



Advanced Medical Systems, Inc.

1020 London Road
Cleveland, OH 44110
(216) 692-3270

September 5, 1996

Mr. John Madera
Nuclear Materials Licensing Section
United States Nuclear Regulatory Commission
801 Warrenville Road
Lisle, Illinois 60523-4351

Re: USNRC License No. 34-19089-01

Dear Mr. Madera:

Advanced Medical Systems, Inc. (AMS) has scheduled a filter exchange for the Hot Cell and Isotope Shop ventilation systems for Tuesday, September 10, 1996. As you indicated in our telephone conversation of September 4, 1996, a license amendment to to perform this work is not necessary. However, you also indicated that the USNRC wishes to review the Radiation Work Permit (RWP) for the work. In compliance with that request, a copy of the RWP is enclosed.

Please note that the RWP references Radiation Safety Procedure No. RSP-021, "Changing Exhaust Filters in the Cell Machinery Room" for the work plan. RSP-021, which has been reviewed and approved for use by the AMS Radiation Safety Committee, will replace ISP-15, "Changing Exhaust Filters in the Cell Machinery Room".¹

Also in our September 4, 1996 telephone call, the USNRC suggested that AMS may wish to collect and analyze the filters from the personal air samplers worn by personnel involved in the filter exchange mid-way during the work as an exposure control methodology. However, you will note that we did not incorporate this suggestion into RSP-021. The reasons for this are four-fold:

- The maximum internal exposure from the project, in its entirety, will be negligible.²
- Since personnel must exit the work area in order to remove and replace filters into the sampler cartridge, the probability of contamination spread will increase.

¹ It is also being submitted to the USNRC under separate cover as additional information to support our license renewal application.

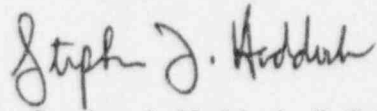
² The maximum measured airborne radioactivity during the 1993 filter exchange was 1.67×10^{-4} microcurie per cubic centimeter. If it is conservatively assumed that the duration of the filter exchange is three (3) hours, and that a worker's respiratory rate is 100 liters per minute, the maximum possible intake of ⁶⁰Co this worker might incur is 0.3 microcuries. This is equivalent to 0.15 percent of the Annual Limit on Intake for ⁶⁰Co and a Committed Effective Dose Equivalent of only 7.5 millirem.

9/10/1

- One of the three (3) workers required to perform the filter exchange will be unavailable for a period of time while the filters are counted.
- The two (2) remaining workers must remain in a location of elevated exposure rate while awaiting the results of the filter processing, thus increasing the external exposure associated with the work.

If you have any questions or if I can provide you with additional information, please call me at (216) 692-3270. We are looking forward to safe, timely, and effective implementation of RSP-021 on September 10th.

Sincerely,

A handwritten signature in dark ink, appearing to read "Stephen J. Haddock". The signature is fluid and cursive, with the first name "Stephen" and last name "Haddock" clearly distinguishable.

Stephen J. Haddock, R.S.O.

cc: D. Cesar
D. A. Miller, Esq. - Stavole & Miller
C. D. Berger, C.H.P. - IEM

INSPECTION PLAN

Licensee: Advanced Medical Systems, Inc.
1020 London Rd.
Cleveland, OH

License No: 34-19089-01

Inspection Dates: Sept. 9-10, 1996

Inspector: M. Weber

Type of Inspection: Special, announced

Purpose of Inspection: To provide general oversight and perform confirmatory surveys during the HEPA filter change-out project

Schedule:

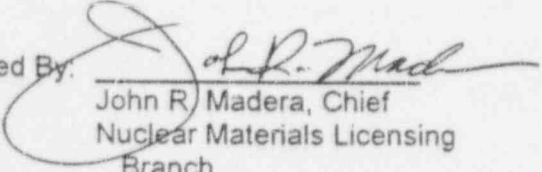
Monday, Sept. 9

- Observe "practice run" of filter change-out, and compare this with the written procedures and good health physics practices
- Perform exposure rate and wipe surveys of areas outside HEPA Room

Tuesday, Sept. 10

- Observe actual filter change-out, and compare this with the written procedures and good health physics practices
- During and after the actual filter change-out, perform exposure rate and wipe surveys of areas outside HEPA Room
- If time permits, inspect outdoor "dirt box" and perform exposure rate surveys near the box
- Call RIII before leaving the site

Approved By:


John R. Madera, Chief
Nuclear Materials Licensing
Branch

Date

9/6/96

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Advanced Medical Systems, Inc.

