mark I-25 Irrad W/520Ci Cs-137
University Of Minnesota Fairview Medical Center Blood Bank Unit J, Room 3-580A Harvard & East River Roads Minneapolis, MN.	646	Mark I-30 Irradiator w/8,000Ci Cs-137
University Of Minnesota Basic Sciences & Biomedical Eng.Bldg... 312 Church Street, S.E. Room 6-269 Minneapolis, MN 55455	1004	Mark I-30 Irradiator W/2000Ci Cs-137
University of Minnesota 425 East River Road Minneapolis, MN 55455	1014	Mark I-68 Irradiator w/1,000Ci Cs-137
The Hughes Institute (Drug Discovery Enterprises) 2680 Patton Road Roseville, MN 55113	1122	Mark I-68A w/(RQ) 1,170Ci Cs-137 as of 11-21-97
Children's Healthcare, St Paul 345 No. Smith Avenue St. Paul, MN 55102	2025	143-45 Irrad w/ 1,100Ci Cs-137 as of 11-9-87

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MISSISSIPPI

	S/N	Model
Keesler Air Force Base Bldg. 0468, 5th Street Keesler AFB, MS 39534-5300	2068	143-45A Irradiator 2,200Ci Cesium-137
USDA/Mississippi State Univ Harned Res Lab/Bollweevil Lab Highway 12 Starkville, MS 39762	203	Decomm American Nucl Mdl 100M w/ 24.5CiCo60
USDA Agricultural Research Service Boll Weevil Research Laboratory Mississippi State, MS 39762	21	Model GC-40 Irradiator 3,200Ci Co-60 as of 3/77

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

MISSOURI

	S/N	Model
Barnes Hospital Blood Bank 4949 Barnes Hospital Plaza St. Louis, Mo.	3013	109-C Irradiator W/4,000Ci Co-60
Community Blood Center of Greater Kansas City 4040 Main Street Kansas City, MO 64111	1044	Mark-I68 Irradiator w/3,000Ci Cs-137
Lucy Lee Hospital 2620 Westwood Blvd. Poplar Bluff, MO 63901	166	Picker C-9 Teletherapy 3,200Ci Co-60
Allied Signal Aerospace Co. 2000 E. 95th Street Kansas City, MO 64141		Decommissioned Gamma Industries Cesium Device w/ 155Ci & 13.4mCi 2/Ea Nuclear Chicago Gages w/ Appr 15Ci Cs-137
Washington University Comparative Medicine 4566 Scott Avenue St. Louis, MO 63110	1111	Mark I-30 Irradiator w/ 1,100Ci Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

MONTANA

	S/N	Model
Rocky Mountain Labs 903 S. 4th Street Hamilton, Montana	1028	Mark I-30 Irradiator
United Blood Services 3000 South Seventh No. Billings, MT 59101	3032	109-C Irradiator w/4,000Ci Co-60

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

NEBRASKA

	S/N	Model
Veterans Administration Medical Center		
4101 Woolworth Avenue	1022	Mark I-22
Omaha, NB. 68105		W/1,500Ci Cs-137

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NEVADA

	S/N	Model
U.S. Environmental Protection 3876 W. Patrick Lane Las Vegas, NV 89118	6000	142-10 Irrad 300mCiCs-137
U.S. EPA 3876 W. Ponderosa Way Building 5 Las Vegas, NV 89118	10197	28-5 Calib 1.0mCi Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

NEW HAMPSHIRE

Portsmouth Naval Shipyard
Portsmouth, NH 03801-2590

7113

Model 81-10
Calib System
w/130Ci, 2Ci
30mCiCs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

