

(6-93)
CFR 30, 32, 33
35, 36, 39 and 40

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 9 HOURS. SUBMITTAL OF THE APPLICATION IS NECESSARY TO DETERMINE THAT THE APPLICANT IS QUALIFIED AND THAT ADEQUATE PROCEDURES EXIST TO PROTECT THE PUBLIC HEALTH AND SAFETY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNRB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,
RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO
RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,
SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
101 MARIETTA STREET, NW, SUITE 2900
ATLANTA, GA 30323-0199

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN,
SEND APPLICATIONS TO:

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW
MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING,
SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S.
TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

RADIOACTIVE MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION V
1450 MARIA LANE
WALNUT CREEK, CA 94596-5368

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED
MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

THIS IS AN APPLICATION FOR (Check appropriate item)

- ☐ A. NEW LICENSE
☐ B. AMENDMENT TO LICENSE NUMBER _____
☒ C. RENEWAL OF LICENSE NUMBER 34-19089-01

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)

Advanced Medical Systems, Inc.
121 North Eagle Street
Geneva, OH 44041

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

1020 London Road
Cleveland, OH 44110
121 North Eagle Street
Geneva, OH 44041

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

David Cesar

TELEPHONE NUMBER

(216) 466-4671

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL. a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.	6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.	8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.
9. FACILITIES AND EQUIPMENT.	10. RADIATION SAFETY PROGRAM.
11. WASTE MANAGEMENT.	12. LICENSEE FEES (See 10 CFR 170 and Section 170.31) FEE CATEGORY <u>2B AND 3P</u> AMOUNT ENCLOSED \$ <u>840.00</u>

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39 AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

David Cesar, Treasurer

SIGNATURE

David Cesar

DATE

11-29-94

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

9702070052 970127
PDR FOIA
ENGLISH96-444 PDR

SECTION 1.1 - RADIOACTIVE MATERIAL

This section corresponds to Item 5 on the application for Material License. The first page discusses the material and possession limits. The use of the material is briefly discussed. The use is discussed in detail in Section 1.2.

Also included in this section is Advanced Medical Systems' current inventory updated as of October 1, 1994.

Inventory Requirements

- A. The Company maintains an inventory system that accounts for the receipt, movement, transfer and disposal of all radioactive material possessed under this license. Records of inventories are maintained for ten (10) years from the date of each inventory.
- B. A complete examination of records will be completed every six (6) months to confirm the location of all radioactive material and ensure that possession is within the limits specified in this license.
- C. The physical inventory of radioactive material possessed under this license will be completed on or before June 1, 1995. Thereafter, a physical inventory of all radioactive material possessed under this license will be completed within sixty (60) months of the completion of the previous physical inventory.

NOTE: The Company currently has inventory stored in a stuck floor plug in the hot cell. A purchase order will be issued by February 10, 1995 to a third party to remove the plug. The company has one proposal in-house which would consist of cutting the plug free. The proposal includes a time line of sixty (60) days to complete the project. A second proposal is promised by another third party by January 25, 1995. Once the plug is removed, the actual physical inventory should take approximately five (5) days to complete. The NRC has requested to review the project prior to the contractor starting. The time line will begin with NRC approval.

5. Radioactive Material

6. Byproduct, source, and/or special nuclear material

7. Chemical and/or physical form

8. CURRENT - Maximum amount that licensee may possess at any one time under this license

REVISED - Maximum amount that licensee may possess at any one time under this license

A. Cobalt-60

A. Solid Metal (bulk)

A. 150,000 curies

23,000 curies

B. Cobalt-60

B. Sealed sources

B. 135,000 curies

75,000 curies

C. Cesium-137

C. Sealed sources

C. 40,000 curies

665 curies

D. Depleted uranium

D. Nickel plated

D. 4,040 kilograms

4,040 kilograms

E. Cobalt-60

E. Sealed sources

E. 15,000 curies

-0-

F. Cobalt-60

F. Sealed sources

F. 15 millicuries

15 millicuries

G. Cobalt-60 Waste

G. RAD Waste in solid and liquid form

G. -0-

40 curies

USE	CHANGE IN MAXIMUM AMOUNT LICENSEE MAY POSSESS Increase (Decrease)	REASON FOR CHANGE
Storage incident to sale or transfer to authorized third party	(127,000) curies	AMS never possessed current maximum possession amount. Revised limit accurately represents current inventory. "Bulk" cobalt will not increase as AMS will not manufacture sources in the future. Company has arrangements with authorized third party to take possession of bulk cobalt.
Storage incident to sale or transfer to authorized third party	60,000 curies	AMS never possessed current maximum possession amount. Revised limit accurately represents current inventory and projected purchases from ongoing sealed source purchases for resale. The Company has arrangements with authorized third parties to take possession of approximately 47,000 curies.
For use in devices; storage incident to waste disposal, discharge and/or decommissioning	(39,335) curies	Sealed sources transferred to authorized third party. Remaining sources are in a device and in cell. AMS will not handle Cesium sources for resale in the future.
Component for shielding in Advanced Medical Systems and Picker teletherapy and radiography units	N/A	N/A
N/A	(15,000) curies	
For use in devices (Tech Ops)	N/A	N/A
Storage incident to waste disposal, discharge and/or decommissioning	40 curies	NRC has requested RAD Waste be a separate line item. Current waste is estimated at 29 curies.

