June 22, 2001

Mr. Louis M. Quintana, Manager
Vallecitos and San Jose Operations
Vallecitos Nuclear Center
General Electric Company
6705 Vallecitos Road
Sunol, CA 94586

SUBJECT: NRC INSPECTION REPORT NOS. 50-73/2001-201, 50-18/2001-201, 50-70/2001-201, AND 50-183/2001-201

Dear Mr. Quintana:

This refers to the inspection conducted on June 4-7, 2001 at your Nuclear Test 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 activities in progress. Based on the results of this inspection, no safety concern or noncompliance to NRC requirements was 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.

Should you have any questions concerning this inspection, please contact Mr. Bassett in Atlanta, GA 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 Nos.: 50-73, 50-18, 50-70, and 50-183
License Nos.: R-33, DPR-1, TR-1, and DR-10

Enclosure: NRC Inspection Report No. 50-73/2001-201, 50-18/2001-201, 50-70/2001-201, 50-183/2001-201

cc w/enclosure: Please see next page

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U. S. NUCLEAR REGULATORY COMMISSION

Docket Nos:	50-73, 50-18, 50-70, and 50-183
License Nos:	R-33, DPR-1, TR-1, and DR-10
Report Nos:	50-73/2001-201, 50-18/2001-201, 50-70/2001-201, and 50-183/2001-201
Licensee:	General Electric Company
Facility:	Nuclear Test Reactor (NTR)
Location:	Sunol/Vallecitos, CA
Dates:	June 4-7, 2001
Inspector:	C. 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

This routine, announced inspection included onsite review of selected aspects of the licensee's programs concerning conduct of operations, emergency preparedness, and the status of shutdown facilities on site since the last NRC inspection in these areas. The licensee's programs were acceptably directed toward the protection of public health and safety, and in compliance with NRC requirements.

CONDUCT OF OPERATIONS

- The organizational structure and functions and the staffing levels were consistent with Technical Specification requirements.
- The design change program satisfied NRC requirements.
- The review and audit program satisfied the requirements stipulated in the Vallecitos Technological Safety Council charter as specified in the Technical Specification.
- Operator requalification was conducted as required by the Requalification Program.
- The operations and maintenance programs satisfied NRC and Technical Specification requirements.
- The surveillance program, including checks, tests, and calibrations, was being completed as required by Technical Specifications.
- A new fuel handling program will be developed when needed by the licensee.
- The program for experiments satisfied procedural requirements.
- The procedural control and implementation program satisfied Technical Specification requirements.

EMERGENCY PREPAREDNESS

- The emergency preparedness program was conducted in accordance with the Emergency Plan.

STATUS OF THE SHUTDOWN REACTORS ON SITE

- The General Electric Test Reactor (GETR), the Empire State Atomic Development Associates (ESADA) Vallecitos Experimental Superheat Reactor (EVESR), and the Vallecitos Boiling Water Reactor (VBWR) facilities were being maintained in accordance with the applicable Technical Specifications and in a safe shutdown condition.

REPORT DETAILS

Summary of Plant Status

The licensee's one hundred kilowatt (100 kW) horizontal annular cylinder non-power reactor (NPR) continued normal, routine operations. During the inspection the reactor was operated daily to support training, surveillance, and contract service work. The shutdown VBWR, GETR, and EVESR were maintained in a safe storage condition.

1. Organizational Structure and Staffing

a. Scope (69001)

The inspector reviewed selected aspects of:

- organization and staffing
- management responsibilities
- administrative controls

b. Observations and Findings

The organizational structure had not changed since the last inspection. The Manager, NTR, continued to be responsible for the safe operation and maintenance of the facility and reported to the site manager. During the inspection, the licensee presented the inspector with a letter addressed to the NRC which indicated that the title of the site manager position, formerly known as "Manager, Vallecitos and Morris Operations (V&MO)" had been changed to "Manager, Vallecitos and San Jose Operations." This change coincided with the retirement of the person formerly occupying the position of Manager, V&MO. The person selected to fill the position of Manager, Vallecitos and San Jose Operations has extensive experience in the nuclear industry and continues to be responsible for the facility license.