NEW JERSEY

	S/N	Model
University of Medicine & Dentistry of New Jersey 191 South Orange Avenue. Newark, NJ. 07103	10259	28-8 Shielded Irradiator w/6.5Ci Cs-137
Schering-Plough Research Institute, 2015 Galloping Hill Road Kenilworth, NJ.	1098	Mark I-68A Irradiator w/2,200Ci Cs-137
New Jersey School of Medicine & Dentistry 185 S. Orange Ave. University Heights Newark, New Jersey	1083	Mark I-68A w/12,000CiCs-137
Schering Laboratories 2015 Galloping Hill Road Room G145 Kenilworth, NJ.	25	Gammacell 40 2230Ci Cs-137
Bristol Myers Squibb Rt 206 & Provinceline Lawrenceville, NJ 08648	1104	Mark I-30 Irrad 1,100CiCs-137
Passaic Valley Sewerage. 600 Wilson Avenue Newark, NJ 07105		Decommissioned 14/Ea Cs-137 Instruments
American Biological Control Laboratories 65 Hudson Avenue Tenafly, NJ 07670		Packed Device For Shipment to Toledo, OH
Kean College 1000 Morris Avenue Union, NJ 07083		Decomm Gammator B w/ 200Ci Cs-137
Bailey Ellard High School 205 Madison Avenue Madison, NJ 07940		Decomm Gammator B w/ 200Ci Cs-137
St Aloyisus High School 721 Westside Avenue Jersey City, NJ 07306		Decomm Gammator B w/ 200Ci Cs-137
Parsippany Hills High School 20 Rita Drive Parsippany, NJ 07054		Decomm Gammator B w/ 200Ci Cs-137
U.S. Army /Fort Monmouth CECOM/Directorate of Logistics Building 116 - Main Post Fort Monmouth, NJ 07703-5301	7140	81-14Q 130Ci-25mCi 5.20Ci-200mCi 1.0mCi Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

NEW JERSEY - Page 2

AT&T Bell Laboratories 600 Mountain Avenue Murray Hill, NJ 07974	8178	Decomm Model Model 89-260 w/ 260Ci & 130mCiCs137
Mary Help of Christians Academy 659 Belmont Avenue North Haledon, NJ 07508	1010	Decomm Model Gammator B w/ 200Ci Cs-137
Burlington TWP H.S. Burlington, NJ	1003	Decomm Model Ramco 50A
Univ of Medicine & Dentistry 185 So. Orange Avenue Newark, NJ 07103		Decomm Model Ramco R-50 Gammator w/ 200Ci Cs-137
US Army, CECOM Camp Evans Bldg 9401 Fort Monmouth, NJ 07703	7149	81-22 Calibrator w/750Ci, 50Ci 40Ci, 1Ci, Cs-137 2,000Ci Co-60
License for Storage Moving January 1999 Above Calibrator to: Building 2540, Charles Wood Area Fort Monmouth, NJ 07703		
Fairleigh Dickinson University 1000 River Road University Hall Room 7 Teaneck, NJ 07666	1044	RAMCO-50B 400Ci Cs-137 Decommission
US Army, CECOM Camp Evans Area, Bldg 9401 Fort Monmouth, NJ 07703	Pool Sources	3,500CiCo-60 Decommission
Novartis Pharmaceuticals 556 Morris Avenue Building LSB Summit, NJ 07901	1063	Mark I-68A W/ 2,000CiCs-137 as of 9-10-90
Previous Company Sandoz		
Hoechst Marion Roussel, Inc. Bldg. G/L/K, Route 202-206 Bridgewater, NJ 08806 (Previous Company Marion Merrell Dow, Inc.)	1093	Mark I-68A w/ 2,200CiCs-137 as of 4-29-93
Lucent Technologies, Inc. (AT&T Bell) 600 Mountain Avenue Radiation Lab, Murray Hill, NJ 07974	7155	81-14 w/275Ci Cs-137 as of 12-5-98