ANSTEC
APERTURE
CARD

Also Available on
Aperture Card

9702070052 - 01

ADVANCED MEDICAL SYSTEMS, INC.
SUMMARY OF INVENTORY
Updated for October 1, 1994

Bulk Cobalt

	<u>Curies</u>
Screw-Top Containers	10,647
Double-Encapsulated Containers	2,915
Bulk in GE Cask	<u>8,859</u>
 TOTAL BULK	 22,421

Sealed Sources

Picker Wafer Sources	2,015
Picker Sealed Sources	15,358
Competitors' Sealed Sources	<u>30,816</u>
 TOTAL SEALED SOURCES	 <u>48,189</u>
 TOTAL COBALT SOURCES	 <u>70,610</u>
 TOTAL DEPLETED URANIUM	 <u>2,171</u>
 TOTAL CESIUM 137	 <u>664</u>

Included in this inventory is suspected material in the front stuck floor plug. These items are indicated by an asterisk (*). Not included are the two (2) check sources.

ADVANCED MEDICAL SYSTEMS, INC.

INVENTORY

BULK COBALT INVENTORY
Updated for October 1, 1994

COBALT IN BULK CAPSULES:

	<u>LOT NO.</u>	<u>CAPSULE NO.</u>	<u>GRAMS</u>	<u>CURIES</u>	<u>C1/gm</u>
1.	B461	XXVI	3.68	362	98.4
2.	B458	XXIV	55.44	1,528	27.6
3.	B457	XXII	263.50	1,603	6.1
4.	B453	XXIII	93.28	1,296	13.9
5.	B450	I	242.78	277	1.1
6.	B449	II	51.45	854	13.9
7.	B430	XXX/IV	289.00	1,370	4.7
8.	B408*	XXVII	164.34	341	2.1
9.	B386*	XI	270.51	476	1.8
10.	B381*	XV	188.04	382	2.0
11.	B378*	IV/VI	631.79	1,143	1.8
12.	B366	XIII/XIV	451.29	420	.9
13.	B308	B-114	284.80	580	2.0
14.	Standard Wafer Sources	SK-64		15	
15.	Bulk III Waste Materials				
16.	Bulk V Waste Materials				
				<hr/>	
TOTAL CURIES:				<u>10,647</u>	

COBALT IN DOUBLE-ENCAPSULATED BULK CONTAINERS:

	<u>LOT NO.</u>	<u>CONTAINER NO.</u>	<u>LOCATION</u>	<u>GRAMS</u>	<u>CURIES</u>	<u>C1/gm</u>
1.	B354	B107 + B108	GE-500	484.63	441	.91
2.	B344	B106	GE-500	146.31	170	1.16
3.	B341	B101	GE-500	251.45	174	.69
4.	B331	B102 + B105	GE-500	363.31	437	1.20
5.	B329	B103	GE-500	283.78	315	1.11
6.	B323	B104 + B105	GE-500	379.84	313	.82
7.	B309	B113	GE-500	302.05	189	.63
8.	B290	B109 + B110	GE-500	323.92	344	1.06
9.	B281	B110 + B111	GE-500	449.42	368	.82
10.	B270	B112	GE-500	238.16	<u>164</u>	.69
TOTAL CURIES:					<u>2,915</u>	

BULK COBALT IN GE-500 CASK:

TOTAL CURIES: 8,859

Total Bulk Curies:

22,421

(Rev. 10/13/94)

PICKER
Cobalt-60 "Wafer" Source (Pellets) Inventory Summary
Updated for October 1, 1994

	<u>MFGR.</u>	<u>S/N</u>	<u>ORIGINAL CURIE DATE</u>	<u>LOT NO.</u>	<u>LOCATION</u>	<u>CURRENT CURIES</u>
1.	Picker	PX446	02/07/66	N/A	8-Y-2	44.9
2.	Picker	PX43	12/05/60	128	4-U-1	12.2
3.	Picker	PX452	03/03/66	396	4-U-3	65.6
4.	Picker	PX439	01/31/66	424	4-U-2	68.4
5.	Picker	PX377	02/15/65	504	7-V-2	57.1
6.	Picker	PX466	03/15/66	521	1-W-2	58.1
7.	Picker	PX376	01/30/65	533	1-W-1	26.2
8.	Picker	PX456	04/15/66	547	3-V-2	44.0
9.	Picker	PX372	12/30/64	548	3-V-3	20.6
10.	Picker	PX477	07/15/66	562	4-T-1	22.5
11.	Picker	PX375	01/30/65	586	6-Y-1	19.7
12.	Picker	PX239 ("1239")	04/18/63	599	7-V-1	28.1
13.	Picker	PX453	10/01/65	604	2-Y-2	48.7
14.	Picker	PX257	07/01/63	618	GE-500	26.2
15.	Picker	PX1249 (old 249)	06/08/63	633	7-X-3	34.6
16.	Picker	PX1385 (old 385)	03/15/65	644	GE-500	34.6
17.	Picker	PX447	01/31/66	675	GE-500	19.7
18.	Picker	PX318	05/28/64	681	1-W-3	52.4
19.	Picker	PX428	10/31/65	682	7-X-1	26.2
20.	Picker	PX405	06/30/65	684	4-Y-3	57.1
21.	Picker	PX1364 (old 364)	11/30/64	730	8-V-3	85.2
22.	Picker	PX1426 (old 426)	10/30/65	742	GE-500	54.3
23.	Picker	PX1410 (old 410)	07/30/65	784	3-X-1	66.5
24.	Picker	PX1404	06/30/65	797	2-V-1	103.0
25.	Picker	PX374	01/30/65	808	GE-500	24.3
26.	Picker	PX1384	03/15/65	815	3-Y-1	41.2
27.	Picker	PX1433 (old 433)	11/30/65	822	2-X-2	66.5
28.	Picker	PX1251 (old 251)	06/20/63	832	GE-500	34.6
29.	Picker	PX1379 (old 379)	02/15/65	834	GE-500	38.4
30.	Picker	PX399	05/31/65	840	7-Y-1	124.5
31.	Picker	PX1425 (old 425)	10/30/65	842	GE-500	78.7
32.	Picker	PX1289 (old 289)	01/15/64	870	Cell (rear plug)	43.1
33.	Picker	PX184	08/26/62	877	2-W-2	37.5
34.	Picker	PX1458 (old 458)	04/15/66	885	GE-500	77.7
35.	Picker	PX440	01/31/66	926	GE-500	39.3
36.	Picker	PX1317 (old 317)	05/25/64	966	7-Z-2	118.0
37.	Picker	PX12	05/13/60	981	GE-500	30.0
38.	Picker	PX1411 (old 411)	07/30/65	1036	GE-500	63.7
39.	Picker	PX430	10/31/65	1095	8-Z-3	122.7

