

SOURCE S/N

## ADVANCED MEDICAL SYSTEMS

## TITLE:

Exchange Container Contamination  
Control Record

Procedure No: QA 1014B

Revision:

Date Issued: 3/20/87

Page 1 of 1

Prior to next use and/or shipment, the container must be wiped clean of contamination. Clean is considered to be less than 200 CPM above background, using the office well counter.

Take wipes on the following areas. Record the 1st wipe before cleaning, and all subsequently counted wipes for that particular area.

Container S/N \_\_\_\_\_ last contained source S/N \_\_\_\_\_

Background \_\_\_\_\_ CPM

STD Activity \_\_\_\_\_ uCi  
STD Counts \_\_\_\_\_ CPM

## 1st Wipe

A. Skid Runners bottom		
B. Skid Runners top		
C. Exterior Surface		
D. Cover- bottom		
E. Cover- top		
F. Cover- side		
G. Push rod		
H. Trap		
I. Drawer		
J. Drawer cavity		
K. Vertical hole		
L. Top plug		
M. Lifting Ears		

9702070296 970127  
PDR FOIA  
ENGLISH96-444 PDR

Date: \_\_\_\_\_

By: \_\_\_\_\_

Advanced Medical Systems

Quality Assurance Department

Prepared by

Approval

Revisions

*Howard R. Jones*

9702070296 14 pp.

Advanced Medical Systems is located in the Midwest Compact. Ohio is the first state within the Compact scheduled to open a radioactive waste disposal site. The earliest such a site is scheduled to open is 2002.

There are currently no other disposal sites to dispose of Advanced Medical Systems' radioactive waste until the Ohio site opens, at the earliest, in seven (7) years. The company, therefore, is forced to store its low-level waste on site at 1020 London Road. The company has developed a Waste Management Program using NRC Information Notice No. 90-09 as a guide.

Advanced Medical Systems' Waste Management and Storage Program is only an interim measure until a waste disposal site is opened for Ohio companies.

1. Identification of Waste

Advanced Medical Systems currently has on-hand approximately 29 curies of low-level dispersable radioactive waste.

1.1 Radioactive Material

We are requesting a possession limit of 40 curies for radioactive waste. The company feels this is adequate given current and future operating conditions. Therefore, there is no increase for the possession limit for extended storage of low-level waste. The estimated maximum capacity available to store waste is 22,000 cubic feet. The estimated maximum volume to be stored is 8,000 cubic feet.

The waste consists of the radionuclide Cobalt-60. The low-level waste currently stored on site is characterized as Class A and consists principally of solid waste. The company is actively seeking quotations from third parties for volume reduction of its current waste quantities of approximately 500 cubic feet. The company is investigating both supercompaction and incineration; however, no decision or commitment is being made by the company at this time to volume reduce its waste.

The non-radiological properties of the low-level waste are combustible materials; i.e., paper, plastic and cloth. All of this material is stored in either sealed 55-gallon drums or B-25 (steel) containers.

The company has no additional permits pending approval. The company does complete a Low-Level Radwaste Report for the Ohio Department of Health on an annual basis.

## 1.2 Plans for Final Disposal

As previously discussed, there is currently no disposal facility available to Advanced Medical Systems. Therefore, on-site storage has already begun. Advanced Medical Systems is located in the State of Ohio which is a member of the Midwest Compact which will be the governing authority for ultimate disposal of its waste. The absolute earliest the Ohio waste disposal site will open is the year 2002. There are currently legislative hearings being conducted on how the site will be selected. It is anticipated that this date will slip.

Once the site is open, Advanced Medical Systems will immediately begin making arrangements to dispose of its low-level radioactive waste. It is difficult at this time to estimate how long the waste inventory will take to be shipped to the site. Site protocol has not yet been developed.

Low level radioactive waste is stored in a portion of the basement, a shielded room, whose wall thickness is a minimum of three feet (3') and the Isotope Shop Warehouse. There is no waste processing equipment as all processing would be contracted to a third party. No flammable or explosive material is stored in or near any area which contains radioactive waste. The basement and shielded storage room air is processed by the building ventilation system which is HEPA-filtered and monitored with an isokinetic system.

The three (3) storage areas have a total volume capacity of 22,000 cubic feet. Anticipated annual volume of non-volume reduced waste is estimated to be approximately 300 cubic feet.

