

Advanced Medical Systems, Inc.

CONTAMINATION CONTROL	Procedure: RSP-009	Revision No.: 000
	Page: 1 of 5	Date: December 28, 1995
	Approved by (Vice President):	
	Approved by (RSO):	
	Approved by (RSC Chair):	

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1 PURPOSE

This procedure provides requirements and guidelines for controlling radioactive contamination at Advanced Medical Systems, Inc.'s (AMS's) London Road facility.

2 SCOPE

This procedure applies to the controlled area at AMS, and to all AMS employees, contractors and visitors that perform work in the controlled area of the London Road facility.

3 REFERENCES

- 3.1 U. S. Nuclear Regulatory Commission Radioactive Material License Number 34-19089-01.
- 3.2 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-001, "Radiation Protection Program Plan"
- 3.3 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-004, "Radiation Protection Records".
- 3.4 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-005, "ALARA Program".
- 3.5 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-008, "Instrumentation and Surveillance".
- 3.6 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-011, "Radiological Areas and Posting"
- 3.7 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-012, "Control of Work"
- 3.8 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-016, "Emergency Response and Notifications".

4 DEFINITIONS

The definition of terms used in this RSP that may not be commonly understood shall be found in RSP-002, "Definitions".

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5 PROCEDURE

5.1 Responsibilities

5.1.1 The Vice President shall supply adequate resources to ensure compliance with this procedure.

5.1.2 The Radiation Safety Officer (RSO) shall:

5.1.2.1 Assure that the requirements of this procedure are met.

5.1.2.2 Assure that all Radiation Protection Technicians are trained in the provisions of this procedure.

5.1.2.3 Verify compliance with this procedure during planned and periodic audits of the Radiation Protection Program.

5.1.3 The Radiation Safety Committee (RSC) shall review unusual incidents involving contamination pursuant to RSP-016.

5.1.4 Radiation Protection Technicians, Authorized Users and contractors shall

5.1.4.1 Comply with applicable requirements of this procedure.

5.1.4.2 Report any unusual findings to the RSO.

5.2 Contamination Limits

5.2.1 Personnel and equipment are considered to be contaminated if the surface being surveyed exceeds the following release criteria:

5.2.1.1 Loose contamination limits for uncontaminated areas are as shown in Attachment 1.

Note: Loose contamination in Contamination Areas within Restricted Areas may exceed these criteria.

5.2.1.2 Total (fixed plus removable) contamination limits for uncontaminated areas are as shown in Attachment 1.

Note: Total contamination in Contamination Areas within Restricted Areas may exceed these criteria.

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5.2.2 Screening levels, as shown in Attachment 1 and following the measurement methodology described in RSP-008 may be used to demonstrate compliance with the release criteria.

5.3 Tagging and Posting

5.3.1 Contamination Areas shall be posted/labeled in accordance with RSP-011.

5.3.2 All contaminated items that are not secured within a restricted area shall be tagged with information on extent and type of contamination.

5.4 Protection of Personnel

5.4.1 All unescorted personnel should wear personal protective clothing (PCs) in contaminated areas.

Note: PC may include shoe covers, coveralls, hood, gloves, face shields, other items, or any combination thereof.

5.4.2 The level of PC shall be specified in a Radiation Work Permit (RSP-012) or by the RSO.

5.4.3 Whole body frisks upon exiting Contamination Areas shall be required.

5.5 Measurement Methodologies

5.5.1 Removable contamination on surfaces shall be measured pursuant to RSP-008.

5.5.2 Total (fixed plus removable) contamination on surfaces shall be measured pursuant to RSP-008.

6 EXEMPTION PROVISIONS

Variances and exceptions to the requirements of this Radiation Safety Procedure shall be permitted pursuant to the written authorization of the RSO and the Vice President.

7 DOCUMENTATION

All records pertinent to this procedure shall be maintained pursuant to RSP-004.

8 ATTACHMENTS

Attachment 1: Release Criteria

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ATTACHMENT 1 RELEASE CRITERIA

NUCLIDE ¹	REMOVABLE ^{2,4}	TOTAL ^{2,3} (FIXED PLUS REMOVABLE)	SCREENING LEVEL ⁵
U-nat, U-235, U-238 and associated decay products	1,000 dpm α /100 cm ²	5,000 dpm α /100 cm ²	--
Cobalt-60 and Cesium-137	1,000 dpm β/γ per 100 cm ²	5,000 dpm β/γ per 100 cm ²	60 cpm above background

- ¹ Where surface contamination by both α and β -gamma-emitting radionuclides exists, the limits established for α and β -gamma-emitting radionuclides should apply independently.
- ² As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- ³ The levels may be averaged over 1 m², provided the maximum surface activity in any area of 100 cm² is less than three times the guide values. For purposes of averaging, any square meter of surface shall be considered to be above the activity guide G if: (1) from measurements of a representative number (n) of sections it is determined that $1/n \sum S_i \geq G$, where S_i is the dis/min-100 cm² determined from measurement of section i ; or (2) it is determined that the sum of the activity of all isolated spots or particles in any 100 cm² area exceeds $3G$.
- ⁴ The amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 cm² is determined, the activity per unit area should be based on the actual area and the entire surface should be wiped. It is not necessary to use wiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable contamination.
- X This screening level is based upon the assumptions that a pancake GM detector with a 60 cm² active area is used as described in RSP-008, that the detector efficiency is 10% for β/γ activity, and that the removable activity is the limiting value.