

February 9, 1993  
67-2023

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Docket No. 50-163; Reactor Facility License No. R-67: Detection of Trace Levels of Fission Product Activity - Update No. 1

Reference: K. E. Asmussen Letter No. 67-1997, "Detection of Trace Levels of Fission Product Activity," to U.S. Nuclear Regulatory Commission, Document Control Desk, dated December 9, 1992

Gentlemen:

In the referenced letter, General Atomics (GA) reported that it had detected trace levels of fission product radionuclides in the pit water and air surrounding GA's Mark F reactor. The levels detected were well below the maximum permissible concentrations (MPCs) for unrestricted areas. At that time, GA indicated that it had instituted a program of increased surveillance to monitor the levels of these radionuclides. Further, GA indicated it would make an assessment of our surveillance plan or other appropriate actions following the restart of the reactor after GA's December 1992 holiday shutdown. Attached is a summary of the results of our surveillance to date, and our plans for future surveillance is given below.

Figures 1 through 4 (attached to this letter) show the results of our surveillance from the date the radionuclides were initially detected. Note that the plots titled "Ratio of MPCs" refers to the ratio of the measured concentration to the appropriate MPC. From the time of the referenced letter to the time the reactor was shut down for the holidays, the level of radionuclides appeared to have leveled off. The reactor was shutdown on the 23rd of December 1992 and restarted on the 5th of January 1993. Samples taken on the 4th of January 1993, prior to plant start-up, showed no detectable levels of radionuclides in the pit water or air surrounding the reactor.

After start-up, trace levels of these radionuclides were again detected in the water followed by a sharp drop off. The air surrounding the Mark F reactor had much lower levels of trace radionuclides than prior to the shutdown. In addition, there are currently no detectable levels of radionuclides in the stack.

As a result of these lower trace levels of radionuclides, GA has decreased the frequency of surveillance to only one sample a week.

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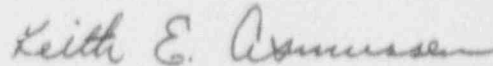
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GA will continue to appraise the NRC of the results of its surveillance; another update on the results will be submitted by letter in about three months.

If you have any questions concerning this letter, please contact Dr. Junaid Razvi at (619) 455-2441, or me at (619) 455-2823.

Very truly yours,



Keith E. Asmussen, Director  
Licensing, Safety and Nuclear Compliance

KEA:shs

Enclosures: Figures 1-4

cc: Mr. Alexander Adams, Jr., Senior Project Manager  
Non-Power Reactors and Decommissioning Project Directorate  
Division of Operating Reactor Support  
Office of Nuclear Reactor Regulation

Mr. Phillip Qualls, NRC Region V.

