

Advanced Medical Systems, Inc.

CONTROL OF RADIOACTIVE WASTE

Procedure: RSP-013

Revision No.: 000

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Date: December 28, 1995

Approved by (Vice President):

Approved by (RSO):

Approved by (RSC Chair):

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1 PURPOSE

This procedure describes the methods for the control, segregation, analysis, and disposal of radioactive waste generated at Advanced Medical Systems, Inc. (AMS).

2 SCOPE

This procedure applies to waste materials that have the potential to be contaminated with licensable radioactive material. This procedure is applicable to all work performed by AMS employees, visitors and contractors.

3 REFERENCES

- 3.1 Title 10, Code of Federal Regulations, Part 20, "Standards for Protection Against Radiation".
- 3.2 Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material".
- 3.3 Title 49, Code of Federal Regulations, Subpart C, Parts 171 through 177, "Hazardous Materials Regulations".
- 3.4 Environmental Protection Agency, Title 40, Code of Federal Regulations, Part 240 through 281, "Resource Conservation and Recovery Act".
- 3.5 U. S. Nuclear Regulatory Commission Radioactive Material License Number 34-19089-01.
- 3.6 Advanced Medical Systems, Inc. Radiation Safety Procedure No. RSP-015, "Packaging and Transportation of Radioactive Materials".

4 DEFINITIONS

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

5 PROCEDURE

5.1 Responsibilities

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

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5.1.2 The Radiation Safety Officer (RSO) shall:

- 5.1.2.1 Train Radiation Protection Technicians on the requirements of this procedure, as applicable.
- 5.1.2.2 Identify waste collection points and supervise the storage of radioactive wastes at these locations.
- 5.1.2.3 Make final waste disposal arrangements with vendors as necessary.
- 5.1.2.4 Maintain a records of packaged waste.
- 5.1.2.5 Confirm that the requirements of this procedure are met during planned and periodic audits of the Radiation Protection Program.

5.1.3 Radiation Protection Technicians shall be responsible for:

- 5.1.3.1 Ensuring that only plastic bags are used for collection of contaminated waste.

Note: Normally these are equivalent to 55-gallon drum liners.

- 5.1.3.2 Sealing and transporting contaminated waste bags.
- 5.1.3.3 Handling radioactive waste in a manner that prevents the spread of contamination.
- 5.1.3.4 Segregating wastes in appropriately-marked containers.
- 5.1.3.5 Complying with the applicable requirements of this procedure.
- 5.1.3.6 Periodically reviewing the requirements of this procedure.

5.2 Control of Waste

5.2.1 Control of radioactive waste materials should be accomplished by the following:

- 5.2.1.1 Preventing materials from becoming unnecessarily and/or excessively contaminated;
- 5.2.1.2 Decontaminating and reusing radioactive materials such as tools and equipment;

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5.2.1.3 Re-cycling;

5.2.1.4 Using waste volume reduction techniques when practical; and

5.2.1.5 Monitoring materials for radioactivity and removing non-radioactive materials prior to disposal.

5.2.2 Radioactive waste streams generated at AMS may include dry solid waste, dry combustible waste and liquid waste.

5.3 Collection of Waste

5.3.1 Each restricted area that generates radioactive waste shall have designated waste collection locations.

5.3.2 Precautions to prevent mixing of various hazardous substances when organizing the waste disposal area should be instituted.

5.3.3 If a bag tears during collection, the waste shall be re-packaged.

5.4 Screening Drummed Waste

5.4.1 Radiological screening shall be performed on all packaged waste.

5.4.2 The following steps shall be taken to screen drummed waste:

5.4.2.1 Don lab coat (or coveralls), safety glasses and gloves prior to the start of work.

5.4.2.2 Assign a unique identification number to the drum and record the number on the Waste Screening Form (Attachment 1)

5.4.2.3 Inspect the drum.

Note: If the drum is leaking, off-gassing, or bulging, do not open the drum, and notify the RSO immediately.

5.4.2.4 Perform ambient and contact exposure rate surveys as described in RSP-008 and record results on Waste Screening Form.

5.4.3 A label containing the curie content of the drum should be affixed to the drum.

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5.5 Waste Disposal

5.5.1 Radioactive waste generated by AMS shall be stored on site in a restricted area.

5.5.2 Alternative means of disposal, such as the following, may be implemented:

5.5.2.1 Transfer to a waste disposal service which is licensed to receive such waste in accordance with 10 CFR 20.2001;

5.5.2.2 Transfer to the original supplier which is properly licensed to receive radioactive materials;

5.5.2.3 Transfer to an authorized recipient as provided for in 10 CFR 20.2001;

5.5.2.4 Release into the sanitary sewer in conformance with USNRC 10 CFR 20.2003;

5.5.2.5 Recycled; or

5.5.2.6 Other means specifically approved in advance by the USNRC pursuant to 10 CFR 20, Subpart K.

5.5.3 For off-site disposal, the RSO should perform the following:

5.5.3.1 Contract an independent licensed vendor to seal, survey, pick up and transport filled drums to a final disposal facility, or

5.5.3.2 Arrange transfer and disposal of sealed, surveyed, and manifested drums to a disposal facility.

5.5.4 The RSO, in conjunction with the disposal vendor, shall confirm that each container is sealed and surveyed for radioactive contamination before the containers leave the waste area.

5.5.5 The RSO shall provide the disposal vendor with the inventory of radioactive materials contained in the waste drums.

5.5.6 The RSO shall determine when the capacity of a radioactive waste collection area dictates a radioactive waste shipment to a commercial disposal facility or waste broker.

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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-003.

8 ATTACHMENTS

Attachment 1: Waste Screening Form

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ATTACHMENT 1 WASTE SCREENING FORM

Waste Drum Number:	Drum Weight:
Description of Contents:	Drum Location:

EXPOSURE RATE SURVEY RESULTS (mr/hr)

Instrument Serial No:	Calibration Due:
Contact Exposure Rate - Top:	Contact Exposure Rate - Bottom:
Contact Exposure Rate - Side (min):	Contact Exposure Rate - Side (max):
Ambient Exposure Rate (Quadrant 1):	Ambient Exposure Rate (Quadrant 3):
Ambient Exposure Rate (Quadrant 2):	Ambient Exposure Rate (Quadrant 4):
Transport Index:	Curie Content:

CONTAMINATION SURVEY RESULTS (dpm/100 cm²)

Total (fixed plus removable) - Top:	Total - Bottom
Total - Side (min):	Total - Side (max)
Removable (max):	

Survey Performed By:	Signature:
Date of Survey:	Time of Survey:
Approved by:	Signature