



Official

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W.
ATLANTA, GEORGIA 30323

SEP 13 1988

The Georgia Institute of Technology
ATTN: Dr. J. P. Crecine, President
225 North Avenue
Atlanta, GA 30332

Dear Dr. Crecine:

This letter is in response to your letter of August 19, 1988, in which you stated that the issues raised in our Orders dated January 20 and March 17, 1988, have been addressed and resolved and requested that I approve in writing the resumption of operations. The purpose of this letter is to outline clearly the issues that remain to be resolved before authorization can be given by us for restart of the reactor and your experimental program. At a later time, we will provide you with a statement of any enforcement action that we propose to take as a result of any violations that we believe have occurred since July 1987.

The most important factor to be assessed prior to restart is the question of adequate management controls. One aspect of this question involves management's attitude toward the freedom of employees to address safety issues. At the enforcement conference scheduled for September 19, we expect you to address this subject. While we are aware of the training you are giving your staff in this area, and while our recent limited inspections have not revealed any current instances of problems in this area, there are indications (ref: my letter of September 1, 1988) that harassment and threat of retaliation for raising safety issues did exist in the past, and we need to be assured that such an atmosphere no longer exists.

Whether or not we finally determine that there were violations of our regulations (10 CFR 50.7) in this area, we are interested in the management controls you have imposed to ensure that such problems will not exist in the future. In this regard, informal conversations with your staff indicated that Dr. Sheppard has assumed management cognizance over the NNRC. We would appreciate a formal confirmation of this assignment which also describes his span of control, the degree of attention he will be able to give the operation of the facility, the controls he intends to implement to assure safe operations and an open atmosphere regarding reactor safety, and the role (if any) to be played by Dr. Stelson in the management of the facility.

Other issues also remain to be resolved prior to your resumption of operations. On August 29, the NRC initiated an inspection at the Georgia Tech Research Reactor (GTRR). The purpose of this inspection was: 1) to determine if you had adequately addressed and resolved the previously identified deficiencies in your program in accordance with your interim plan submitted to us on May 13, 1988; and 2) to assess your technical readiness to resume reactor operation and irradiation experiments.

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While the inspection found that you have added experienced staff at the GTRR, upgraded operating procedures, and retrained facility operators, all the actions directed by the Order of January 20, 1988, have not been completed. These issues are listed in the enclosure to this letter. In addition to the actions contained in the Order which have not been completed, this inspection identified several other issues pertaining to the calibration and operation of effluent monitors and of laboratory radioactivity counting systems which must be satisfactorily addressed before the NRC can consider authorizing resumption of reactor operation and irradiation experiments. These issues are also listed in the enclosure to the letter. These issues were discussed with Dr. R. Karam on September 7, 1988. Our inspection will be concluded following your resolution of these issues.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them.

Sincerely,

J. Nelson Grace
Regional Administrator

Enclosure:
Resumption of Reactor Operation
Issues

cc w/encl:
A. P. Sheppard, Acting
Vice President for Research
State of Georgia

bcc w/encl:
DRS Technical Assistant
Document Control Desk

bcc w/o encl:
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ENCLOSURE

Resumption of Reactor Operation Issues

The following three issues relate directly to the Order issued on January 20, 1988:

1. Assess and document the skin, whole body, and extremity doses to personnel involved in the August, 1987 incident and/or decontamination activities.
2. Revise or develop, as appropriate, health physics procedures such that they are technically adequate to ensure safe operation of the GTRR facility.
3. Develop and implement a training program for the entire GTRR staff addressing the new health physics procedures and practices.

The next five issues are not directly related to the Order but were identified in the inspection initiated on August 29, 1988, and must be resolved prior to start-up to assure that any radioactive releases to the environment are properly controlled and assessed.

4. Revise or develop adequate procedures for the calibration and operation of all radiation monitors used to monitor the release of radioactive effluents from the GTRR facility.
5. Revise or develop adequate sampling methods and procedures that ensure that effluent samples are properly collected and are representative of the radioactivity concentrations actually being released.
6. Revise or develop adequate procedures for the calibration and operation of the gamma spectroscopy system for the sample geometries used to quantify radioactive liquid and gaseous releases at the GTRR.
7. Train GTRR operations and health physics personnel, as appropriate, on the new procedures developed to sample, analyze, and document releases of radioactive effluents from the facility, including the procedure for calibration and operation of radiation monitors and laboratory instruments.
8. Implement all of the above procedures.