The organizational structure and staffing extant at the facility, and as reported in the Annual Report, were as required by the Technical Specifications (TS). Review of records verified that management responsibilities were discharged as required by TS and applicable procedures and the appropriate number of qualified operators were available to operate the facility non-power reactor.

c. Conclusions

The organizational structure and functions at the facility remained in compliance with the requirements specified in the TS.

2. Design Control

a. Scope (69001)

The inspector reviewed selected aspects of:

- facility design changes and records

- facility configuration and control

b. Observations and Findings

Records and observations showed that changes at the facility were acceptably reviewed in accordance with 10 CFR 50.59 and applicable administrative procedures and controls. All of the recent changes were minor in nature and none of the changes constituted a safety concern or required a change to the TS.

c. Conclusions

The design change program satisfied NRC requirements.

3. Review and Audit

a. Scope (69001)

The inspector reviewed selected aspects of:

- meeting minutes of the Vallecitos Technological Safety Council
- safety review and audit records
- responses to safety reviews and audits

b. Observations and Findings

The meeting minutes of the Vallecitos Technological Safety Council (VTSC) showed that the required safety reviews were being conducted. Topics of these reviews were consistent with those specified in the VTSC charter as required by the TS. The results of these reviews and audits provided guidance, direction, and oversight to facility personnel and helped ensure acceptable use of the reactor.

The audit records showed that audits were typically completed by members of the Regulatory Compliance group. The inspector noted that the safety reviews and audits and the associated findings were acceptably detailed and that the licensee responded to the findings and took corrective actions as needed.

c. Conclusions

The review and audit program satisfied the requirements stipulated in the VTSC charter as specified in the Technical Specification.

4. Operator Requalification

a. Scope (69001)

The inspector reviewed selected aspects of:

- the Requalification Program
- status of operator licenses

- operator training and examination records

- operator physical examination records
- operator active duty status

b. Observations and Findings

The Requalification Program was being maintained up to date. Operator licenses were verified to be current. Records showed that operator training was consistent with the Requalification Program requirements. Requalification records also showed that written examinations were completed by the operators and that performance evaluations of the operators were acceptably maintained. Logs showed that operators continued to maintain active duty status as required. Physical examinations of the operators were conducted as required as well.

There are currently two qualified Senior Reactor Operators (SROs) employed at the facility and one person is in training. One former employee still maintains an SRO license but would need to perform various operations under observation of a qualified SRO before he could operate the reactor. This person, who now works at the facility on a part-time basis as a contractor, will probably maintain his license until other licensee personnel become qualified to operate the reactor.

c. Conclusions

Operator requalification was conducted as required by the Requalification Program.

5. Operations and Maintenance

a. Scope (69001)

The inspector reviewed selected aspects of:

- operational logs and records
- staffing for operations
- selected startup, operational, and shutdown activities
- maintenance procedures and records
- Scram Reports

b. Observations and Findings

The operating logs and records were clear and provided an acceptable indication of operational activities. This included documentation of any problems that occurred, and tracking/resolution of the events. Logs and records also showed that operational conditions and parameters were consistent with license and TS requirements. Observation of actual operational activities further confirmed the fact that these conditions and requirements were satisfied.

The various logs and records also indicated that maintenance problems were addressed and preventive maintenance activities were completed as required by procedure. Records showed that the preventive maintenance activities were

conducted at the required frequency and in accordance with the TS and/or the applicable procedure or equipment manual. Maintenance activities ensured that equipment remained consistent with the Safety Analysis Report and TS requirements. Further, maintenance activities were consistent with the requirements of 10 CFR 50.59.

c. Conclusions

The operations and maintenance programs satisfied NRC and Technical Specification requirements.

6. Surveillance Activities

a. Scope (69001)

The inspector reviewed selected aspects of:

- surveillance and calibration procedures
- surveillance, calibration, and test data sheets
- operational logs and records

b. Observations and Findings

Surveillance, test, and Limiting Conditions for Operation (LCO) verifications and calibrations were completed on schedule and in accordance with licensee procedures. None of the recorded results of these activities exceeded the TS and procedurally prescribed parameters or limits. The records and logs reviewed were complete and were being maintained as required.

c. Conclusions

The surveillance program, including checks, tests, and calibrations, was being completed as required by TS.

