



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 29 TO

FACILITY OPERATING LICENSE NO. R-38

GENERAL ATOMICS

DOCKET NO. 50-89

1.0 INTRODUCTION

General Atomics (GA) has determined that due to the obsolescence and progressive deterioration of their control console, a new reactor instrumentation and control system is needed to maintain reliable operations. In December 1988, GA published their safety analysis of the new reactor instrumentation and control system. In this report GA concluded that the new system was an allowable change under 10 CFR 50.59. 10 CFR 50.59 permits licensees to make changes in the facility as described in the safety analysis report without prior Commission approval unless the proposed change, test, or experiment involves a change in the Technical Specifications incorporated in the license or an unreviewed safety question. "A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced."

The staff concluded from its review of the GA safety analysis report that NRC review and approval of the replacement computerized control system was required, since (1) the installation of the new reactor instrumentation and control system did present an unreviewed safety question because of the possibility of an accident or malfunction of a different type than any evaluated previously and (2) changes to the Technical Specifications were required.

Pursuant to 10 CFR 50.90, the licensee submitted by letter dated July 19, 1990, a request to amend Appendix A of Facility Operating License No. R-38, "Technical Specifications for the Torrey Pines TRIGA Reactor." The licensee's submittal of July 19, 1990 included the December 1988 safety analysis. The requested amendment would (1) allow installation of the micro-processor based instrument and control system, (2) add the watchdog (software failure) scram to Table 1 of the Technical Specifications, "Minimum Reactor Safety System Scrams", and (3) add a requirement that no more than one of the required two independent power level scram channels in Table 1 be a digital scram channel.

The licensee has installed, in parallel to their existing control console, the new digital microprocessor based instrumentation and control system. The transfer of control from the old to the new system (including scram) was via a

3.0 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 increase in the amounts, and no significant change in the types, 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.

4.0 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 an accident 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 margin of safety, 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 health and safety of the public.

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Dated: December 4, 1990