



# Advanced Medical Systems, Inc.

1020 London Rd.  
Cleveland, Ohio 44110  
216-692-3270

June 7, 1996

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

Re: Advanced Medical Systems Inc. (License No. 34-19089-01) Emergency Plan

Dear Mr. Madera:

Advanced Medical Systems, Inc. (AMS) is in receipt of your letter dated February 28, 1996 wherein comments on Revision 0 of the AMS Emergency Plan were provided. On March 21, 1996, we provided you with our responses and a description of our proposed follow-up actions. However, in that transmittal, we deferred our response to your Comment 2, "Engineers Opinion Report", pending receipt/review of USNRC Inspection Report No. 030-16055/95006. Since that review is now complete and all of the outstanding issues raised in the report have been addressed, attached is our response to Comment 2.

Once you have approved the responses and follow-up actions contained herein and in our March 21, 1996 letter, the Emergency Plan will be revised in accordance with our commitments. Revision 1 of the Plan will then be distributed to the USNRC and to those individuals on our "first responders" list. Shortly thereafter the first responders will be trained in the provisions of the Plan, and the first emergency drill will be scheduled.

If I can answer any questions or provide you with additional information, please call me at (216) 692-3270. We are looking forward to timely approval of our Emergency Plan.

Sincerely,

Robert Meschter, RSO

cc: D. Cesar  
D. A. Miller, Esq. - Stavole & Miller  
C. D. Berger, C.H.P. - I&M  
M. Weber - USNRC, Region III

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REGION III

**RESPONSE TO COMMENTS FROM  
U. S. NUCLEAR REGULATORY COMMISSION**

**Agency Comment (2):** Engineers Opinion Report - In response to our request for an engineering analysis of the facility structure, the emergency plan refers to an Engineers Opinion Report issued by Neff and Associates dated September 1995. We obtained a faxed copy of the report dated September 22, 1995 (after the date of the emergency plan). We noted a number of deficiencies in the report and a general failure to provide an adequate technical basis to support its conclusions. Most of our concerns regarding the structural integrity of your facility will be addressed in Inspection Report No. 030-16055/95006 which will be transmitted under separate cover.

**AMS Response:** In a June 7, 1996 letter from R. Meschter (AMS) to G. Wright (USNRC), AMS addressed the structural integrity issues raised in Inspection Report No. 030-16055/95006. This response, which included a report generated by Dr. James Beavers, P.E., demonstrates that, barring unforeseen circumstances, the AMS building on London Road is capable of providing protective confinement of the licensed radioactive materials in the restricted areas for many years into the future.

**Action Taken:** None required.

**Agency Comment (2):** Engineers Opinion Report - With respect to the emergency plan, the Engineer's Opinion Report does not provide an adequate analysis of the worst case earthquake. The report states that the structure can "withstand seismic forces as great as 5.2 Richter" and "a seismic event greater than 5.2 Richter in this region is highly improbable." Since the Richter scale is a method of classifying the energy released by an earthquake without defining other parameters such as epicentral distance, the statement fails to define the associated seismic forces on the structure. An adequate analysis should state, in appropriate units, the ground acceleration, velocity, and displacement that the worst case earthquake could impose on the structure. The analysis should evaluate how well the various existing structural systems in the building would withstand these seismic effects.

**AMS Response:** Concur. In a June 7, 1996 letter from R. Meschter (AMS) to G. Wright (USNRC), AMS provided a seismic analysis of the London Road facility (Attachments I and II of Dr. Beavers report). In that submission, we confirmed that if an earthquake were to occur, the horizontal loads would be transmitted into the hardened areas of the building (e.g., the WHUT Room, the Hot Cell and the High-level Waste Storage Room). As a result, the first floor unreinforced masonry load-bearing wall would see little, if any seismic load, there would be no displacement of the first floor, and there would be negligible, if any, displacement of the second floor. Although pre-existing cracking in the southeast corner of the building could initiate a partial building collapse in the event of an earthquake, the ability of the building to confine the licensed radioactive materials contained therein would not be compromised. Thus the impact of an earthquake-related emergency at the AMS facility is consistent with that reflected in Revision 0 of the Emergency Plan.

**Action Taken:** Page 2-3, lines 2 through 5, and Page 2-4, lines 1 through 3 of the "Emergency Plan for the London Road Facility" will be modified to reflect the findings in Dr. Beavers' report. References to the Engineers Opinion Report will be removed.