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NEW MEXICO

	S/N	Model
White Sands Missile Range Eldg 1528 White Sands, NM	8203	89-400 Shielded Calibration Range W/400Ci & 130mCi Cs-137
White Sands Missile Range Bldg 1528 White Sands, NM	7131	81-12 Irradiator 400Ci & 130mCi Cs-137
White Sands Missile Range White Sands, NM	D1	AN/UDM-1A 120CiCs-137
Phillips Laboratory Bldg 1010 (West End) Kirtland AFB, NM 87117-6008	8255	89-20 Calibrator 20Ci & 130mCi Cs-137
WL Cobalt 60 Test Facility Bldg. 48065 Kirtland AFB, East Kirtland AFB, NM 87117-6008	Unknown	US Nuclear Irrad. 5,000Ci Co-60
Kirtland AFB Bldg. No. 325 Kirland AFB, NM 87117	N/A	Well Facility 200mCi & 20CiCs137 140Ci Co-60

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NEW YORK

USDA Animal & Plant Health
Inspection Service
Plum Island Animal Disease Center
P.O. Box 848
Greenport, NY 11944

212

Gammacell 220
w/26,000Ci Co-60
as of 11/85

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

NORTH CAROLINA

	S/N	Model
V A Medical Center 508 Fulton Street. Durham, NC. 27705	2024	143-45 Irradiator
National Institute of Environmental Health Sciences Research Triangle Building 101 Room D 408 Park, NC. 27709	1005	Mark I-68A Mdl 423 Irradiator W/2/Ea Cs-137 11,250 Curies

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

NORTH DAKOTA

NORTH DAKOTA STATE UNIVERSITY	S/N	Model
Robinson Vet/Science Building	1103	M-38-4
Centennial Boulevard		3,200Ci Cs-137
Fargo, ND 58105		as of July 1970

Also On USDA List as Below

USDA Agricultural Research Service
Red River Valley Agricultural Research Center
1307 North 18th Street
Fargo, ND 58105-5677

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

OHIO

	S/N	Model
Cleveland Clinic Foundation 9500 Euclid Avenue. Cleveland, OH	1012	Mark I-25 Irradiator W/4,000Ci Cs-137
Bicron-Solon 6801 Cochran Road Solon, OH 44139	623	A-0070-11 Dosimeter Calibrators W/12Ci Cs-137
Bicron-Solon 6801 Cochran Road Solon, OH 44139	505	W/120mCi Cs-137
Case Western Reserve University 2109 Adelbert Road Cleveland, OH. 44106	1047	Mark I-68 Irradiator W/8,000Ci Cs-137
Newark Air Force Base Wyle Laboratories 813 Irving-Wick W Building 4 Room BLD92 Heath, OH 43056	6061	Mini 142S Dosimeter Calibrator w/20Ci Cs-137
Advanced Medical Systems, Inc. 1020 London Road Cleveland, OH.		Take Possession Of Soures in the Future When Scheduled
Dosimeter Corporation 11286 Grooms Road Cincinnati, OH. 45242	9004	78-2M Calibrator W/130Ci Cs-137 100mCi Cs-137
Newark AFB Wyle Laboratories Building 4 813 Irving-Wick Drive W Heath, OH 43056	6052	142S-12 Irrad w/12Ci Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

OHIO - Page 2

	S/N	Model
Western Reserve Care Systyn c/o YMA, Inc. 500 Gypsy Lane Youngstown, OH 44501	2076	143-68 Irrad w/2,200Ci Cs-137
Newark AFB Wyle Laboratories Attn: AGMC/WLDE 813 Irving-Wick Drive W. Heath, OH 43056	6062	142S Irradiator w/20Ci Cs-137
Newark AFB Wyle Laboratories Building 4 813 Irving-Wick Drive W. Heath, OH 43056	12028	149 Irradiator w/ 16CiPuBe w/ 16CiPuBe
Newark AFB Wyle Laboratories 813 Irving-Wick Drive W Building 4 Heath, OH 43056	7080	81-22 Calib w/1,000CiCo-60
Newark AFB Wyle Laboratories Building 4 813 Irving-Wick Drive W Heath, OH 43056	7052	81-10 Calib w/130CiCs-137
Victoreen, Inc 6000 Cochran Road Cleveland, OH 44139-3395	7137	81-20 Calib w/2,000Ci 20Ci Cs-137 & 1,300 Ci-Co-60
New Company Name & Address /Move Pending Amended License Inovision Radiation Measurment LLC 6045 Cochran Road Solon, OH 44139	7137	