Total Sources: 39

TOTAL CURIES: 2,015.1

(Rev. 10/13/94)

PICKER - AMS
Sealed Sources
Updated for October 1, 1994

	<u>MFGR.</u>	<u>S/N</u>	<u>CM</u>	<u>ORIGINAL CURIE DATE</u>	<u>LOT NO.</u>	<u>LOCATION</u>	<u>CURRENT CURIES</u>
1.	Picker	664	2.0	10/15/68	816	W/H590C-179	91.8
2.	Picker	679	1.0	09/01/71	831	6-U-3	67.4
3.	Picker	725	2.0	07/01/69	873	3-W-1	112.4
4.	Picker	PX269	1.0	09/20/63	N/A	3-Z-1	32.8
5.	Picker	2002	1.5	05/01/73	882	GE-500	58.1
6.	Picker	665	2.0	10/15/68	883	3-W-2	131.1
7.	Picker	95	1.0	11/01/61	890	3-X-3	26.2
8.	Picker	2066	1.5	05/15/74	894	2-Z-3	67.4
9.	Picker	1363 (old 363)	2.0	11/30/64	904	5-U-1	106.7
10.	Picker	887	2.0	10/01/71	907	8-V-1	131.1
11.	Picker	789	2.0	04/01/70	915	2-X-3	162.9
12.	Picker	883	2.0	09/01/71	919	GE-500	89.0
13.	Picker	191	1.5	09/09/62	947	1-V-3	20.6
14.	Picker	1513 (old 513)	2.0	12/31/66	978	4-Z-1	88.0
15.	Picker	581	2.0	12/01/67	979	GE-500	78.7
16.	Picker	644	2.5	08/15/88	990	Cell (rear)	255.6
17.	Picker	636	2.0	07/01/68	1012	1-Z-1	63.7
18.	Picker	2168	1.5	12/01/75	1020	9-Y-1	74.0
19.	Picker	999	2.0	05/01/73	1037	6-Z-2	167.6
20.	Picker	816	2.0	09/15/70	1040	1-X-2	180.7
21.	Picker	2076	2.0	07/01/74	1047	1-X-3	134.8
22.	Picker	587	2.0	12/15/67	1060	6-Y-3	170.4
23.	Picker	371	2.0	06/25/71	1073	3-X-2	91.8
24.	Picker	1679 (old 679)	2.0	01/01/69	1108	9-Z-2	101.1
25.	Picker	PX784	2.0	03/09/70	N/A	6-Z-3	238.8
26.	Picker	PX450	2.5	04/02/66	N/A	7-U-2	47.8
27.	Picker	616	2.0	05/01/68	1135	9-Y-3	123.6
28.	Picker	557	1.5	09/01/67	1151	GE-500	54.3
29.	Picker	2117	2.0	05/01/75	1161	1-V-1	262.2
30.	Picker	687	2.0	02/01/69	1164	1-V-1	63.7
31.	Picker	2407	2.0	03/01/81	1166	3-Z-1	534.7
32.	Picker	2394 (old 2060)	2.0	04/01/74	1167	1-X-1	201.3
33.	AMS	2476	2.0	01/01/83	1187	Cell (rear)	1,177.0
34.	AMS	2532	1.6	03/01/85	1189	Cell	442.9
35.	AMS	2411	2.0	05/01/81	1190	Cell	1,214.5
36.	Picker	2245	2.0	05/01/77	1196	Cell	501.9
37.	AMS	2387	1.0	10/01/80	1201	Cell	454.1
38.	Picker	2286	2.5	02/01/78	1202	Cell	430.7
39.	Picker	PX2337	1.0	06/01/79	1204	Cell	320.2
40.	AMS	2487	1.5	03/01/83	1205	Cell	587.1
41.	Picker	2236	1.5	02/01/77	1211	Cell (rear)	238.8
42.	Picker	1202 (old 2021)	2.0	09/01/73	1212	9-W-3	365.2
43.	AMS	2527	2.0	01/01/85	1221	Cell	950.4
44.	Picker	PX347	2.0	09/25/64	N/A	9-V-1	71.2
45.	AMS	2466	2.0	08/20/82	N/A	W/HSE113	1,533.0
46.	(from Turkey - See Note on Page 8)					W/HSE115	2,719.4
47.	Picker	PX292*	1.5	12/23/63	880	Cell	23.0
48.	Picker	PX347*	1.5	04/01/77	1132	Cell	298.0

