



August 18, 1997  
38-2800

Document Control Desk  
ATTN: Alexander Adams, Jr., Senior Project Manager  
Non-Power Reactors, Decommissioning and  
Environmental Project Directorate  
Division of Advanced Reactors & Special Projects  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Subject: Facility License R-38; Docket 50-89: Response to NRC Request for Additional Information; TAC No. M97502**

Reference: Adams, Alexander, Jr., Letter to Dr. Keith E. Asmussen, "REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M97502), Dated July 9, 1997

Dear Mr. Adams:

As you are aware, General Atomics (GA) has requested that the license for its TRIGA Mark I reactor, i.e., License Number R-38, be amended so as to withdraw U.S. Nuclear Regulatory Commission (NRC) authorization to operate the subject reactor. Recently, you responded for the NRC with a request for additional information (Reference). Accordingly, in response to your request for additional information and in further support of our request, GA hereby submits the following enclosures:

- Attachment 1: General Atomics' Responses to NRC's Request Dated July 9, 1997 for Additional Information Re: General Atomics TRIGA Mark I Research Reactor (Docket No. 50-89)
- Attachment 2: Copy of entire revised technical specifications: "TECHNICAL SPECIFICATIONS / TRIGA MARK I REACTOR"

Following up on its commitment to render the subject reactor incapable of operation, GA is in the process of removing all fuel elements from the Mark I reactor core structure and placing them into the storage canal of the Mark F reactor. As of this date, 33 fuel elements (out of a total of 76) have been removed from the Mark I core and placed in the Mark F storage canal.

GA appreciates your assistance in considering this request and is hopeful of, and in need of, an expeditious approval. If you have any questions or require additional information, please do not hesitate to contact me at (619) 455-2823, or Dr. Junaid Razvi at (619) 457-8850.

Very truly yours,

*Keith E. Asmussen*

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

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Attachments: as stated in text above



cc: Regional Administrator, U. S. Nuclear Regulatory Commission, Region IV

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

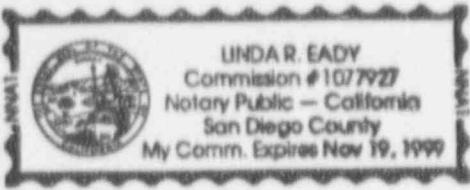
County of San Diego

On August 18, 1997 before me, Linda R. Eady, Notary Public  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Keith E. Asmussen  
Name(s) of Signer(s)

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s)

whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Linda R. Eady  
Signature of Notary Public

**OPTIONAL**

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Title or Type of Document: Letter

Document Date: August 18, 1997 Number of Pages: 7

Signer(s) Other Than Named Above: \_\_\_\_\_

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Signer's Name: Keith E. Asmussen

- Individual
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- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: Director,  
Licensing, Safety  
and Nuclear Compliance.



Signer Is Representing:  
General Atomics

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer  
Title(s): \_\_\_\_\_
- Partner —  Limited  General
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- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing:  
 \_\_\_\_\_

**General Atomics' Responses  
to  
NRC's Request Dated July 9, 1997  
for  
Additional Information Re: General Atomics TRIGA Mark I Research Reactor  
(Docket No. 50-89)**

NRC Item 1:

*Please provide a copy of your proposed technical specifications (TSs) without the changes italicized.*

GA Response to Item 1:

A copy of the proposed technical specification without italicized changes is enclosed.

NRC Item 2:

*Your answer to question 2 dated April 25, 1997, states that corrections have been made to license condition 2.B.(3). However, your proposed wording does not show the correction. Please address.*

GA Response to Item 2:

The proposed wording inadvertently did not show the correction. GA requests that License Condition 2.B.(3) of its license No. R-38 be amended to read.

"Pursuant to the Act and 10 CFR Chapter I, Part 30 - "Rules of General Applicability to Domestic Licensing of Byproduct Material", to possess but not to separate such byproduct material as may have been produced by past operation of the reactor."

NRC Item 3:

*In your proposed TS 1.2 and 1.3, the wording in your replacement TS pages is different than the wording proposed in your application. Please address.*

GA Response to Item 3:

GA requests that the wording in TS 1.2 and 1.3 be revised to be consistent with the original application. This revised wording is incorporated into the copy of proposed technical specifications provided in response to item 1 above.