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

OHIO - Page 3

Ohio Emergency Management Agency 1296 Kinnear Road Columbus, OH 43212 OR 2825 W. Dublin-Granville Rd Columbus, OH 43235	6063	142S Mini Irrad w/130Ci & 1.3Ci Cs-137
Ohio Emergency Management Agency As Above	7126	81-14T Calib w/400Ci & 4.0Ci & 40mCi Cs-137
Medical College of Ohio 3000 Arlington Avenue Dowling Hall Toledo, OH 43614		GR-6 US Nuclear 500Ci Cs-137
Children's Hospital Medical Center 3333 Burnett Avenue Cincinnati, OH 45229	1110	Mark I-68A Calibrator 2,200Ci Cs-137
Keithley Instruments 6045 Cochran Road Solon, OH 44139	7145	Model 81-12 Calibrator w/4Ci Cs-137 & 1.20Ci Co-60
New Company Name /Pending Amend Lic/ Also for Source Exchange of the 1.20Ci Co-60 for 500mCi Cs-137 Inovision Radiation Measurement LLC	7145	
The University of Akron Akron, OH		Decom GC220 w/100CiCo-60
American Biological Control Laboratories Toledo, OH		

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

OKLAHOMA

	S/N	Model
Oklahoma Medical Center 940 N.E. 13th Street. Oklahoma City, Ok. 73104	3024	109C Irradiator W/4,000Ci Co-60
Oklahoma Medical Research Foundation Oklahoma City,	1023	Mark I-68 W/6,000Ci Cs-137
Oklahoma Medical Research Foundation Oklahoma City,	1321	GC-1000C AECL Gammacell 1000
Tinker Air Force Base OC/ALC/TIPLP, Bldg 3113 Tinker Air Force Base, OK 73145	1291	Model DS50 Irradiator w/7.98Ci Cs-137
Tinker Air Force Base OC-ALC/TIPL 3001 Staff Drive, Ste 2M70 Tinker AFB, OK 73145-3044	6080	Model 142S w/ 10Ci Cs-137 as of 11-13-98
The University of Tulsa Biological Science OH304 600 So. College Ave. Tulsa, OK 74104-3189	2087	143-68 w/ 1,100CiCs-137 as of TBD

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

PENNSYLVANIA

	S/N	Model
Shadyside Hospital 5230 Centre Avenue. Pittsburgh, PA.	2015	143-45A Irradiator 600Ci Cs-137
Merck & Company West Point Pike, Bldg 1 West Point, PA. 19486	1002	Mark I-30 Irradiator W/5,000Ci Cs-137 as of 1-15-81
Merck & Company West Point Pike, Bldg 1 West Point, PA 19486	3049	109-68R w/ 7,200Ci Co-60 as of 11-9-98
University Of Pennsylvania Dept. of Rad Oncology 180A John Morgan Building 37th & Hamilton Walk Philadelphia, PA. 19104	664	Mark I-30 Irradiator 10,000Ci Cs-137
Temple University 3400 N. Broad Street. Philadelphia, PA. 19140	2064	143-45A Irradiator W/550Ci Cs-137
Temple University 3400 N. Broad Street Philadelphia, PA 19140	1101	Mark I-30 w/1,100Ci Cs137
The Lankenau Medical Research Center 100 Lancaster Avenue. Wynnewood, PA. 19096	1070	Mark I-68A Irradiator W/4,400Ci Cs-137
American Red Cross 29 New Commerce Blvd. Ashley, PA. 18706	3030	109-C Irradiator W/4,000Ci Co-60
University of Pittsburgh RIDC Park 260 Kappa Drive Pittsburgh, PA.	2057	143-45A Irradiator W/1,100Ci Cs-137