TOTAL CURIES: 15,357.7

COMPETITORS' SOURCES
Updated for October 1, 1994

	<u>MFGR.</u>	<u>S/N</u>	<u>CM</u>	<u>ORIGINAL CURIE DATE</u>	<u>LOT NO.</u>	<u>LOCATION</u>	<u>CURRENT CURIES</u>
1.	USN		2.0	09/07/76	740	5-Y-2	138.6
2.	USN		2.0	09/22/75	741	5-Y-3	81.5
3.	NPI	T31	2.0	05/01/83	764	8-W-2	257.5
4.	NPI	T24	2.11	05/01/83	774	8-X-3	338.0
5.	AECL	C-106		06/07/76	777	7-W-2	34.6
	(Radiography Source)						
6.	USN	W87		10/08/76	790	GE-500	18.7
7.	USN			04/05/77	818	4-Y-2	30.9
8.	BUDD	T162			N/A	8-Z-2	205.1
9.	Gamma Ind.	039/GI TS101	2.0	08/01/75	859	2-V-3	222.9
10.	NPI	T52	1.57	05/01/83	861	1-U-1	186.3
11.	Gamma Ind.	032/TS101		02/04/80	939	2-U-2	142.3
12.	NPI	T232	2.0	05/01/83	946	Cell (rear)	172.3
13.	NPI	T131	2.0	05/01/83	963	7-Z-3	222.9
14.	France	CEA2634	2.0	08/13/80	965	Cell (rear)	145.1
15.	NPI	T182	2.0	05/01/76	974	7-W-1	616.1
16.	NPI	T205	1.56	05/01/83	980	1-Y-3	376.4
17.	Gamma Ind.	045/TS101	2.0	07/15/75	986	1-Y-1	377.4
18.	NPI	T95	2.0	05/01/83	987	1-Y-2	461.6
19.	NPI			12/30/80	989	7-Y-2	30.9
20.	NPI	T244	1.5	05/01/83	992	7-W-3	346.5
21.	USN	362		03/03/81	998	3-Z-3	290.3
22.	France	CEA2605		03/16/81	1004	Cell (rear)	262.2
23.	USN			04/10/81	1006	1-Z-3	565.6
24.	NPI	T145	2.16	05/01/83	1011	1-V-2	553.4
25.	NPI	T187	2.03	05/01/83	1017	9-Y-2	308.1
26.	NPI			08/01/81	1024	8-Z-2	89.0
27.	NPI	T454	2.16	11/01/80	N/A	3-T-3	625.5
28.	NPI	T121	1.5	04/25/75	1034	3-Y-3	273.4
29.	NPI	T308	2.0	05/01/83	1038	3-Y-2	537.5
30.	NPI	T189	2.5	05/01/83	1042	5-U-1	453.2
31.	USN		2.0	09/01/82	1071	6-Z-1	216.3
32.	NPI	T462	2.0	05/01/83	1075	2-Z-2	560.9
33.	NPI	T263	2.0	12/15/77	1087	7-Y-3	753.8
34.	USN		1.5	04/25/83	1091	2-Y-1	142.3
35.	USN			04/24/83	1092	2-Y-3	480.4
36.	NPI	T337	2.0	04/27/79	1103	7-Z-1	456.9
37.	NPI	T177	2.12	07/15/76	1114	6-U-2	709.8
38.	NPI	T577	2.06	10/01/82	N/A	9-Z-3	502.8
39.	AECL	C-172			N/A	Cell (rear)	205.1
40.	NPI	T540	1.5	03/01/85	1129	9-Z-1	424.2
41.	NPI	T388	2.0	12/01/79	1134	1-U-3	664.8
42.	NPI	T445	2.08	06/01/85	1138	Cell (rear)	803.4
43.	NPI	T514	2.08	09/18/81	1139	2-W-3	734.1
44.	NPI	T275	2.0	01/20/78	1142	5-U-3	736.9
45.	Amersham	GET-15-15			N/A	Cell (rear)	205.1
46.	NPI	T672	2.0	01/13/84	1148	3-T-1	1,062.8
47.	NPI	RT76	2.0	10/03/80	1150	3-U-2	481.3
48.	NPI	T472	2.0	01/19/81	1154	4-Z-3	623.6

Competitors' Sources (Cont'd)

	<u>MFGR.</u>	<u>S/N</u>	<u>CM</u>	<u>ORIGINAL CURIE DATE</u>	<u>LOT NO.</u>	<u>LOCATION</u>	<u>CURRENT CURIES</u>
49.	NPI	T493	2.0	03/23/81	1162	1-U-2	1,020.6
50.	NPI	T707	2.0	08/01/84	1210	9-W-1	933.6
51.	NPI	T705	2.14	06/02/84	1224	WHSE 590C-175	1,628.3
52.	NPI	T772	2.0	07/01/85	1237	9-W-2	985.1
53.	Theratronics	S3817	1.5	11/01/85	1242	590E-139	2,435.5
54.	NPI	T972	2.1	12/02/86	1253	590-208	2,793.2
55.	Jalapa				1254	S/E 117	453.2
56.	Amersham	0343ET	2.0	10/10/85	1261	S/E 106	1,750.1
57.	ORNL	TS51*	1.0	12/28/55	125	Cell	3.0
58.	ORNL	TS68*	2.0	09/20/73	598	Cell	35.0
59.	NPI	577*			1119	Cell	551.0
					1120	Cell	99.0