FIGURE 1.  
MARK F CAM ACTIVITY

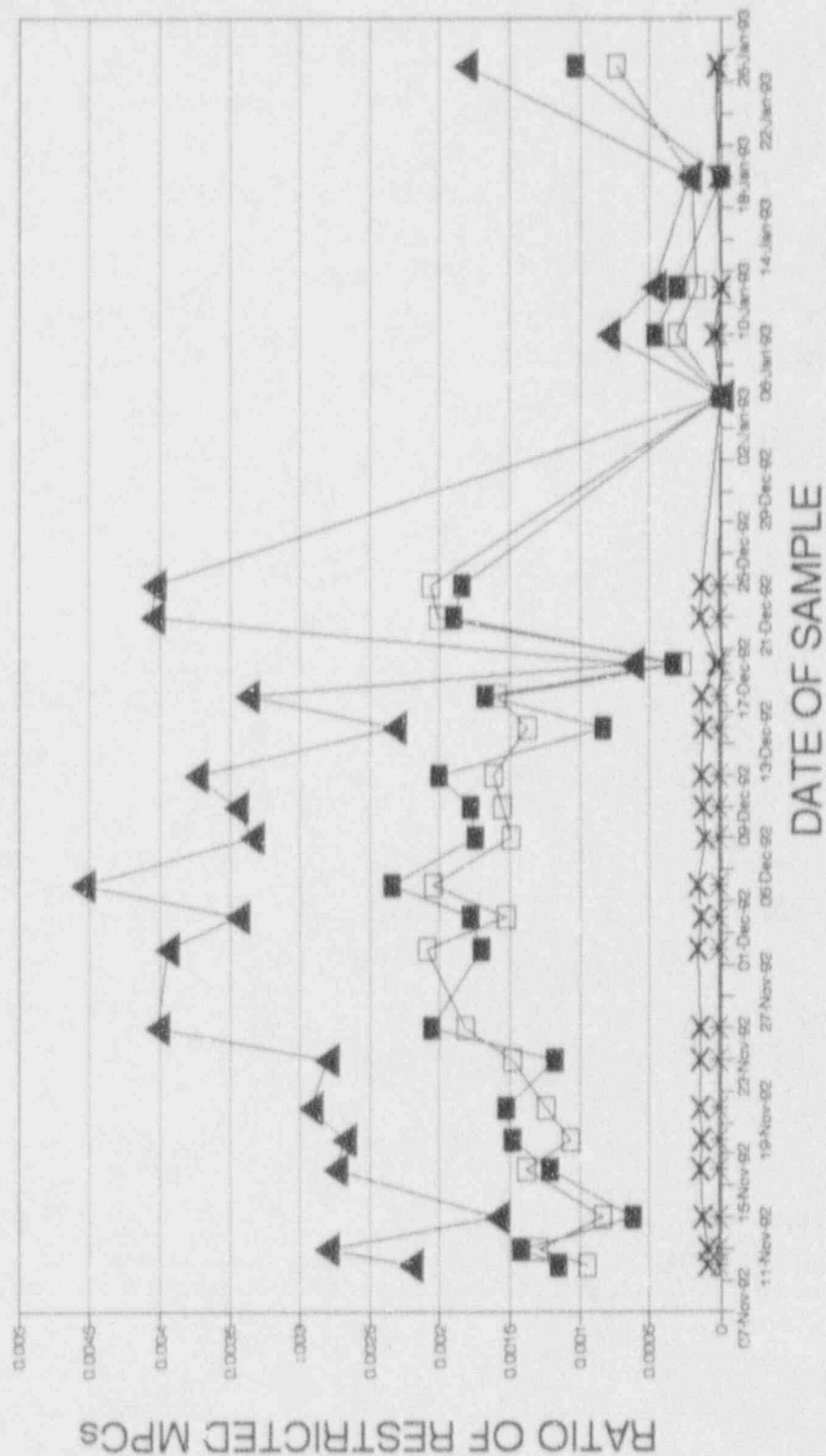


FIGURE 2  
