



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE  
OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 35 TO  
FACILITY LICENSE NO. R-67  
GA TECHNOLOGIES, INC.  
DOCKET NO. 50-163

Introduction

By letters dated August 26 and September 24, 1985, the licensee, GA Technologies, Inc. (GA) requested an amendment to Operating License R-67 for its TRIGA Mark F non-power reactor. The requested amendment would permit the licensee to substitute portable radiation detectors for certain reactor room radiation monitors during temporary disruption of operation of permanent detectors for the purposes of calibration or maintenance. Additionally, the requested amendment would permit bypassing an automatic reactor scram function of the reactor room continuous air monitor and substituting a manual scram requirement during a scram test or maintenance. The reason for the request is that the licensee is currently performing an experimental program involving incore fueled components that do or may require continuous irradiation for several months. The requested amendment does not decrease the required frequency of scram tests or calibrations of the radiation instruments, yet provides the opportunity for the licensee to perform more frequent instrument calibrations and scram tests without shutting down the reactor than under the current Technical Specifications.

Evaluation

The current Technical Specifications require certain operable radiation monitors while the reactor is in operation. Currently, a portable detector with alarm capability may be substituted temporarily for the permanent area radiation monitor during its calibration or maintenance. However, there is no such provision for the continuous air monitor for airborne radioactivity. The licensee has requested that the same provision for temporary detectors with alarm capability be allowed for the air monitor. Under the current Technical Specifications, the licensee might operate for several months since the most recent calibration or scram test. Under the amended Technical Specification, the licensee could check calibration or test the scram setting at more frequent intervals without interrupting reactor operation. This would increase assurance that the air monitor's calibration is correct at all times of reactor operation. Additionally the amendment would permit continuing reactor operation in the event the air monitor required maintenance during an extended irradiation. The opportunity to perform such maintenance could also increase assurance of correct and reliable operation of the radiation detectors. The amendment would require that portable equivalent detectors with alarms, or observable by the reactor operators, would be used temporarily.

The staff has determined that the use of portable detectors in this way would not significantly decrease the safety of operation, and the increased assurance of reliability of the permanent detectors might increase safety. Therefore, the staff concludes that this change in the Technical Specifications would cause no significant decrease in safety.

The requested change to the Technical Specifications authorizing a temporary bypass of the automatic reactor scram initiated by the continuous air monitor and the substitution of a manual scram if comparable radiation conditions develop provides the operator with comparable information and control of the release of radioactivity. The staff has determined that the licensee's provisions for protective action in the case of malfunction of incore experiments are sufficiently reliable and timely that there is reasonable assurance of no significant decrease in the level of protection of the health and safety of the public.

#### Environmental Consideration

This amendment involves changes in the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes in inspection and surveillance requirements. The staff has determined that the amendment involves no significant hazards consideration (as discussed below), there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and there is no significant increase in individual or cumulative occupational radiation exposure. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

#### Conclusion

The staff has concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, does not create the possibility of a new or different kind of accident from any accident previously evaluated, and does not involve a significant reduction in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed activities, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or the the health and safety of the public.

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Dated: August 22, 1985