



GA Technologies

In Reply
Refer To: 67-8016

GA Technologies Inc.
P.O. BOX 85608
SAN DIEGO, CALIFORNIA 92138
(619) 455-3000

24 September 1985

Mr. Harold R. Denton
Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Docket 50-163: R-67; Modification to Application for License
Amendment and Technical Specification Change. (19 copies)

Reference: (a) GA ltr 67-7097 dtd 8/26/85 from W. R. Mowry to NRC.

Dear Mr. Denton:

GA Technologies Inc. (GA) requested a change in its subject reactor technical specification as described in an application dated 26 August 1985 (Ref. a). As a result of subsequent discussions with the NRC staff we find that a change in one of the specifications [10.2.6(f)(2)] is required and we were requested to clarify the justification and discussion included in the earlier submission. For the sake of completeness and clarity, all the specifications that are the subject of this application, together with the slightly altered discussion and justification, are presented below. We request that the subject specification be amended to read:

6.2.3: The following monitoring systems shall be operable during reactor operation or when work is done on or around the reactor core. (For periods of time for maintenance to the radiation monitoring systems, the intent of this specification will be satisfied if the installed system is replaced as needed with alternative or portable gamma-sensitive instruments having their own alarms or which shall be kept under visual observation).

- (a) An area radiation monitoring system capable of activating the evacuation alarm.
- (b) A continuous monitoring system for airborne radioactivity having a readout and audible alarm which can be heard in both the reactor and control rooms.
- (c) The monitoring systems in (a) and (b) shall be calibrated annually and their set points verified weekly.

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10.2.6 (f)(2)

When devices are present in the core regardless of reactor power level:

- (1) Reactor scram if the reactor room continuous air monitor registers 50,000 counts per minute or more (scram bypass is permissible during scram test or maintenance operations provided the reactor operator shall initiate a manual scram upon the occurrence of an equivalent signal from a specified alternative radiation monitor).

The purpose of this request is to seek authorization to perform routine calibration or maintenance on any of the radiation monitors including the continuous air monitor (CAM), during extended operations. According to Section 6.2.3(c), "...the monitoring system in (a) and (b) shall be calibrated annually and their set points verified weekly. As is clear in Section 10.2.6(f)(2), the CAM which is normally part of the radiation monitor system (and tested weekly) becomes part of the experiment safety system. Unless provision is made during these operations for its scram bypass, its operability cannot be verified until the end of a long run. Prudence suggests that provision should be made to verify operability of the CAM at least weekly during a long continuous run. In addition, a defective CAM may need to be repaired or replaced by an alternative CAM with scram. To permit these desirable surveillance and maintenance operations, we seek the additional wording in the applicable Technical Specifications suggested above.

Justification for providing scram bypass or temporary alternative instrumentation for the radiation monitors is the following:

1. The Mark III TRIGA reactor license (R-100) authorized the requested substitution of temporary, portable instrumentation under visual observation (Sections 3.2 Reactor Instrumentation).

For periods of time for maintenance to the radiation monitoring systems, the intent of this specification will be satisfied if the installed systems are replaced with portable gamma-sensitive instruments having their own alarms or which shall be kept under visual observation.

2. To instrument for the present continuous reactor operation, we have in operation a large number of radiation sensitive monitors: namely,

2 Area monitor detectors;

1 Continuous Air Monitor with standby CAM in the immediate vicinity;

1 Radiation Monitor in the Absolute Air Filter (in stack exhaust line);

1 Cell top radiation monitor near the thermionic cells;

1 Stack monitor.

With such an array of radiation monitors, there is no credible possibility that dangerous release of radioactivity would be detected by only one of the above monitors. Release of such a quantity would be immediately detected by at least four of these detectors: the CAM, the absolute filter radiation monitor, the stack monitor, and the cell top monitor.

The desire both to test routinely the CAM scram and to provide maintenance during a long term test stems from our interest to assure continued long term operation of the experiment safety circuits. The temporary replacement of any of the above radiation monitors does not decrease the system safety (because of the obvious redundancy) and does in fact actually increase the assurance of continued proper operation of these components of the safety system.

GA concludes that no safety considerations are altered by this request for ability to test and maintain the radiation monitors during a long reactor operation.

The fees required to accompany this request for amendment were submitted with the earlier submittal.

We would appreciate your assistance in expediting this request and look forward to receiving the requested license amendment at your earliest

Harold R. Denton

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convenience. Should you have any questions in the matter, please promptly contact by telephone either Dr. W. L. Whittemore at (619) 455-3277 or me at (619) 455-2823.

Very truly yours,

Keith E. Asmussen

Keith E. Asmussen
Licensing Administration

KEA:WLW:hc

cc: R. E. Carter, NRC

STATE OF CALIFORNIA)
)
COUNTY OF SAN DIEGO)

After being duly sworn, the person known to me to be Keith E. Asmussen, Licensing Administrator, Quality Assurance and Compliance Division, GA Technologies Inc., San Diego, California, signed the above document this 24th day of September 1985.



Lorraine Rogers
Notary Public