

December 1, 2000

Dr. Nolan Hertel, Director
Neely Nuclear Research Center
Georgia Institute of Technology
900 Atlantic Drive
Atlanta, GA 30332-0425

SUBJECT: NRC INSPECTION REPORT NO. 50-160/2000-203

Dear Dr. Hertel:

This letter refers to the inspection conducted on October 24-27, 30, and 31, and November 15 and 16, 2000, at your Georgia Institute of Technology Research Reactor facility. The enclosed report presents the results of that inspection.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations of decommissioning activities in progress. Based on the results of this inspection, no safety concerns or noncompliances with NRC requirements were identified. No response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at (the Public Electronic Reading Room) <http://www.nrc.gov/NRC/ADAMS/index.html>. If you have any questions, please contact Mr. Craig Bassett at 404-562-4712.

Sincerely,

/RA/

Ledyard B. Marsh, Chief
Events Assessment, Generic Communications
and Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 50-160

License No.: R-97

Enclosure: NRC Inspection Report
No. 50-160/2000-203

cc w/enclosure: Please see next page

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U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No: 50-160

License No: R-97

Report No: 50-160/2000-203

Licensee: Georgia Institute of Technology

Facility: Georgia Institute of Technology Research Reactor (GTRR)

Location: 900 Atlantic Drive
Atlanta, GA 30332

Dates: October 24-27, 30, & 31, and November 15 & 16, 2000

Inspector: C. H. Bassett

Approved by: Ledyard B. Marsh, Chief
Events Assessment, Generic Communications
and Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Georgia Institute of Technology
Report No: 50-160/2000-203

The primary focus of this routine, announced inspection was the on-site review of selected programs of this Class III non-power reactor (NPR) including licensee and contractor organization, ongoing decommissioning activities, and transportation of radioactive material.

Organization and Staffing

- The licensee's organization and staffing level were in compliance with the requirements specified in the Technical Specifications and the Decommissioning Plan.
- The staffing level was acceptable for reviewed activities.
- Because of unforeseen delays, the Decommissioning Contractor has had to change the schedule. Currently the decommissioning and final survey are slated to be completed by January of next year.

Decommissioning Activities

- The Technical Safety Review Committee was meeting to review changes to the project and audits were conducted as required.
- Postings satisfied regulatory requirements.
- Appropriate contamination control was being maintained and radiation monitoring equipment was maintained and calibrated as required.
- Surveys were completed and documented acceptably to permit evaluation of the potential radiation hazards.
- Personnel dosimetry was worn as required and doses were within the established regulatory limits.
- Good work practices were employed during the lifting, movement, and removal of the reactor thermal shield lead tank from the containment.

Transportation

- The program for shipping radioactive material was consistent with regulatory requirements.

REPORT DETAILS

Summary of Plant Status

On November 17, 1995, the Georgia Institute of Technology ceased operating their research reactor and it has not been operated since that date. All reactor fuel was shipped from the site in early 1996. On July 22, 1999, Amendment No. 14 to the facility license (No. R-97) was issued which authorized decommissioning of the Georgia Institute of Technology Research Reactor (GTRR) pursuant to 10 CFR 50.82(b). The licensee has proceeded with decommissioning activities since that time.

1. Organization and Staffing (40755)

a. Inspection Scope

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of the Technical Specification (TS) and the Decommissioning Plan (DP) were met:

- licensee and contractor organizations
- management responsibilities
- licensee and contractor staffing for decommissioning work
- Decommissioning Contractor schedules and plans

b. Observations and Findings

Through discussions with licensee representatives and contractor personnel, the inspector determined the organization at the facility continued to meet the requirements specified in the TS and the DP. The inspector verified that the Director of the Neely Nuclear Research Center (NNRC) continued to retain overall responsibility for direction of the decommissioning of the facility. The Radiation Safety Officer advised the Director in matters pertaining to radiological safety. The Technical Safety Review Committee (TSRC) continued to function as the facility safety committee and to provide oversight of the ongoing work. An Executive Engineer, hired as a consultant for the licensee, provided overall contractual direction to the decommissioning contractor.

Roles and responsibilities of the Decommissioning Contractor (DC) were also reviewed. The DC and a subcontractor continued to perform engineering and decommissioning work, waste packaging, and waste disposal. The DC will also complete a final release survey when decommissioning of the reactor facility is complete.

The inspector determined that the current licensee and contractor staffing levels were adequate to support the activities being conducted at the facility.

The inspector noted that DC personnel had originally planned to complete the decommissioning project by June 2000, but various difficulties have caused extensive delays. Currently, the schedule reflects a tentative completion date of January 31, 2001.

c. Conclusions

The licensee's organization was in compliance with the requirements specified in the TS and the DP and the current staffing levels were acceptable. Because of unforeseen delays, the Decommissioning Contractor has had to change the schedule and, currently, the decommissioning project and final survey submittal will tentatively be completed by the end of January 2001.