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PENNSYLVANIA - Page 2

	S/N	Model
Tobyhanna Army Depot Tobyhanna, PA.	8221	89-400 Calibrator Range w/400Ci & 130mCi Cs-137
University of Pennsylvania Dept of Radiation Oncology 180A John Morgan Building 37th & Hamilton Walk Philadelphia	1082	Mark I-68A Irradiator W/3,000Ci Cs-137
University of Pittsburgh Presbyterian University Hospital A-532 Scaife Hall, Terrace & Desoto St. Pittsburgh, PA. 15261	624	Mark I-68 Irradiator W/12,000Ci Cs-137
Letterkenny Army Depot. Tower Repair Chambersburg, PA	8219	89-400 Self Calibration Range W/400Ci & 130Ci Cs-137
Fox Chase Cancer Center 7701 Burholme Avenue. Philadelphia, PA 19111	635	Model 280 Irradiator w/700CiCs as of 2/76
Fox Chase Cancer Center 7701 Burholme Avenue. Philadelphia, PA	7092	81-14 Beam Calibrator 6,000Ci Cs-137
Radiation Management Consultants 5301 Tacony Street Bldg. 11 Philadelphia, PA.	603	28-10 Calibrator W/130Ci Cs-137
E. I. Du Pont de Nemours & Co. Glenolden Laboratory 500 South Ridgeway Avenue Glenolden, PA. 19036	1068	Mark I-68A W/6,000Ci Cs-137
The Wistar Institute 36th & Spruce Streets. Philadelphia, PA. 19104-4268	1031	Mark I-68A Irradiator W/5,000Ci Cs-137
U S Nuclear Regulatory Commission 631 Park Avenue King of Prussia, PA 19406	6001	142-10 Irrad 120mCiCs-137

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PENNSYLVANIA - Page 3

American Red Cross 700 Spring Garden Street Philadelphia, PA 19123	3035	109-C Irrad w/4,000Ci Co-60
USDA Agricultural Research Service Eastern Regional Research Center Food Safety Research Unit 600 East Mermaid Lane Philadelphia, PA 19118	01	Lockheed Model LG-20000 w/250,000Ci Cs-137 as of 1/71
Edinboro University Department of Physics Edinboro, PA 16444		Decommission Gammator B Irradiator w/ 200Ci Cs-137
University of Pittsburgh Children's Hospital of Pittsburgh 3460 Fifth Avenue, Rangos Building Rangos Research Center Pittsburgh, PA 15213		Mark I-30 Irradiator w/ 1,100Ci Cs-137 as of 2-8-97
Thomas Jefferson University 233 South 10th Street BLUEMLE Life Sciences Building Philadelphia, PA 19107	1118	Mark I-30 Irradiator w/ 5,000Ci Cs-137 as of 7-9-97
Allegheny General Hospital 1300 Sandusky Street Pittsburgh, PA 15212	1121	Mark I-68A Irradiator w/ 7,000Ci Cs-137 as of 10-17-97
Westinghouse Electric Corp I-70 Madison Exit 25A Madison, PA 15663	9046	81 (78-2M) Calibration Sys w/ 0Ci & 130mCi Cs-137 as of
Juniata College 1700 Moore Street Huntingdon, PA 16652-2119	1086	Gammacell-10 Irradiator w/400Ci as of 8-12-68
Philadelphia Water SW Water Pollution Control District 8200 Enterprise Avenue Philadelphia, PA 19153	N/A	Gages 10/Ea Cs-137 2/Ea Co-60

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

PENNSYLVANIA - Page 4

U.S. NRC, Region I
King of Prussia, PA 19406

6001

Decom 142-10
Panoramic
Irradiator w/
120mCi Cs-137
as of 10-21-80

PermaGrain Products, Inc.
1125 Reactor Road
Karthaus, PA 16845

Cobalt-60
Source/Decom

Philadelphia Water Company
Northeast Plant
3900 Richmond Street
Philadelphia, PA

Decom 6/Ea 7063
Kay Ray "P"
Gauges w/500mCi
Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