MARK F REACTOR ROOM ACTIVITY

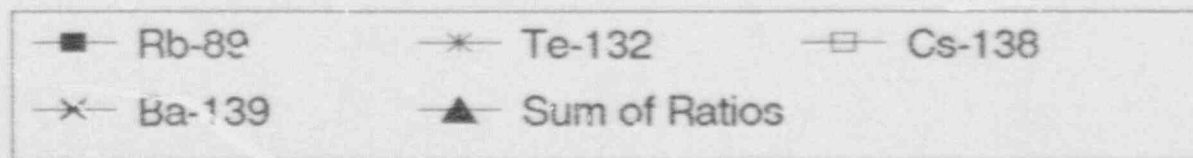
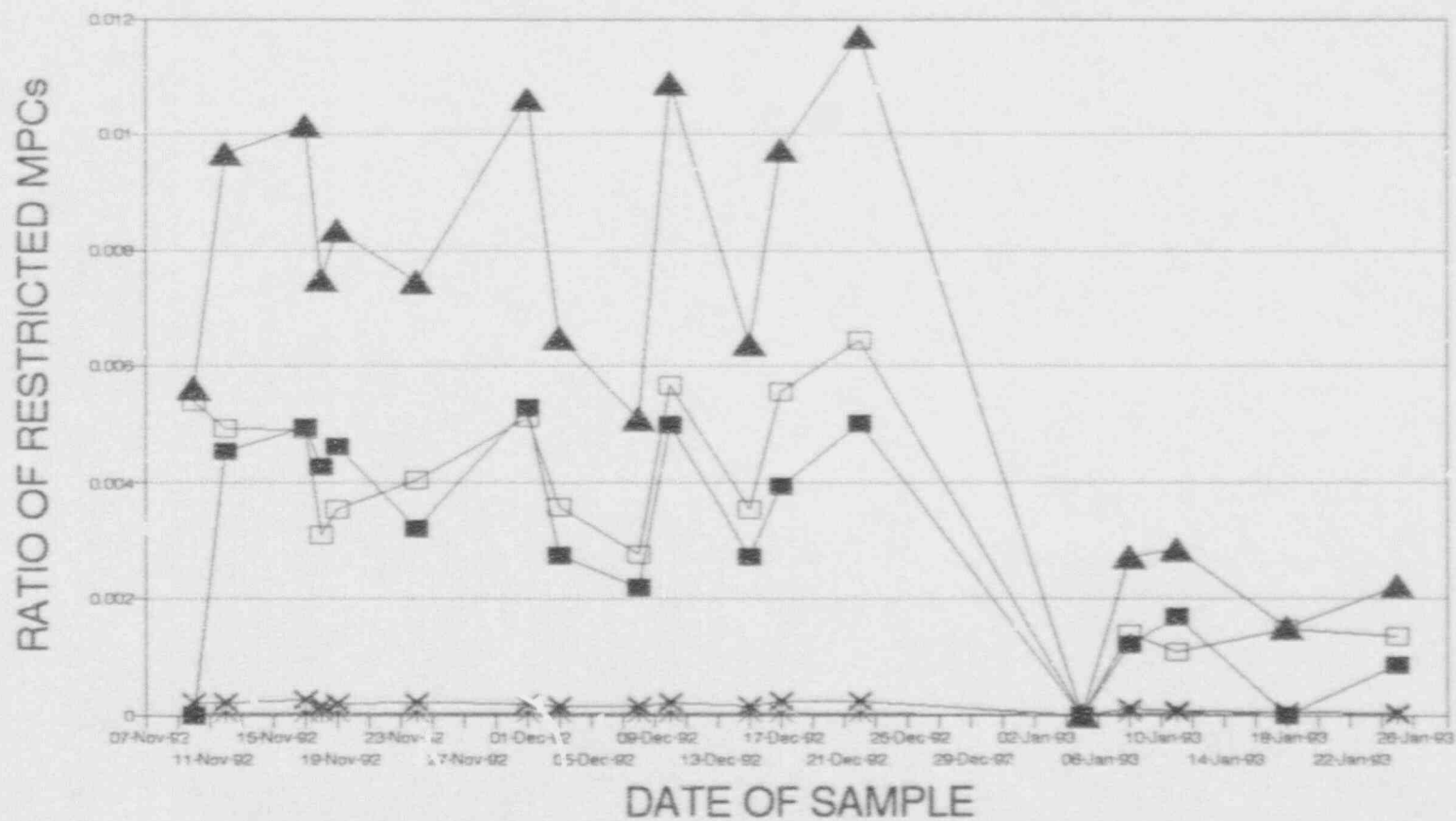