7. Fuel Handling

a. Scope (69001)

The inspector reviewed selected aspects of:

- Standard Operating Procedures
- TS information concerning fuel

b. Observations and Findings

There are no currently approved fuel handling procedures at the facility. Fuel inspection is not required by the TS nor is fuel handling routinely performed. Through discussions with the licensee the inspector noted that they did not anticipate any need

to move fuel or refuel the reactor for possibly the next ten years. The licensee indicated that, when the need for refueling or fuel movement arises, special new procedures will be written, reviewed, and approved for the operation.

c. Conclusions

A new fuel handling program will be developed by the licensee when needed.

8. Experiments

a. Scope (69001)

The inspector reviewed selected aspects of:

- experimental program requirements
- procedures
- logs and records
- experimental administrative controls and precautions

b. Observations and Findings

The experiments conducted at the facility were routine procedures that had been in place for several years. No new or untried experiments had been initiated, reviewed, or approved since the last inspection. Those routine experiments that were carried out, were completed with the cognizance of the Manager NTR and a Senior Reactor Operator and in accordance with procedural requirements (e.g., reactivity limitations). The results of the experiments were documented in appropriate logs or records as required. Engineering and radiation protection controls were implemented as needed to limit exposure to radiation.

c. Conclusions

The program for experiments satisfied procedural requirements.

9. Procedures

a. Scope (69001)

The inspector reviewed selected aspects of:

- administrative controls for procedures
- records of changes and temporary changes
- procedural implementation

b. Observations and Findings

Administrative controls of revisions and temporary changes to procedures were reviewed. The review and approval processes were as required. Revisions to

procedures underwent various reviews and approvals and temporary changes were made using an Engineering Release (ER). Training of personnel on procedures and changes thereto was acceptable. Through observation of operations in progress the inspector determined that personnel conducted activities in accordance with applicable procedures. Review of records showed that procedures were reviewed and revised as required.

c. Conclusions

The procedural control and implementation program satisfied Technical Specification requirements.

10. Emergency Preparedness

a. Scope (69001)

The inspector reviewed selected aspects of:

- the Emergency Plan and implementing procedures
- emergency response facilities, supplies, equipment and instrumentation
- training records
- offsite support
- emergency drills and exercises

b. Observations and Findings

The Emergency Plan (E-Plan) in use at the NTR was the same as the version most recently approved by the NRC. The E-Plan was audited and reviewed more often than required. Implementing procedures were reviewed and revised as needed to effectively implement the E-Plan. Facilities, supplies, instrumentation, and equipment were being maintained, controlled, and inventoried as required in the E-Plan.

Through records review and through interviews with licensee personnel, emergency responders were determined to be knowledgeable of the proper actions to take in case of an emergency. Agreements with outside response organizations had been updated and maintained as required. Communications capabilities were acceptable with these support groups and generally had been tested even more frequently than stipulated in the E-Plan. Off-site support for the facility was verified to be in accordance with the E-Plan.

Emergency drills had been conducted as required by the E-Plan. Critiques were written following the drills to document the strengths and weaknesses identified during the exercises and to develop possible solutions to any problems noted. Emergency preparedness and response training for reactor staff was being completed and documented as stipulated by the E-Plan.

Appendix B of the Site Emergency Procedures-VNC requires that the High-Level Conference Circuit (HICON) be tested monthly and that the Central Alarm Station

(CAS) operator document the status of the circuit and completion of the test. The inspector reviewed the records documenting the testing of the HICON from the beginning of 2000 to the present. It was noted that there was apparently no test of the HICON during July 2000 because the CAS operator had not documented the completion of the test as required. The licensee was informed that failure to conduct a test of the High-Level Conference Circuit during the month of July 2000 was an area for improvement and would be followed by the NRC as an Inspector Follow-up Item (IFI). This issue will be reviewed during a subsequent inspection (IFI 50-73/2001-201-01).

c. Conclusions

The emergency preparedness program was conducted in accordance with the Emergency Plan.