Fax Cover Sheet

ATTN: MIKE WEBER

COMPANY: USNRC.

FROM: SJH

EXT.

SUBJECT: RSP-021 & RWP

Date 9/5/96

FAX NO.: (630) 515-1259

1020 Lorcon Road

Cleveland, Ohio 44110

(216) 692-3270

Fax (216) 692-3269

MESSAGE

MIKE,

HERE YOU GO!

TALK TO YOU AT 1:30!

9/5/96

This plan was reviewed by Chuck Gill and Mike Weber after telecon with C. Pengert an D. Miller of ANS to answer some minor questions we agreed that their RWP & procedures were adequate

Portals X RWP Unit?

TENT

ADVANCED MEDICAL SYSTEMS, INC.
RADIATION WORK PERMIT

FAXED
+ 8-30-96

Permit No:	Type: <input checked="" type="checkbox"/> Job Specific <input type="checkbox"/> Extended <input type="checkbox"/> Routine
Expiration Date:	

Description and Location of Work: (RSP-02 Lab Work Plan) ^{ALB} CHANGE 15A HEPA FILTER AND HOT CELL HEPA FILTER ^{ALB} LOCATED IN SECOND FLOOR HEPA ROOM. CONTAMINATED FILTERS WILL BE MOVED ~~DOWN~~ FROM STAIRWELL TO HIGH LEVEL STORAGE. ⁸⁻³⁰⁻⁹⁶

SURVEY INFORMATION

General Area Dose Rates (mR/hr):	<input checked="" type="checkbox"/> See Map
150 mR/hr ROOM	4.7 mR/hr AT SIDEWALK
Maximum Accessible Dose Rates (mR/hr):	<input checked="" type="checkbox"/> See Map
3000 mR/hr AT HOT CELL HEPA FILTER	
Removable Contamination (dpm/100 cm ²):	<input type="checkbox"/> See Map
≤ 40,000 DPM / 100 cm ² IN ROOM	> 40,000 DPM IN HOT CELL HEPA CAVITY

HARRIS REVIEW

Estimated Total Dose: 200 mR / 3R EXTREMITY / PERSON	Actual Total Dose:
Pre-Job Briefing by: R.S.O.	Post-Job Briefing by:
Dose Reduction Techniques to be Employed: LOW DOSE AREA IS DOOR-WAY AND MARKED. PRESTAGE EQUIPMENT WITH OUTSIDE SUPPORT. WORK QUICKLY BUT SAFELY. SEQUENCE OF FILTERS HOT CELL FILTER CHANGED FIRST FOLLOWED BY SHOP FILTER(S)	