FIGURE 3.  
MARK F STACK ACTIVITY

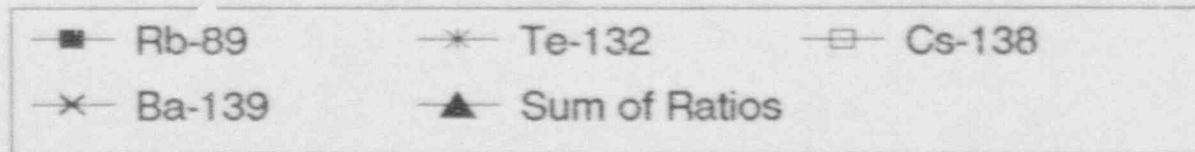
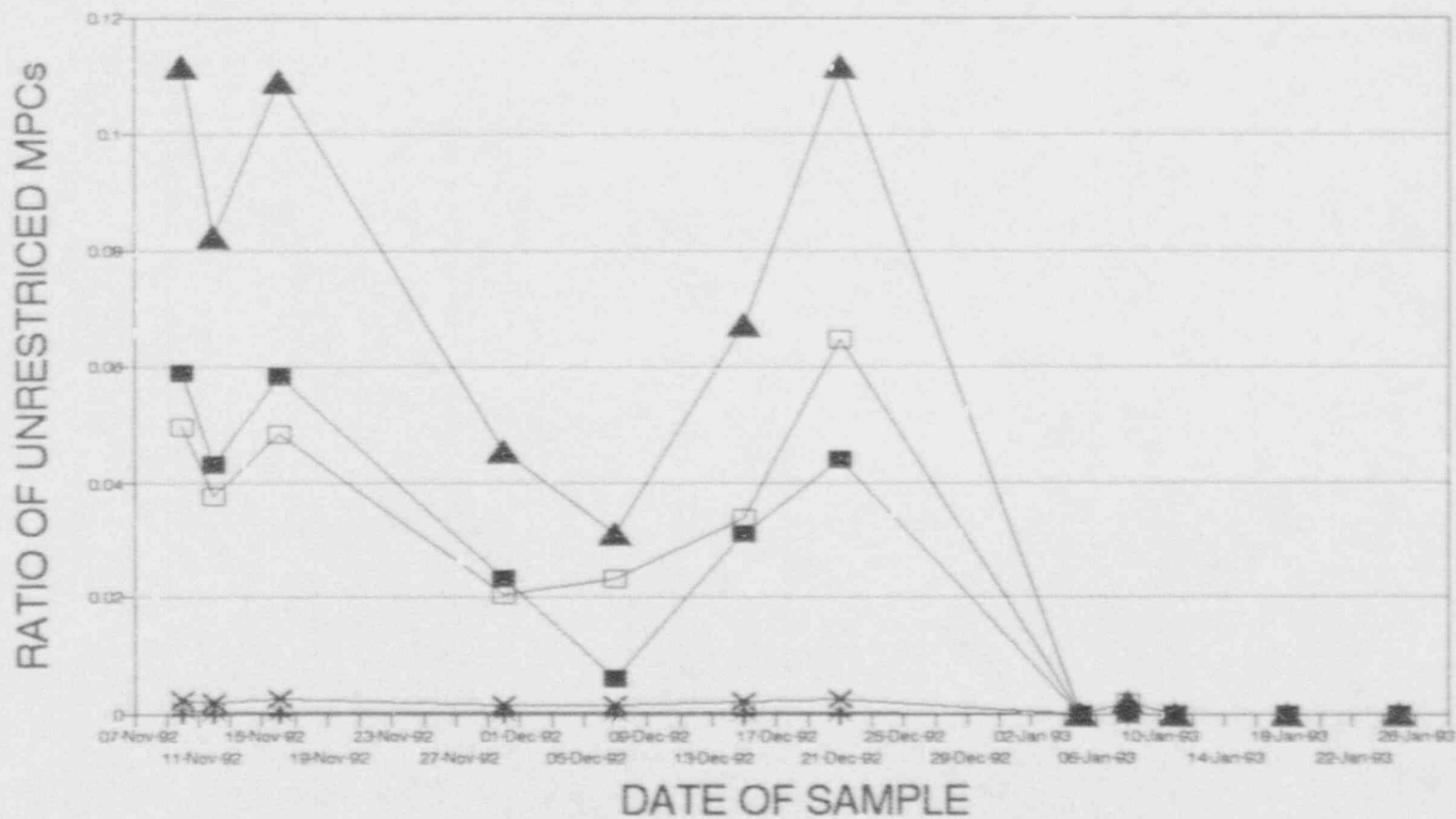


FIGURE 4.  
MARK F PIT WATER ACTIVITY