NRC Item 4:

*You have proposed changing the title of TS 1.10 from "Reportable Occurrences"*

to "Abnormal Occurrences," which was the historical title of the TS. You state that you do not know when or why the name was changed. The title was changed by Amendment No. 23 to the license dated July 18, 1978, which provided for a change in nomenclature for events which require reporting. Please provide a justification for your proposed change. We note that section 9 of the TSs refer to TS 1.10 by both titles. Please insure that the TSs are internally consistent.

You have proposed eliminating TS 1.10d. Please justify why any unanticipated or uncontrolled change in reactivity greater than \$1.00 while handling fuel would not be reportable.

Also, you have proposed changes to TS 1.10e. That refers to possession of the reactor outside the specified safety limits. What limits does this TS refer to in the possession-only mode?

GA Response to Item 4:

The term "Abnormal Occurrences" in TS 1.10 has been changed to "Reportable Occurrences" as the approved terminology specified in Amendment No. 23 to the license dated July 18, 1978. All references in TS section 9 referring to "Abnormal Occurrences" were changed accordingly. These proposed revisions have been incorporated into the proposed technical specifications provided in response to item 1 above.

GA hereby withdraws its proposed elimination of Technical Specification 1.10d. TS 1.10d is to remain in the revised technical specifications.

As written, Technical Specification 1.10e is only applicable to an operable reactor, it does not apply to a reactor with a possession only license amendment. Therefore, GA proposes that TS 1.10e be revised to read as follows:

"An observed inadequacy in the implementation of either administrative or procedural controls, such that the inadequacy could have caused the existence or development of a condition which could result in possession of the reactor outside the requirements of the Technical Specifications."

NRC Item 5:

*In light of your decision to remove all fuel from the reactor grid plate and place into storage, please reconsider the proposed wording of TS 5.1, "Control Systems." While the wording is true (a reactor without fuel is shutdown by at least one dollar), it is possible to have the wording similar to that of your proposed license condition 2.C.(4). Please address.*

GA Response to Item 5:

GA proposes revising TS 5.1.2 as follows:

"No reactor fuel elements or control elements with fuel followers shall be located in, stored in, or moved into, the reactor core structure."

NRC Item 6:

*In your proposed TS 5.2.3 a., the wording in your replacement TS pages is different that the wording proposed in your application. Please address.*

GA Response to Item 6:

The proposed wording in TS 5.2.3 a. Has been revised to match the wording in GA's original application. This revision has been incorporated into the proposed technical specifications provided in response to item 1 above.

NRC Item 7:

*Please provide justification for your new proposed TS 6.4.*

GA Response to Item 7:

The addition of TS 6.4 is a precautionary measure to prevent unauthorized movement of fuel or, damage to the fuel handling equipment from use outside of their intended purpose. By requiring that fuel handling tools and devices be stored in a secure manner, their use can be limited to only authorized movements of fuel.

NRC Item 8:

*Please add a legend to your organizational chart that defines the difference between dotted and solid lines. Also please show the reporting lines for the Health Physicist and the Criticality and radiation Safeguards Committee, Some other TS (e.g., 8.2.9) still refer to the Criticality Safeguards Committee. Please make the Committee title throughout the TSs consistent.*

GA Response to Item 8:

The revisions requested in Item 8 have been made in the revised technical specifications provided in response to item 1 above.

NRC Item 9:

*Your answer to our question number 11 discusses replacing licensed reactor operators with trained fuel handlers. Licensed reactor operators are required by the regulations until fuel is removed from the site. In light of this, please provide justification for removing the requirement for the Physicist-in-Charge or designate to be a licensed senior reactor operator as proposed in TS 9.1.*

GA Response to Item 9:

GA is evaluating its options for addressing this issue. Currently, two approaches are being considered; these are: 1) request an exemption from the requirement for licensed operators, and 2) re-defining its reactor operator requalification program to address reactor operator duties as they will exist under a possession only license amendment. Inasmuch as the resolution of this item will take time, and is of great importance to GA to expeditiously obtain its requested possession only license amendment (POLA), GA requests that this issue be addressed in a manner that will not impede the issuance of the POLA.

NRC Item 10:

*You have proposed changing the frequency of audits in TS 9.2.c. from quarterly to annually. Please provide a justification for this change.*

*In your proposed TS 9.2.a., the wording in your replacement TS pages is different than the wording proposed in your application. Please address.*

GA Response to Item 10:

The CRSC audit frequency was proposed to be reduced from quarterly to annually to be commensurate with the change in reactor status from operable to incapable of operation and the issuance of a possession only license amendment (POLA). The quarterly audit frequency was warranted while the reactor was still operable due to the various conditions the reactor experienced, i.e., pulsing, steady state power operations and shutdown. The likelihood of off normal conditions that would be detected by CRSC audits were certainly greater under normal operations than under the POLA condition, which is shutdown and defueled. Accordingly, an annual CRSC audit frequency was determined to be adequate under the static POLA conditions. This audit frequency is consistent with the existing CRCS audit policy.