All storage areas are within the confines of the existing facility structure which are climate controlled. None of the waste storage areas have immediate access to the outside. The structure is a combination of cement, cement block, brick and cement and a steel roof. The structure provides exceptional weatherproof containment. All the interior rooms are locked and are designated and posted "Restricted Access". Access is controlled by the Radiation Work Permit System. All areas that contain radioactive waste are monitored through smoke or heat detectors or sprinkler system. Advanced Medical Systems' Emergency Plan recommends that any fires within a restricted area be fought with dry chemicals, Halon, CO<sub>2</sub> or equivalent. As all the waste is stored within sealed 55-gallon drums or B-25 (steel) containers, the likelihood of a fire involving dispersable radioactive material is extremely remote.

As the building temperature is maintained by the building's HVAC System, there should be no adverse effects to the extremes of temperature and humidity on the waste.

Advanced Medical Systems is located in Northeast Ohio. Natural hazards such as hurricane and flood are considered remote as are tornadoes. There is very little active industrial activity within the areas where the low-level radioactive waste is stored. Accordingly, the risk of an industrial accident carries an extremely low probability.

### 1.3 Packaging and Container Integrity

As previously discussed, waste is stored in DOT 17H 55-gallon drums, B-25 (steel) boxes, and within shielded rooms with minimum three-foot (3') thick concrete walls, ceilings/floor with a labyrinth entrance. The waste is LSA DAW and imposes no hazard to the integrity of the containers.

The waste storage areas are currently surveyed for radiation and contamination and are visually inspected on a monthly basis. If waste packages were discovered to be leaking, they would manually be re-packaged.

### 1.4 Radiation Protection

All waste storage areas are designated restricted areas and posted per 10CFR20. Access is controlled via locked doors in the Radiation Work Permit System. Surveys and inspections are performed on a routine basis as prescribed in Advanced Medical Systems' Isotope Shop Procedure Manual. Waste is arranged to shield higher radiation level items with lower radiation level items.

Waste causing radiation levels in excess of 25mRem/hour on contact are stored in the basement and shielded storage room. Advanced Medical Systems does not anticipate any changes in the current personnel monitoring program.

Advanced Medical Systems currently has an NRC-approved Emergency Plan in effect. This Plan is being amended to reflect current operations at the facility. The amended plan is contained within this Application for License Renewal.

### 1.5 Maintaining of Records of Waste

Advanced Medical Systems does not receive any low-level radioactive waste from any third parties.

Records are maintained by implementation of a currently-approved facility procedure that identifies and records data pertaining to the waste generated and stored.

1.6 Training

Advanced Medical Systems' Isotope Shop Procedure Manual contains several separate procedures for training company personnel in the packaging, handling, placement, inspection and monitoring of low-level radioactive waste. All personnel located at 1020 London Road are aware and are familiar with the company's Emergency Plan.

1.7 Financial Assurance

The company currently maintains a Decommissioning Funding Plan and corresponding financial assurance for its facility at 1020 London Road. Waste disposal costs are included within this Plan.

1.8 Emergency Preparedness

As previously discussed, the company currently maintains an Emergency Plan for its entire facility located at 1020 London Road. This Plan also contains a Risk Analysis prepared by a consultant which discusses both the likelihood and the effects of an emergency that would involve dispersable radioactive material. The consultant's conclusion is that there is not a very likely scenario for the release of radioactive material to the environment.