TOTAL CURIES: 30,815.9

DEPLETED URANIUM INVENTORY
Updated for October 1, 1994

<u>PART NUMBER/DESCRIPTION</u>	<u>CLEVELAND</u>	<u>GENEVA</u>	<u>TOTAL</u>	<u>KG EACH</u>	<u>TOTAL KG</u>
46411 C-9 Shutter Insert	7	0	7	6.58	46.06
46879 C-8, C-9 Saddle	12	0	12	15.60	187.20
58429A C-12 Saddle	10	0	10	106.82	1,068.20
58430 C-12 Shutter Rotor Insert	1	0	1	17.70	17.70
58431A C-12 Shutter Plug Insert	8	0	8	10.90	87.20
200670 C-9, C-12 Saddle	1	0	1	21.80	21.80
16423C Rotor Assembly	18	2	20	6.58	131.60
590D/G Head (C-9 Style)	14	2	16	15.60	249.60
590A Head	1	0	1	15.60	15.60
590G Special (w/o Rotor/Plug)	1	0	1	21.80	21.80
Eldorado 8 with Collimator	1	0	1	40.80	40.80
C-12 Head (w/o Shutter Plug)	0	2	2	106.82	213.64
C-12 Rotor	0	2	2	17.70	35.40
C-12 Shutter Plug	1	0	1	10.90	10.90
Accelerator Shield	4	0	4	5.97	<u>23.88</u>
TOTAL DEPLETED URANIUM (KG):					<u>2,171.38</u>

ADVANCED MEDICAL SYSTEMS, INC.
Cesium Inventory Summary
Updated for October 1, 1994

	<u>MFGR</u>	<u>S/N</u>	<u>CM</u>	<u>ORIGINAL CURIE DATE</u>	<u>LOCATION</u>	<u>CURRENT CURIES</u>
1.	Picker	CS10*	2.89	10/10/61	Cell	<u>664</u>
					TOTAL CURIES:	<u>664</u>

SECTION 1.2 - PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED

This section expands upon the use description under Section 1.1.

Authorized third parties are defined as facilities or individuals in the United States who possess an NRC or Agreement State License authorizing possession of the licensed material or exported to a facility outside of the United States.

6(a): This is bulk cobalt currently stored in screwtop source containers, double-encapsulated containers or the GE-500 cask. Advanced Medical Systems will not be manufacturing sources in the future. This material is only being stored incident to sale or transfer to an authorized third party. It is anticipated that 100% of our bulk cobalt will be transferred within the next twelve (12) months.

6(b), Cobalt-60 Sealed Sources: Current inventory is being stored incident to sale or transfer to an authorized third party. The sealed sources' primary use is for installation into and dismantling of Advanced Medical Systems and Picker Corporation Teletherapy Units and Picker Model 6145 Radiography Units possessed by licensees authorized to possess the radioactive material pursuant to a specific license issued by the Commission or an Agreement State. Sealed sources will also be used for training personnel on teletherapy equipment and training in-house personnel per ISP-32.

Advanced Medical Systems expects to transfer the current inventory of Cobalt-60 sealed sources to authorized third parties within the next twelve (12) months.

Future uses of new purchases of sealed sources will be to verify source strength and installation into a teletherapy or radiography unit for testing prior to shipment of the unit to an authorized third party. These sources are anticipated to be in-house for less than 4 weeks.

6(c), Cesium 137: For use in devices approved by the NRC or an Agreement State to calibrate radiation survey instruments. The one Cesium source stored in the front plug is incident to sale or transfer to an authorized third party.

6(d), Depleted Uranium: This is used as shielding material in Advanced Medical Systems, Inc. and Picker Radiography and Teletherapy Devices.

6(f): This item is for use in devices (including a Tech-Op Model 571 Calibrator) approved by the Nuclear Regulatory Commission or an agreement state to calibrate radiation survey instruments.

6(g), Cobalt 60 Waste: This material is being stored incident to disposal, discharge and/or decommissioning. The company does not generate liquid waste in its normal operations. Contaminated liquid radwaste may occur in abnormal situations. This liquid radwaste will be dealt with on a case-by-case basis.

Section 1.2 (Cont'd)

Locations

All licensed material, except in Item 6(d), shall only be stored or used at the Company's facility at 1020 London Road, Cleveland, Ohio or at a facility of an authorized third party.

Item 6(d) shall be used only at the licensee's facilities at 1020 London Road, Cleveland, Ohio or 121 North Eagle Street, Geneva, Ohio or at an authorized third party facility.

SECTION 1.3 - INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE

Attached are the work histories and both past and present responsibilities for the following individuals. These employees are employed at 1020 London Road on a full-time basis.