The wording in TS 9.2.a has been changed to reflect the exact wording in the original application. This wording is incorporated into the version of the technical specifications provided in response to item 1 above.

NRC Item 11:

*The introduction to TS 9.3 refers to safety of operation of the reactor. Please consider changing this wording to reflect possession-only status.*

*Your proposed wording for TS 9.3.a. eliminated reference to testing and calibration of radiation monitors. Please address.*

*You have proposed eliminating TS 9.3.f. Will any systems remain operational to ensure integrity of the fuel (e.g. demineralizer system) that require maintenance? If so, there should be a TS requirement for written maintenance*

*procedures.*

*You have proposed changes to the paragraph following 9.3.g. One of the changes would allow the Physicist-in-Charge to make changes to procedures that were not temporary in nature. The existing TS allowed temporary changes to be made to allow operational flexibility and continued operation of the reactor if minor deviation from procedures was needed. Please justify your proposed change including how the requirement of 50.59 will be met for Physicist-in-Charge changed procedures, if applicable.*

GA Response to Item 11:

The term "safety of operation" in the introductory paragraph of TS 9.3 was changed to "safe possession" to reflect the POLA status of the reactor. This revision has been incorporated into the copy of the technical specifications provided in response to item 1 above.

TS 9.3.a. has been changed to include the requirement for testing and calibration of radiation monitors. This revision has been incorporated into the copy of the technical specifications provided in response to item 1 above.

TS 9.3.f will not be deleted but be changed to read: "Maintenance of systems necessary for assuring the integrity of the fuel or otherwise maintaining the reactor in POLA status." This revision has been incorporated into the copy of the technical specifications provided in response to item 1 above.

This proposed change to TS 9.3.g has been revised to be consistent with the existing TS and allow the Physicist-in-Charge to make only temporary changes to procedures. This allows flexibility in the possession of the reactor if minor deviations from procedures are needed. This revision has been incorporated into the copy of the technical specifications provided in response to item 1 above.

NRC Item 12:

*In your proposed TS 9.6 you have the NRC zip code as 20545. The current zip code for the NRC is 20555. Please address.*

*You have proposed changes to TS 9.6.e for the facility annual report. We agree that some of the items listed are not applicable to a facility in possession-only status. However, because the report provides information on past events, all the reporting requirements must stay in place until reports that cover the time period for the operating license are submitted. Please address. Please consider revising TS 9.6.e.1 and 4 to refer to possession-only activities. Also, you state that TS 9.6.e.6 through 9.6.e.8 are required by GA's 10 CFR 20 site report. Please reference the regulation in 10 CFR Part 20 that requires submission of the radiological information in the TS. If this requirement can not be found, please justify your proposed deletion of these requirements.*

GA Response to Item 12:

The NRC zip code in TS 9.6 was changed from 20545 to 20555. This change is incorporated into the version of the technical specifications provided in response to item 1 above.

GA hereby withdraws its request of April 25, 1997 to revise TS 9.6.e and, instead, requests that only the introductory paragraph to TS 9.6.e be revised. GA proposes that the introductory paragraph read as follows:

- "e. By April 15, 1998, a routine report in writing to the Document Control Desk, U.S. Nuclear Regulatory Commission providing the following information:"

Further, GA requests that a new technical specification 9.6.f be added. The proposed TS 9.6.f is to read as follows:

- "f. Commencing in 1999, a routine report in writing to the Document Control Desk, U.S. Nuclear Regulatory Commission by April 15 of each year, providing the following information:
1. A brief narrative summary of: (1) possession and storage and (2) changes in facility storage design.
  2. Discussion of the major maintenance operations performed during the period, including the effects, if any, on the safe possession of the reactor, and the reasons for any corrective maintenance required.
  3. A summary of each change, if such changes have been made, to the facility, or procedures, tests, and experiments carried out under the conditions of Section 50.59 of CFR Part 50.
  4. A summary of the nature and amount of radioactive effluents released or discharged to the environs beyond the effective control of the licensee as measured at or prior to the point of such release or discharge.
  5. A description of any environmental surveys performed outside the facility.
  6. A summary of radiation exposures received by facility personnel and visitors, including the dates and time of significant exposure, and a brief summary of the results of radiation and contamination surveys performed within the facility."