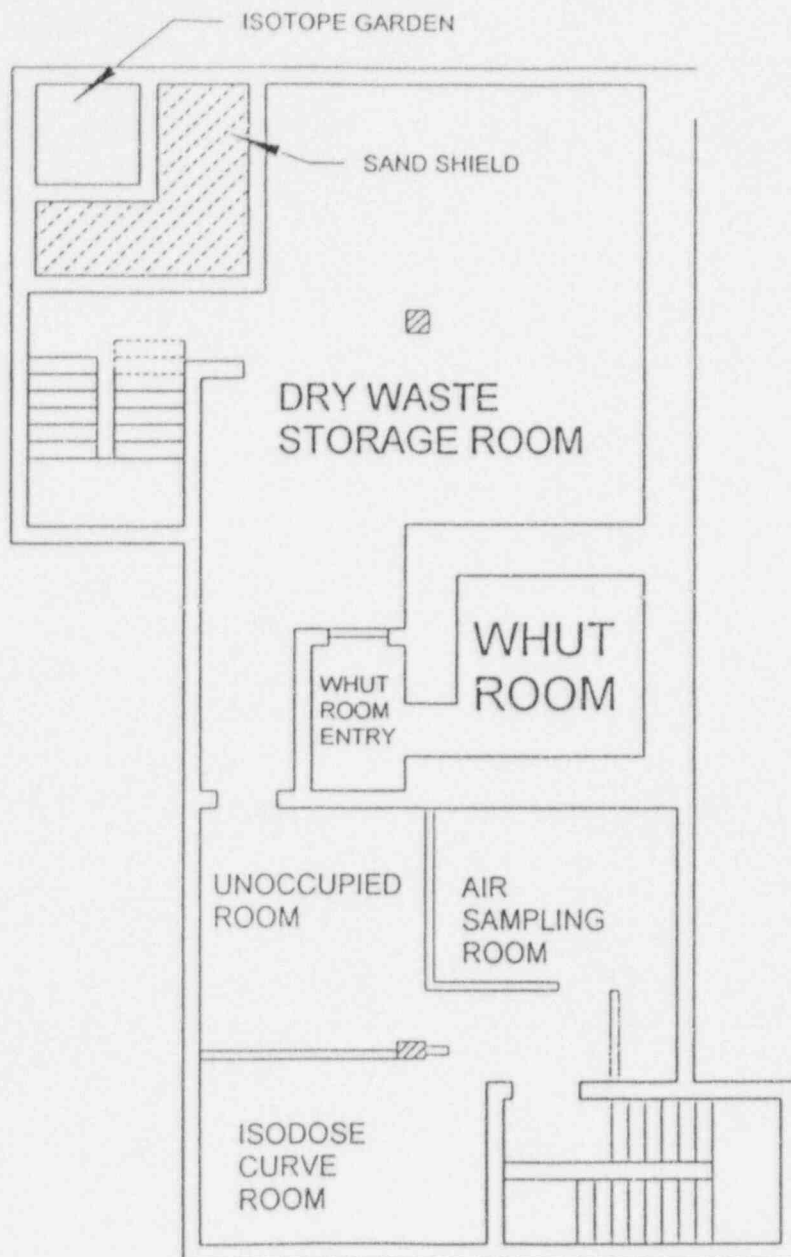
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\* = SECONDARY EXIT/ENTRANCES  
FOR EMERGENCY USE

UNLESS NOTED • TOLERANCES ON ANGLES =	<input type="checkbox"/> BREAK ALL SHARP EDGES
DECIMALS =	* FRACTIONS =
DIMENSIONS ARE BEFORE APPLYING FINISH	
NEXT ASSISTANT NAME	LOANER ROAD 1ST FLOOR
	AR - EUGENE
	PLAN
MATERIAL	
FINISH	
DATE	12/2/5
ADVANCED MEDICAL SYSTEMS, INC.	SCALE 1/8" = 1'-0"
GENEVA, OHIO 44041	C-A9-P-0063





AMS Facility Basement

SECTION 1.8 - LICENSE FEES

The information contained in this License Renewal Application describes in detail the uses of the licensed material for License No. 34-19089-01. To briefly restate, Advanced Medical System requires a license to possess its current inventory of licensed material and to purchase sealed sources for resale.

Based on this information, the following are the Materials Licenses and fees for this renewal:

Source Material

- 2B) Licenses which authorize only the possession, use and/or installation of source material for shielding:

Renewal Application..... \$ 160.00

Byproduct Material

- 3P) All other specific byproduct material licenses, except those in Categories 4A through 9D:

Renewal..... \$ 680.00

TOTAL FEES	\$ 840.00
PAID-CHECK #27819 11/29/94	2,200.00
PAID-CHECK #27919 12/28/94	<u>740.00</u>

OVERPAYMENT OF FEES \$(2,100.00)



J.	YOUR INV. NO.	INV. DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
1	341908901	11/28/94	2200.00	2200.00	0.00	2200.00