Robert Meschter Radiation Safety Officer - Approved by the NRC as
Radiation Safety Officer on October 14, 1994

Stephen Haddock Licensed Source Handler on the following
AMS/Picker Teletherapy Radiography Units: (Not
authorized for service)

CS-600	C-4	V-3000
C-1000	C-8	V-10000
C-2000	C-12	CV-4
C-3000	Cyclops	CV-9
C-5000	V-1000	
C-10000	V-2000	

Christopher Reed Isotope Technician in Training. Currently being
trained as a Licensed Source Handler

Vince Rocco Isotope Technician in Training. Currently being
trained as a Licensed Source Handler

This staff is adequate for the routine operations described in the Isotope Shop Procedures Manual for AMS, 1020 London Road. Staffing is augmented by outside contract services on an as-needed basis for special projects.

The responsibilities of each of these individuals is discussed in the ISP Manual.

NUCLEAR EXPERIENCE

ROBERT MESCHTER

RWP Preparation:

Have performed initial radiation, contamination, and airborne radioactivity surveys of high radiation and high contamination areas such as power reactor vessel cavities, pressurized water reactor steam generator primary side channel heads, spent fuel transfer tube equipment repairs, etc. Dose rates encountered in these surveys ranged widely from mrem/h levels to 60 rem/h or more. Contamination levels ranged up to rem/h/smear.

Information from these surveys was used to write RWF's specifying protective closing requirements, respiratory protection requirements, stay times, degree of HP coverage required, types-ranges-placement of dosimeters, pre and post job ALARA review requirements, and special instructions and precautions as appropriate.

HP Job Supervision:

Have provided for continuous HP surveillance of high radiation and high contamination work in progress to ensure worker safety and RWP compliance. Typical surveillance was for steam generator entries, reactor vessel head removal, reactor cavity decontamination, preparation of radioactive waste. Area and equipment decontamination supervision for up to 10 individuals at a time was typical.

Worker Training:

Have provided training to personnel in the areas of dress and undress procedures, contamination control, ALARA principles and practices, decontamination techniques and methods, personal decontamination techniques, radiation and contamination survey techniques, air sampling methods and techniques, RWP preparation, etc. Have trained off-site radiation monitoring teams for response to the four classes of emergency response at nuclear power plants. Have also provided training to personnel in Health Physics basics such as biological effects of radiation exposure, types and nature of radioactive decay, and radiation protection regulations (100FR20), and respiratory protection (NUREG 0041).

Emergency Response:

Have received training in various emergency actions to be taken for contaminated/wounded person, high radiation alert, airborne contamination alert, system breach (spill), fire fighting, basic first aid, etc. Have participated in over 30 practice drills at a nuclear power plant - at least 5 of which were NRC evaluated drills.

The above-listed overview of experience has been gained over the last 20 years in the facilities and educational institution listed in the previously-submitted resume to the USNRC.

EXPERIENCE ADDENDUM

ROBERT MESCHTER

I am familiar with the process and gamma sources used. I have provided radiation monitoring and surveillance during radiographic operations and know the 10 CFR 20 requirements specifically for posting and barricading areas during the operations. I can calculate dose rates and exposures based on source strength, distance, and time. Other nuclear experience includes radiological environmental sampling and analysis, knowledge of radon sampling, and operation and calibration of radiation measuring instruments such as G-M detectors, ion chambers, solid and liquid scintillators, etc.

Nuclear experience also includes "nuclear decontamination", or more specifically defined as those processes and methods for removing unwanted material from surfaces and equipment. My experience in this area includes the operation of liquid abrasive systems employing glass bead or cutting abrasives, CO₂ pellet blasting, Freon and other degreasing systems, ultra-sonics, ultra-high pressure water cleaning systems, and other solvent and chemical cleaning processes.

My nuclear background includes two (2) years chemistry laboratory experience. Primary duties in this area involved the operation of a water purification plant (Graver and Pennfield systems) and all sampling and analysis to insure Grade "A" demineralized water. Laboratory testing of samples included the measurement of chlorides, fluorides, conductivity, turbidity, dissolved oxygen, silica, suspended solids, pH, etc. Lab duties also included preparation of reagents and standards and the use of strong acids, caustics, and specialty chemicals such as Hydrazine. Measuring and test equipment experience includes pH meters, ion specific meters, Mettler balance, photometers, hydrometer, conductivity cells, etc. Electronic test equipment experience includes multimeters, oscilloscopes, Meggar and load banks. I also have general knowledge of electricity.

More specifically, my experience is:

Knowledge of 10 CFR Part 19 (§ 19.12) requirements and application sections of Part 20 (§§ 20.1101(a) and 20.1101), 33 (§ 33.13) and 35 (§ 35.21). Was involved in the development and provided Part 19 Radiation Safety instruction to radiation workers while employed at various nuclear power plants.

Hold an Associate of Science Degree in Radiological Health Technology. Have a broad working knowledge of Health Physics principles, practices, and regulations. Routinely reviewed ongoing procedures, proposed procedures, equipment at other facilities and Advanced Medical Systems. Recommended necessary changes for the safe use of radioactive materials and radiation producing devices.

Cognizant of potential airborne/surface contamination hazards when using unsealed sources. Aware that metallic cobalt forms oxides when exposed to air and will result in both airborne and surface contamination. Routinely conducted contamination (dry swipe) surveys and air-monitoring and provided instruction to workers on internal radiation protection, potential contamination risks, contamination control, and protection options.