SOUTH CAROLINA

New Name: SPAWARSYSCEN Naval Supply Center 4600 Marriott Drive No. Charleston, SC	7097	81-10 Calibrator 130Ci, 2.0Ci 70mCi Cs-137
Navelex 2430 Air Park Road No. Charleston, SC 29418-6504	7078	81-22 Calib 300Ci Co-60
Charleston Naval Shipyard @ Charleston SC 29408		Decommissioned Picker Cyclops w/150Ci Co-60
New Name: SPAWARSYSCEN Naval Supply Center Engineering Center Charleston, SC 29418-6504	7100	81-10 Calib w/ 130Ci, 2.0Ci 70mCi Cs-137
SPAWARSYSCEN 1639 Avenue "B" North M/F Building 3414 No. Charleston, SC 29405-1639	7120	81-10 Calib w/ 130Ci, 2.0Ci 30mCi Cs-137
SPAWARSYSCEN 1639 Avenue "B" North M/F Building 3414 No. Charleston, SC 29405-1639	7119	81-10 Calib w/ 130Ci, 2.0Ci 30mCi Cs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

TENNESSEE

VA-University of Tennessee
Dept. of Radiology
Room 260, Chandler Building
865 Jefferson Avenue
Memphis, TN

S/N
1054

Model
Mark I-25
Irradiator
w/4,000Ci
Cs-137

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TEXAS

	S/N	Model
Brooks Air Force Base Medical Supply Office Building 1155 Brooks AFB, TX 78235	7033	81-10 Calib w/130Ci & 130mCiCs-137
Brooks Air Force Base Radiation Sciences Division School of Aerospace Medicine Building 186 Brooks AFB, TX 78235-5301	7054	81-10 Calib w/130Ci Cs-137
Kelly Air Force Base SA-ALC/MATL Building 300 Kelly AFB, TX 78241		Relocated 81-10 to Hill AFB
U.S. Air Force WHMC/Schools Med Material Mgt. Lackland, AFB, TX 78236	13000	385-C w/ 10mCi Sr-90
USDA Animal & Plant Health Inspection Service Mexican Fruit Fly Rearing Facility Moore Air Base, Route 3, Box 1005 Edinburg, TX 78539	H-001	Isomedix Husman 520 Irradiator w/ 42,000CiCs-137
USDA Animal & Plant Health Inspection Service Mexican Fruit Fly Rearing Facility Moore Air Base, Route 3, Box 1005 Edinburg, TX 78539	009	Isomedix Husman 521 Irradiator w/ 37,087CiCs-137
Brooke Army Medical Center Blood Bank DPALS, BAMC Building 1000 Fort Sam Houston, TX 78234	Unknown	Decomm Gammator Mdl M-38-2 w/ 1,600Ci Cs137 as of 7/69
U.S.Army TMDE Support Center Building 88039W Fort Hood, TX 76544-5061	8133	89-400 Shielded Calibration Range w/260Ci &130mCi Cs-137
Lackland AFB San Antonio, TX 78236-5253		Decom IBL Mdl 437C Irrad w/ Aprx 5,000CiCs

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1999

UTAH

Hill AFB	S/N	Model
Ogden, UT	7053	81-10 Calib
		130CiCs-137
Hill AFB	7055	81-10 Calib
Ogden, UT		130CiCs-137