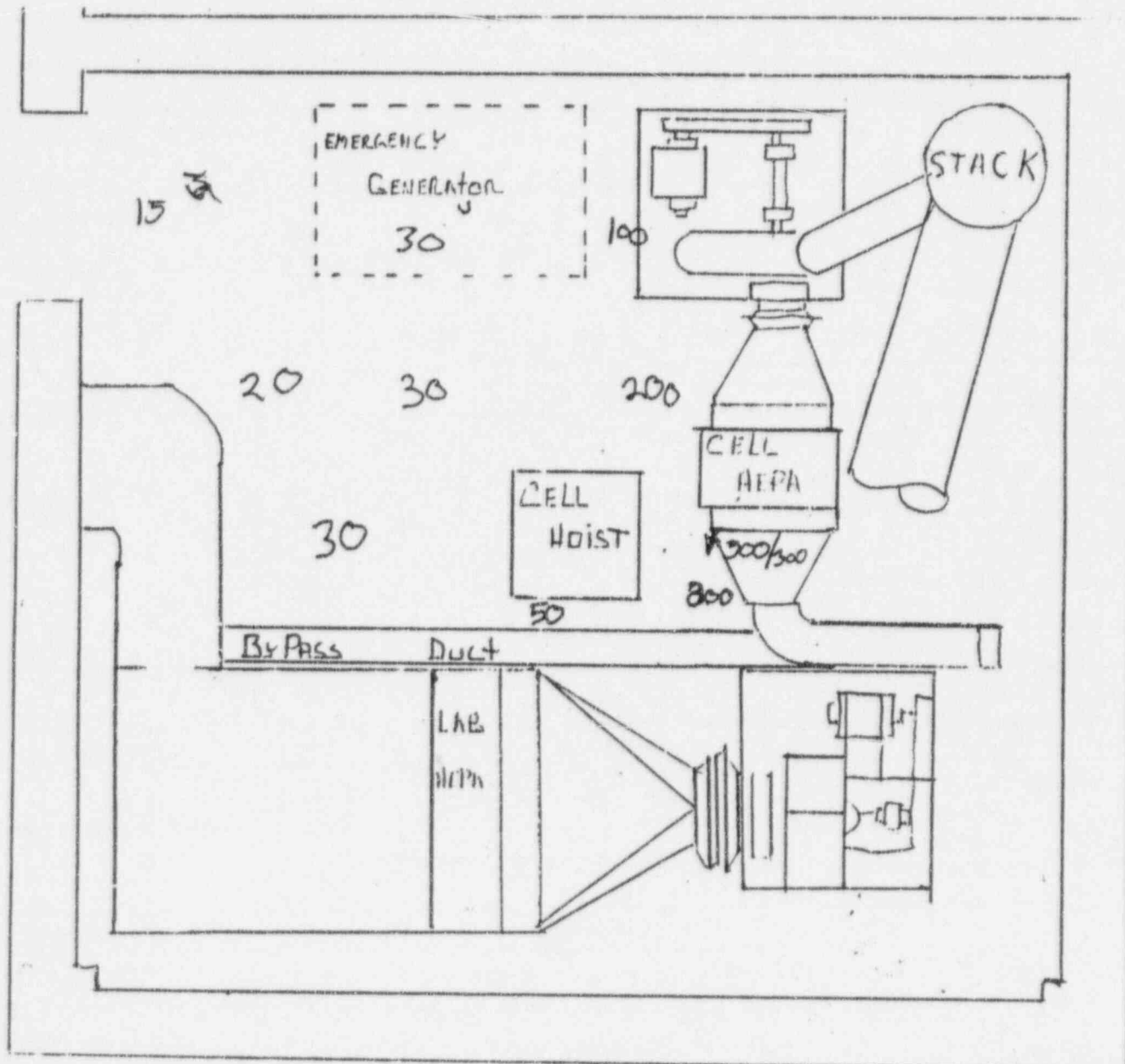
DOSEMETRY REQUIREMENTS

<input checked="" type="checkbox"/> TLD/Film Badge	<input checked="" type="checkbox"/> Finger Ring	<input checked="" type="checkbox"/> SFPP (200 mR)	<input checked="" type="checkbox"/> SFPP (1R)	<input checked="" type="checkbox"/> SFPP (50 EXTREMITY)
<input checked="" type="checkbox"/> Other (Specify): SUPER-DAD ALARMING DOSIMETERS				

PROTECTIVE EQUIPMENT REQUIREMENTS

<input checked="" type="checkbox"/> Coveralls X 2	<input type="checkbox"/> Lab Coat	<input checked="" type="checkbox"/> Hood X 2	<input checked="" type="checkbox"/> Rubber Gloves X 2	<input checked="" type="checkbox"/> Booties X 2
<input type="checkbox"/> Rubbers	<input checked="" type="checkbox"/> Respirator	<input checked="" type="checkbox"/> Taped Rooms	<input checked="" type="checkbox"/> GMP Coverage	<input checked="" type="checkbox"/> Air Sampling
Other Precautions and Special Instructions: SURVEY FILTERS FOR HOT SPOTS PRIOR TO REMOVAL TO HIGH LEVEL STORAGE. CONTRACT H.P. SUPPORT. FRONT GATE CLOSED AND LOCKED PRIOR HEPA REMOVAL				

Authorized by (signature of ASO):	Date of Authorization:
Approved by (signature of ASO) <i>[Signature]</i>	Date of Approval: 8-30-96
Terminated by (signature of ASO):	Date of Termination:

CELL HEPA ROOMDATE 8/2/96INST TeledetectorCOMMENTS Before filter change outTIME 0850S/N 28821TECH C ReedCAL. DUE 1/1/97TYPE OF SURVEY Pre Job Survey

REVIEWED BY

Joseph J. Haddock