2. Decommissioning Activities (40755)

a. Inspection Scope

In order to verify that activities at the site were proceeding as outlined in the Decommissioning Schedule and in the DP, the inspector reviewed:

- Technical Safety Review Committee meeting minutes
- safety review and audit records
- 50.59 reviews
- radiological signs and posting
- routine surveys and monitoring
- dosimetry records
- maintenance and calibration of radiation monitoring equipment

b. Observations and Findings

Minutes of the Technical Safety Review Committee (TSRC) showed that the committee has been meeting at the required frequency and that a quorum was present for each meeting. The topics considered during the meetings were appropriate and as stipulated in TS. Records also show that safety reviews were conducted as required in the Technical Specification and the Decommissioning Plan. Topics of these reviews were consistent with TS requirements to provide guidance, direction, and oversight. Audits were also being conducted as required in those areas outlined in the TS and at the required frequency. Records and observations showed that changes at the facility were acceptably reviewed in accordance with 10 CFR 50.59 and applicable licensee administrative controls. None of the changes constituted an unreviewed safety question or required a change to the Technical Specifications.

Copies of NRC Form 3, "Notice to Employees," were posted in accordance with 10 CFR 19.11. Caution signs, postings and controls to radiation areas were as required in 10 CFR 20, Subpart J. Licensee and DC personnel were noted observing the indicated precautions for access to the radiation areas.

The inspector observed the lifting, movement, and removal of the reactor thermal shield lead tank from the Containment Building. Contamination controls were implemented appropriately. Radiation monitoring and survey activities were as required. Equipment used for these activities were maintained and calibrated acceptably. Use of dosimeters and exit frisking practices were in accordance with radiation protection requirements. The licensee and the contractor were using a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited vendor to process dosimetry. Radiological exposure records show that occupational doses were above projected levels for the project but were still within 10 CFR Part 20 limitations. Although the job was challenging, good work practices were employed and the project was completed acceptably and without incident.

c. Conclusions

The Technical Safety Review Committee was meeting to review changes to the project as required and audits were conducted. Postings satisfied regulatory requirements. Appropriate contamination control was being maintained and radiation monitoring equipment was maintained and calibrated as required. Surveys were completed and documented acceptably to permit evaluation of the potential radiation hazards. Personnel dosimetry was worn as required and doses were well within the licensee's specified procedural action levels and regulatory limits. Good work practices were employed during the removal and movement of the reactor thermal shield lead tank.

3. Transportation of Radioactive Materials (86740)

a. Inspection Scope

In order to verify that transportation of radioactive materials was conducted as outlined in the Decommissioning Plan, the inspector reviewed:

- radioactive materials shipping procedures
- radioactive materials transportation and transfer records

b. Observations and Findings

Records showed that radioactive waste material for disposal, including the reactor thermal shield lead tank and other debris, was shipped in accordance with the applicable regulations. The licensee's program for radioactive material transport was acceptably implemented.

c. Conclusions

The program for shipping radioactive material was consistent with regulatory requirements.

4. Exit Meeting Summary

The inspection scope and results were summarized on November 16, 2000, with licensee representatives. The inspector discussed the findings for the areas reviewed. The licensee did not identify any of the materials provided during the inspection as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel

N. Hertel, Director, Neely Nuclear Research Center
R. Ice, Manager, Office of Radiation Safety
E. Jawdeh, Research Scientist
F. Strydom, Research Scientist

Licensee Contractor Personnel

W. Daniels, Project Manager - Energy and Nuclear, IT Corporation
R. Eby, Executive Engineer, (Vice President Energy, Environment, and Systems) CH2M HILL
P. Jones, Project Manager, GTS Duratek Field Services
G. Kalinauskas, Senior Project Engineer, IT Corporation
L. Lundberg, Associate Executive Engineer, CH2M HILL
S. Marske, Deputy Executive Engineer, CH2M HILL
J. Nelson, Health and Safety Officer, IT Corporation
M. Stafford, Health Physic Manager, IT Corporation

State of Georgia Personnel

C. Blackman, Inspector, Georgia State Division of Natural Resources (DNR)
D. Ivey, Project Manager, Georgia State Financing and Investment Commission (GSFIC)

INSPECTION PROCEDURES USED

IP 40755	Class III Non-Power Reactors
IP 86740	Inspection of Transportation Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management Systems (NRC's document system)
CFR	Code of Federal Regulations
DC	Decommissioning Contractor
DNR	Division of Natural Resources (State of Georgia)
DP	Decommissioning Plan
GSFIC	Georgia State Financing and Investment Commission
GTRR	Georgia Institute of Technology Research Reactor
NNRC	Neely Nuclear Research Center
NPR	Non-Power Reactor
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accreditation Program
PARS	Publicly Available Records (a component of ADAMS)
TRTR	Test, Research, and Training Reactors
TS	Technical Specifications
TSRC	Technical Safety Review Committee