CONTROL NO.	CHECK DATE
27819	11/29/94

BANK ONE, CLEVELAND, NA  
Cleveland, Ohio

ADVANCED MEDICAL SYSTEMS, INC.  
121 NORTH EAGLE ST.  
GENEVA, OHIO 44041

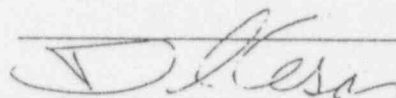
CHECK NO. 027819

6-1543  
410

CHECK AMOUNT
*****2200.00

PA.  
TO THE  
ORDER OF  
U.S. NUCLEAR REGULATORY COMMISSION

TWO SIGNATURES REQUIRED IF AMOUNT IS OVER \$5,000.00



⑈027819⑈ ⑆041015436⑆ 801077672⑈

OUR REF. NO.	YOUR INV. NO.	INV. DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
LICENSE RENEWAL FEE				740.00		740.00

*9340-1*  
*10/21/90*  
*5221*

CONTROL NO.	CHECK DATE
27919	12/28/94

BANK ONE, CLEVELAND, NA  
Cleveland, Ohio

ADVANCED MEDICAL SYSTEMS, INC.  
121 NORTH EAGLE ST.  
GENEVA, OHIO 44041

CHECK NO. 027919

6-1543  
410

CHECK AMOUNT
*****740.00*****

PAID TO THE ORDER OF THE U.S. NUCLEAR REGULATORY COMMISSION

TWO SIGNATURES REQUIRED IF AMOUNT IS OVER \$5,000.00

*[Signature]*

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SECTION 1.9 - SERVICE OPERATIONS

As Advanced Medical Systems is maintaining its licensed service operations, we will require the following license categories:

1. Authorizes the servicing of AMS/Picker units excluding source exchange;
2. Authorizes sealed source exchange;
3. Authorizes removal of the unit and head from customers' sites only;
4. Authorizes the handling of licensed material.

In addition, no licensee shall perform any service operations until they have completed the required training.

These service categories are essentially the same as in our current license and are required to be maintained as AMS may service, install and remove units in the domestic market.

## SECTION 2 - EMERGENCY PLAN

Advanced Medical Systems has revised its Emergency Plan to accurately represent the current operating condition of the facility. In addition, a consultant has prepared a Risk Analysis given an emergency at the facility that would result in dispersable radioactive material being released. The consultant's report is enclosed and concluded an absolute worst-case incident at the facility would not require evacuation of nearby residences and businesses given the secure storage of the licensed material.

In addition, the Company has had several meetings with the Chief of Fire Prevention for the City of Cleveland. Several changes were suggested by both Advanced Medical Systems and the Fire Department which would aid the responding units. The suggested changes are as follows:

- 1) Each restricted area in the facility will have a separate zone. The restricted areas are:
  - a) Hot Cell
  - b) Isotope Shop Warehouse
  - c) Airlock
  - d) Isotope Shop Workshop
  - e) Basement
  - f) HEPA Room
  - g) Clean Equipment Room
  - h) High Level Waste Storage

This would allow the responding units and Advanced Medical Systems' personnel to know the exact location of an emergency in a restricted area.

- 2) Section waterflow monitors will be installed on the two risers to further define the emergency area.
- 3) An enunciator panel will be installed in the Main Lobby entranceway. This will allow the responding unit to verify signal location. At the enunciator panel will be a legend and a facility layout.
- 4) Heat/smoke detectors will be installed to allow monitoring both above and below the ceiling tiles in the office area.
- 5) The local monitoring company will add a monthly maintenance test to the booster pump. The flow test will remain on a semi-annual basis. The monitoring company will continue the monthly inspector test and 2" drain test.
- 6) The cell office and Clean Equipment Room Gamma alarms will be connected to the monitoring company's system. Advanced Medical Systems' personnel will be the only notified party of a Gamma alarm.
- 7) The overhead fire door will be checked by a contractor for working condition and proper activation.

Completion time, per the monitoring company, for these changes is 8-12 weeks. Section 2.1.2 of the E-Plan will be updated once the system is updated.

These changes will aid the local emergency response teams in locating and determining the extent of the emergency.

The Fire Prevention Chief also expressed an interest in a joint exercise to ensure the local firehouse personnel are familiar with the facility. Advanced Medical Systems supports this request and it was mutually agreed that the drills and training be conducted after the monitoring system has been updated.