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES 1999

VIRGINIA

	S/N	Model
Virginia Commonwealth University Massey Cancer Center Ground Floor, Room G-104 Richmond, Virginia	1046	Mark I-68 Irradiator 6,000Ci Cs-137
LOCKHEED MARTIN FEDERAL SYSTEMS INC 9500 Godwin Drive Manassas, Virginia	3028	109-68 Irradiator 13,000Ci Co-60
Babcock & Wilcox Naval Nuclear Fuel Division Research Laboratory Mt. Athos Road Lynchburg, Virginia	8165	89-30 Calibrator 20Ci, 80mCi Cs-137
U.S. Naval Weapons Station Bldg 476, Bay7/Code 3024 Yorktown, VA 23691	7117	Model 81-10 Calibration Sys w/130Ci, 2Ci, & 30mCi Cs-137
Naval Weapons Station Yorktown, VA	7067	81-8 Calib 3Ci Cs-137
Naval Weapons Station Yorktown, VA	12029	149 Neutron Irradiator 5Ci AmBE Spec Form
Norfolk Naval Shipyard Radiac Cal Lab Portsmouth, VA 23709-5000	7099	81-10 Calib w/(RQ)130Ci, 2Ci, & 70mCi Cs-137
Norfolk Naval Shipyard SPAWARSYSCEN Portsmouth, VA	5	AN/UDM-1A w/Apprx 45Ci Cs-137-May1958

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

VIRGINIA - Page 2

FEMA (Federal Emergency Instrumentation
Center
19844 Blue Ridge Mountain Road
Building 217
Bluemont, VA 22012

Decommission
3/Ea CDV-794
Model 1 Devices
W/Aprox 100Ci
Cs-137 Each

Argonex Pharmaceuticals
706 Forrest Street, Ste 1
Charlottesville, VA 22903

2085

143-45
Irradiator w/
1,100Ci Cs-137
as of 8-13-98

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NUCLEAR REGULATORY COMMISSION - RECIPROCITY STATES

1999

WASHINGTON

Naval Torpedo Station Bangar Annex Building 31 Keyport, WA 98345	S/N Unknown	Model US Nuclear Model B CO K-3 Camera w/1,000CiCo-60
USDA Agricultural Research Service 3706 W. Nob Hill Blvd. Yakima, WA 98902	205	American Nucl Service Model 120M w/150Ci Co-60 as of
Puget Sound Naval Shipyard Bldg 431 5th Floor 1400 Farragut Avenue Bremerton, WA 98314-5001	7116	Model 81-10 Calibrat Sys w/ 130Ci, 2Ci 30mCi Cs-137

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WISCONSIN

	S/N	Model
Medical College of Wisconsin 8701 Watertown Plank Road Milwaukee, Wisconsin 53226	2056	143-45A Irradiator 500Ci Cs-137
Medical College of Wisconsin 8701 Watertown Plank Road Milwaukee, Wisconsin 53226	2033	143-45 Irradiator 300 Ci Cs-137
American Red Cross 4860 Sheboygan Avenue Madison, Wisconsin	2013	143-45A Irradiator 2,200Ci Cs-137
The Blood Center of Southeastern Wisconsin, Inc 8727 Watertown Plank Road Milwaukee, Wisconsin 53226	1176	Model 38-1 Isomedix Gammator M 800Ci Cs-137
University of Wisconsin 317 N. Randall Avenue Madison, Wisconsin 53715	631	Mark I-30 Irradiator 2,000Ci Cs-137
University of Wisconsin McArdle Laboratory 450 N. Randall Street Madison, Wisconsin 53706	668	Mark I-30 Irradiator 2,000Ci Cs-137
University of Wisconsin Medical Science Center 1300 University Avenue Madison, Wisconsin 53706	5069	78-2M Beam Calibrator 1.3Ci Cs-137
University of Wisconsin 317 N. Randall Avenue Madison, Wisconsin 53715	655	109 Irradiator 4,200Ci Cs-137
University of Wisconsin Lapham B 14 3209 N. Maryland Avenue Milwaukee, Wisconsin 53211	614	Mark I-22 Irradiator 1,350Ci Cs-137
Janesville School District Parker High School 527 S. Franklin Street Janesville, WI 53545		Decommission GC-10/ Gammator50 w/250CiCs137