Knowledge of 10 CFR Subpart H intent and requirements, Part 20 Appendix B derived limits, the ALARA concept, and contents of Advanced Medical Systems' Respiratory Protection Program. Received regular training covering respiratory protection in the workplace and included types of respirators, suitability, protection factors, permissible practice, Respiratory Protection Programs, and applicable regulations (OSHA 29 CFR 191C.134 and NIOSH/MSHA 30 CFR Part 11).

Knowledge of contamination hazards, contamination control, internal radiation protection, and decontamination procedures. Routinely provided instruction to workers and subordinates on the proper use, maintenance, and disposal of protective clothing: lab coats, disposable gloves/booties, and anti-c suits.

Knowledge of internal radiation protection, hood design and air cleaning devices. Routinely evaluated hoods at Livermore Laboratories for use with radioactive gases, vapors, and particulates; measured face velocities and determined air transport velocities; determined the effectiveness of, replaced, and disposed of rough and high efficiency (HEPA) filters; operated and maintained the glove box at various nuclear facilities.

Knowledge of 10 CFR Part 20 (Subpart K and Appendix F) and external and internal radiation protection. Involved in the planning and operation of the Perry Nuclear Power Plant Waste Storage Facility. Prepared procedures for the safe collection, transport, treatment (compaction or solidification), storage, and packaging for transfer to an authorized agent. Routinely supervised and was involved in the collection, transport, treatment, storage, packaging, and disposal of radioactive wastes at various nuclear plants.

Knowledge of organization, management, regulatory, and operational aspects of a Radiation Safety Program operating a Type A broad license. Knowledge of RSO/Radiation Safety Office's responsibilities and functions.

RESUME

ROBERT MESCHTER

EXPERIENCE

- 1994 - Advanced Medical Systems, Inc.; Radiation Safety Officer
 - Complete authority and responsibility for the Isotope facility at 1020 London Road
 - Responsible for Radiation Safety
 - Responsible for regulatory compliance
 - Rewrote ISP Manual and participated in the rewrite of the Emergency Plan
 - Chairperson of the Isotope Committee
 - Member of the Management Committee and Safety Committee
- 1984 to 1993 - employed by the Cleveland Electric Illuminating Company at the Perry Nuclear Power Plant as a Senior Engineering Technician. Health Physics and other related duties during the past nine years included (but not limited to) engineering analysis and evaluations, project economic and cost benefit analysis, preparation of procurement specifications, bid proposal evaluations, procedure writing, correspondence preparation, emergency planning, regulatory issues review, technical and program reviews, and work crew supervision as assigned.
- 1975 to 1984 - employed in the commercial nuclear power industry in a variety of Health Physics and other related positions including health and safety technician, chemistry technician, consultant and engineering technician; member of American Nuclear Society and Health Physics Society (specific employers and dates available on request).
- The nuclear plants I have obtained training and experience at are as follows:
 - Duke Power, Oconee Nuclear Plant
 - Lawrence Livermore Laboratory
 - PSE&G, Salem Nuclear Plant
 - Jersey Central Power & Light, Oystercreek Nuclear Plant
 - Boston Edison, Pilgrim Nuclear Plant
 - Carolina Power & Light, HB Robison Nuclear Plant
 - TVA, Browns Ferry Nuclear Plant
 - SMUD, Rancho Seco Nuclear Plant
 - Connecticut Yankee, Haddam Neck Nuclear Plant
 - Alabama Power, Farley Nuclear Plant
 - LP&L, Waterford 3 Nuclear Plant
- Vietnam War Era Veteran, U.S. Navy, 1967 to 1972 - Honorable Discharge.

EDUCATION

- Associate of Science Degree in Radiological Health Technology, Central Florida Community College, 1975 - Graduated with Honors (GPA 3.9).
- Other training includes nuclear systems, engineering economics, Kepner-Tregoe Problem Solving and Decision Making, personal development, management and supervision, TQM, and various short technical seminars.
- Computer skills include word processing, Lotus spread sheet, 20/20 spread sheet, and the use of industry specific calculational computer codes. Former training in COBOL and FORTRAN languages.

STEPHEN J. HADDOCK
1170 East 337th Street
Eastlake, OH 44095
(216) 953-3966

WORK EXPERIENCE:

ADVANCED MEDICAL SYSTEMS, INC. - CLEVELAND, OHIO

Isotope Handler and Technician (May 1991 to Present)

Health Physics responsibilities included the following:

- *Licensed on USNRC #34-19089-01 as a sealed source handler and Isotope Technician; assisted Radiation Safety Officer in all aspects of the facility's operation.
- *Exposure to contaminated areas with contamination ranging from 100,000-200,000 dpm/100cm² throughout the room.
- *Health physics support in high radiation areas with an accessible dose rates of 1-3 R/hr.
- *Extensive hot cell maintenance and manipulator use experience.
- *Transfer and handling of special by-product material with activities ranging from 2,000-9,000Ci Co⁶⁰ and potential exposure of 3,000-10,000 Röntgens/hr. @ 1 meter.
- *Equipment maintenance and calibration.
- *Packaging radioactive waste.
- *Shipping and receiving of radioactive material.
- *Assisted in developing a Decommissioning Plan and Emergency Pre-Plan.
- *Assisted in developing and implementing plan for replacement of HEPA filter system and for hot cell upgrades, repairs and maintenance.
- *Responsibilities also included source fabrication; basic radiation safety for the facility; associated maintenance routines for Picker-AMS Cobalt-60 Teletherapy equipment; source transfers and shipments; physical inventorying of sealed sources and basic daily procedures of operation for the facility under AMS and Nuclear Regulatory Commission guidelines.

