Docket No. 50-274

Mr. David Smith U. S. Geological Survey Box 25046, MS 973 Denver Federal Center Denver, Colorado 80225

Dear Mr. Smith:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION

We are continuing our review of your application for amendment of Facility Operating License No. R-113 submitted on October 30, 1990. During our review of your application for amendment, questions have arisen for which we require additional information and clarification. Please provide response to the enclosed Request for Additional Information within 60 days of the date of this letter, so that e may continue our evaluation of your application. If you have any question on this review please contact me at (301) 492-1128.

The reporting and/or record keeping requirements contained in this letter affect fewer than ten respondents; therefore, Office of Management and Budget clearance is not required under Public Law 96-511.

Sincerely,
Original signed by:
Marvin M. Mendonca, Senior Project Manager
Non-Power Reactors, Decommissioning and
Environmental Projects Directorate
Division of Advanced Reactors
and Special Projects
Office of Nuclear Reactor Regulation

Enclosure: As stated

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NRC & Local PDRs S. Weiss E. Jordan

NRDE r/f M. Mendonca ACRS (10) D. Crutchfield E. Hylton

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## NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20666

December 5, 1990

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Marvin M. Mendonca, Senior Project Manager Non-Power Reactors, Decommissioning and Environmental Projects Directorate Division of Advanced Reactors and Special Projects Office of Nuclear Reactor Regulation

Enclosure: As stated

## ADDITIONAL INFORMATION REQUEST FOR U.S. GEOLOGICAL SURVEY TRIGA RESEARCH REACTOR

- 1. Provide Technical Specifications (TS) change pages.
  - a. TS Table I currently has an asterisk to specify the purpose of the pulse timer. Is the asterisk still applicable? Provide appropriate rationale for any changes in this regard.
- Provide a description of your verification and validation plan for installation of the new console.
  - a. Include a list of the major problems and resolutions found during your test sequence.
  - b. Include consideration that new console components are functional before conversion from the related old console components.
- Provide a description of the locations and installation configurations for the new instrumentation and control system.
  - Include evaluation or specification of the temperature and humidity conditions.
  - Include evaluation of enclosures, cabinets, and connections to building structure for general ruggedness under potential dynamic conditions, e.g., seismic.
  - c. Include evaluation of potential contact chatter during dynamic conditions. Is the system designed to scram on potential contact chatter conditions?
  - d. Include evaluation of cable shielding to mitigate the consequences of electro-magnetic interference.
  - e. Include evaluation of power supply buffers to mitigate power transient effects. Describe power backup systems and computerized memory for the retention of needed data on loss of power. Describe surveillance programs to assure proper system function after power loss.
  - f. Include evaluation of instrument isolation devices. Describe manufacturer's or related testing that assures adequate isolation capability between safety and non-safety functions.
- 4. Provide a description of administrative controls that are provided to assure that the rod withdrawal interlock functions performed by the NM-1000 are satisfied.

## ADDITIONAL INFORMATION REQUEST (CONTINUED) FOR U.S. GEOLOGICAL SURVEY TRIGA RESEARCH REACTOR

- Provide a description of the maintenance and surveillance program to assure acceptable safety function of the new system.
- 6. Provide a description of operator training on the new system.