11. Review of the Status of Other Reactor Facilities at the VNC

a. Inspection Scope (40755)

The inspector reviewed the following to ensure that the requirements of the applicable TS were being met for the General Electric Test Reactor (GETR), the Empire State Atomic Development Associates (ESADA) Vallecitos Experimental Superheat Reactor (EVESR), and the Vallecitos Boiling Water Reactor (VBWR) facilities:

- annual reports
- Regulatory Compliance Reviews of the facilities
- Annual Inspection Checklists for each facility

b. Observations and Findings

The inspector verified through records review and direct observation that the GETR, EVESR, and VBWR facilities were being maintained in a deactivated status in accordance with the appropriate licenses. No major preventive or corrective maintenance activities, involving these facilities and having safety significance, had been performed since the previous inspection. Annual entries have been made into the buildings to perform routine radiation surveys and to check the areas to ensure that the conditions remained unchanged in the facilities. All reactor fuel had been removed from the reactors and shipped off site. The GETR, EVESR, and VBWR facilities were being maintained in a safe shutdown condition.

c. Conclusions

The GETR, EVESR, and VBWR facilities were being maintained in accordance with the applicable TS requirements and in a safe shutdown condition.

12. Follow-up on Previous Open Items

a. Inspection Scope (69001)

The inspector reviewed the actions taken by the licensee following identification of an Inspector Follow-up Item during a previous inspection.

b. Observations and Findings

IFI - 50-73/99-201-01 - Follow-up on the licensee's decision regarding supplementary "emergency" procedures at the NTR facility.

NRC Inspection Report No. 50-73/99-201 outlined this finding. During the present inspection, the inspector reviewed the actions taken by the licensee to correct the potential conflicting instructions between the site emergency procedures and the facility procedures. The licensee had decided to eliminate the supplementary "emergency" procedures by incorporating what was necessary for adequate safety into the site emergency procedures. This item is considered closed.

c. Conclusions

One previously identified Inspector Follow-up Item was closed.

13. Exit Interview

The inspection scope and results were summarized on June 7, 2001, with members of licensee management. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

F. Arlt, Manager, Facilities Maintenance
C. Bassett, Manager, Regulatory Compliance
E. Ehrlich, Manager, Nuclear Test Reactor
C. Hamilton, Licensing Engineer
W. Kreutel, Senior Reactor Operator
T. Peterson, Reactor Operator trainee
L. Quintana, Manager, Vallecitos and San Jose Operations (newly appointed)
M. Rogers, Specialist, Radiation Monitoring
G. Stimmell, Manager, Vallecitos & Morris Operations (retiring)
H. Stuart, Specialist, Radiological Engineering

Other Personnel

P. Benson, Fire Apparatus Engineer and Paramedic, California Department of Forestry and Fire Protection (CDF)
J. Layton, Fire Apparatus Engineer, CDF

INSPECTION PROCEDURES USED

IP 69001	Class II Non-Power Reactors
IP 40755	Class III Non-Power Reactors

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-73/2001-201-01	IFI	Follow-up on the licensee's efforts to ensure the completion of routine monthly tests of the High-Level Conference Circuit (HICON) at the site.

Closed

50-73/99-201-01	IFI	Follow-up on the licensee's decision regarding supplementary "emergency" procedures entitled "Building 105 Emergency Procedures," as to whether they should be reviewed and incorporated into the facility (SOPs), into the E-Plan, or whether they should be eliminated.

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System (of the NRC)
CAS	Central Alarm Station
CDF	California Department of Forestry and Fire Protection
CFR	Code of Federal Regulations
E-Plan	Emergency Plan
ER	Engineering Release
ESADA	Empire State Atomic Development Associates
EVESR	ESADA Vallecitos Experimental Superheat Reactor
GETR	General Electric Test Reactor
HICON	High-level Conference Circuit
IFI	Inspector Follow-up Item
IP	Inspection Procedure
kW	Kilowatt
LCO	Limiting Conditions for Operation
NRC	Nuclear Regulatory Commission
NTR	Nuclear Test Reactor
PARS	Publicly Available Records
SOP	Standard Operating Procedure
SRO	Senior Reactor Operator
TS	Technical Specifications
V&MO	Vallecitos and Morris Operations
VBWR	Vallecitos Boiling Water Reactor
VNC	Vallecitos Nuclear Center
VTSC	Vallecitos Technological Safety Council