COYNE-KANGESSER - CLEVELAND, OHIO

Facility Coordinator (February 1990-May 1991)

Managed 15 employees, which involved hiring, payroll, termination and scheduling of personnel as well as marketing functions. Responsible for customer complaints, billing and deposits. Position included a high degree of confidentiality and customer contact.

WORK EXPERIENCE:
(Cont'd)

BALDWIN-WALLACE COLLEGE - BEREA, OHIO (1982-1986)

Athletic Trainer (1982-1986)

Part-time as a student athletic trainer with the Athletics Department. Duties included all facets of injury assessment including emergency procedures, first-aid including physical therapy and preventative procedures. Assisted doctors with field emergencies and physicals.

EDUCATION:

BALDWIN-WALLACE COLLEGE - BEREA, OHIO (1982-1986)

Bachelor of Arts--Health including 60 Credit Hours in Science
Related Class and 58 Credit Hours in Teaching
Related Classes
3.0 GPA in His Major

HONORS:

Dr. Robert H. Lechner Memorial Service Award

Recipient in 1984, 1985 and 1986. Awarded for outstanding service at Baldwin-Wallace College.

Baldwin-Wallace College Four-Year Honorary Letterman for
Athletic Training from 1982 to 1986.

CHRISTOPHER N. REED
317 East Main Street
Madison, OH 44057
Phone: (216) 428-1424

WORK EXPERIENCE:

- o Advanced Medical Systems, Inc. (1994 to Present)
 - o Technician Responsibilities
 - o Radiation surveys (routine/non-routine)
 - o Contamination surveys (routine/non-routine)
 - o Calibrate counter/scalers/pocket dosimeters
 - o Count/calculate air samples
 - o Calculate DAC-HRS
 - o Count/evaluate smear samples
 - o Decontamination of tools, equipment, areas
 - o Perform fire/safety inspections of building
 - o Provide Health Physics (ALARA) coverage for work in progress
 - o Respond to emergencies as appropriate
 - o Shipment and receipt of exchange containers, therapy heads/source (when qualified)
 - o Preparation and shipment of radioactive samples
 - o Survey documentation
 - o Operational checks of building equipment; i.e., emergency generator, ventilation system, etc.
 - o Exposure calculations/tracking
 - o Shielding calculations
 - o Radioactive decay calculations
- o Perry Nuclear Power Plant (December 1993 to November 1994)
 - o Junior Health Physics Technician
 - o Duties included:
 - o Area and tool decontamination
 - o Hot particle surveys
 - o Release of material from RCA
 - o Air sampling for particulate and gaseous radionuclides
 - o Instrument repair
 - o Calibration and source check
 - o Respirator wash, issue, inspection and fit test
 - o Setup of MSA Breathing Air Supply Manifold

TRAINING:

- o Training included:
 - o Advanced Radiation Worker II
 - o Confined Space Entry
 - o GET and RCT
 - o Respirator Protection Training

- Other training includes:
 - Auburn Career Center certificate for Junior Health Physics Technician
 - International Brotherhood of Teamsters OSHA 1910.120 Certified Hazwoper

VINCENT J. ROCCO
4351 State Road, #7
Cleveland, OH 44109
Phone: (216) 459-2672

WORK EXPERIENCE:

- o Advanced Medical Systems, Inc. (1994 to Present)
 - o Technician Responsibilities
 - o Radiation surveys (routine/non-routine)
 - o Contamination surveys (routine/non-routine)
 - o Calibrate counter/scalers/pocket dosimeters
 - o Count/calculate air samples
 - o Calculate DAC-HRS
 - o Count/evaluate smear samples
 - o Decontamination of tools, equipment, areas
 - o Perform fire/safety inspections of building
 - o Provide Health Physics (ALARA) coverage for work in progress
 - o Respond to emergencies as appropriate
 - o Shipment and receipt of exchange containers, therapy heads/source (when qualified)
 - o Preparation and shipment of radioactive samples
 - o Survey documentation
 - o Operational checks of building equipment; i.e., emergency generator, ventilation system, etc.
 - o Exposure calculations/tracking
 - o Shielding calculations
 - o Radioactive decay calculations
- o Nuclear Energy Services (1991-1994)
 - o Decontamination Technician/Laborer
 - o Duties included:
 - o Decontamination, smear and contamination surveys
 - o Air and soil sampling
 - o Knowledge and operation of various survey meters and counting equipment

SECTION 1.4 - TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

The Company has three (3) training programs for employees and individuals who will be working in or frequenting restricted areas. These training programs are included in the Isotope Shop Procedure Manual and are also included in their entirety in Section 1.4. These programs are as follows:

- ISP-28 Instruction to Ancillary Personnel. This training is for company employees and third parties who do not work in the restricted areas but will be entering a restricted area. An individual will only enter a restricted area upon receiving instructions according to ISP-28.
- ISP-31 Isotope Technician Training Program. This is for company employees who will be assigned full-time to the Isotope Facility at 1020 London Road. This program allows for training and instruction for work within restricted areas. This training does not include source handling.
- ISP-32 Isotope Handler Training Program. This is for company employees who have successfully completed the Isotope Technician Training Program and will be handling and moving sources. Only upon successful completion of this course and NRC approval will employees be authorized to handle sources.