

July 17, 2000

Mr. G. L. Stimmell, Manager
Vallecitos and Morris Operations
Vallecitos Nuclear Center
General Electric Company
P.O. Box 460
Pleasanton, CA 94566

SUBJECT: NRC INSPECTION REPORT NO. 50-73/2000-201 AND NOTICE OF VIOLATION

Dear Mr. Stimmell:

This refers to the inspection conducted on June 26-29, 2000, at your Nuclear Test Reactor facility. The inspection included a review of activities authorized for your facility. The enclosed report presents the results of that inspection.

Various aspects of your safety and security programs were inspected including selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

As a result of the inspection, a violation was identified. The NRC is concerned because the violation appears to have resulted from a lack of attention to detail. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding the violation are described in detail in the enclosed report.

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 <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Mr. Craig Bassett at 404-562-4712.

Sincerely,

/RA by J. E. Lyons Acting for/

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.: 50-73
License No.: R-33

Enclosures: Notice of Violation
NRC Inspection Report No. 50-73/2000-201

cc w/enclosure:
Please see next page

General Electric Company
(NRC INSPECTION REPORT)

Docket No. 50-73

cc:

California Department of Health
ATTN: Chief, Environmental Radiation
Control Unit
Radiological Health Section
714 P Street, Room 498
Sacramento, CA 95814

Mr. Chuck Bassett, Manager
Regulatory Compliance
Vallecitos Nuclear Center
General Electric Company
P.O. Box 460
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Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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Please see next page

Distribution: w/enclosure

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DOCUMENT NAME: ML003731636

TEMPLATE #: NRR-056

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NOTICE OF VIOLATION

General Electric Company
Nuclear Test Reactor Facility

Docket No.: 50-73
License No.: R-33

During an NRC inspection conducted on June 26-29, 2000, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

TS 6.3 requires that the licensee have procedures for various activities including radiation protection.

Vallecitos Nuclear Center (VNC) Safety Standard No. 5.3.0, "Bioassay Program," Rev. 6, dated November 1996, Section 3.7 stipulates that an employee's supervisor or manager is responsible for initiating the action to begin bioassay sampling and for notifying Regulatory Compliance of all radionuclides with which their employees will be working. Written notification from supervision is to be made using form VNC-335. Form VNC-335 has a Frequency-Of-Exposure Table, which states that personnel regularly assigned to work in "Radioactive Material Areas" on a daily basis be counted four times per year.

VNC Safety Standard No. 5.3.1, "Internal Dosimetry and Dosimetry Classification," Rev. 7, dated December 1993, Section 6.2 requires that managers submit a listing of VNC employees annually reporting the individuals' dosimetry classification. The forms are to be submitted the first working day in April.

Contrary to the above, in 1999, an individual who was regularly assigned to work in Radioactive Material Areas associated with Nuclear Test Reactor received only three bioassays (whole body counts), not four as required.

This is a Severity Level IV violation (Supplement IV).

Pursuant to the provisions of 10 CFR 2.201, General Electric Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the responsible inspector, U.S. Nuclear Regulatory Commission, Region II, 61 Forsyth St. S. W., Suite 23T85, Atlanta, GA 30303, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Because your response will be placed in the NRC Public Document room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure or information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated at Rockville, Maryland
this 17th day of July 2000.

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

Docket Nos: 50-73

License Nos: R-33

Report Nos: 50-73/2000-201

Licensee: General Electric Company

Facility: Nuclear Test Reactor (NTR)

Location: Vallecitos, CA

Dates: June 26-29, 2000

Inspector: Craig 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

General Electric Company Nuclear Test Reactor
Report No: 50-73/2000-201

The primary focus of this routine, announced inspection was the on-site review of selected aspects of the licensee's Class II non-power test reactor operation including: organization and staffing; review and audit functions; procedures; radiation protection and ALARA programs; effluent and environmental monitoring; the shipment of radioactive material; the safeguards and security program; and the material control and accounting program.

Changes, Organization, and Staffing

- The licensee's organization and staffing remain in compliance with the requirements specified in the Technical Specifications.

Review and Audit Functions

- Audits were being conducted by the Regulatory Compliance group and the Vallecitos Technological Safety Council reviewed the audits and corrective actions as specified in the Technical Specifications.

Procedures

- Procedures were being reviewed and approved as required. Changes to procedures were acceptably reviewed and approved.

Radiation Protection Program

- Surveys were being completed and documented acceptably to permit evaluation of the radiation hazards present.
- Postings met regulatory requirements.
- Personnel dosimetry was being worn as required and doses were within the licensee's procedural action levels, and NRC's regulatory limits.
- Radiation monitoring equipment was being maintained and calibrated as required.
- The Radiation Protection and ALARA Programs satisfied regulatory requirements.
- An apparent violation was noted for failure to provide four whole body counts per year as required by procedure for an individual assigned to work in radioactive material areas.

Effluent and Environmental Monitoring

- Effluent monitoring satisfied license and regulatory requirements and releases were within the specified regulatory and TS limits.

Transportation of Radioactive Materials

- Radioactive material was transferred to the licensee's materials license for shipment and disposal according to procedure.

Safeguards and Security

- The NRC-approved security program at the facility was being acceptably carried out.

Material Control and Accountability

- No deficiencies were identified in the licensee's Material Control and Accounting program.

REPORT DETAILS

Summary of Plant Status

The licensee's one hundred kilowatt (100 kW) Nuclear Test Reactor (NTR) continues to be operated in support of neutron radiography. During the inspection, the reactor was being operated several hours a day to complete various radiographic work projects.

1. Changes, Organization, and Staffing (69001)

a. Inspection Scope

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of TS Section 6.1 were being met:

- the organizational structure
- management responsibilities
- staffing requirements for safe operation of the reactor facility

b. Observations and Findings

Through discussions with licensee representatives the inspector determined that management responsibilities and the organization at the facility had not changed since the previous NRC inspection in June 1999 (Inspection Report No. 50-73/99-201). The inspector determined that the Manager of the Vallecitos and Morris Operations (V&MO) was responsible for the NTR facility license. The Manager of Facilities Maintenance was responsible for the overall safe operation and maintenance of the facility as specified in the TS. The Manager, NTR, was responsible for the routine safe operation and maintenance of the facility.

Through review of records and logs and through discussions with licensee personnel, the inspector determined that the staffing at the facility was acceptable to support the work and ongoing activities. The staffing met the requirements of the TS.

c. Conclusions

The licensee's organization and staffing remain in compliance with the requirements specified in the TS.

2. Review and Audit Functions (69001)

a. Inspection Scope

The inspector reviewed the following to ensure that the audits and reviews stipulated in the requirements of TS Section 6.2 were being completed:

- Vallecitos Technological Safety Council (VTSC) meeting minutes
- Vallecitos Nuclear Center (VNC) Regulatory Compliance audits
- VNC Nuclear Safety Procedures
- VNC Safety Standards
- TS duties specified for the cognizant Nuclear Safety Review Groups responsible to the Manager, V&MO

b. Observations and Findings

Section 6.2 of the TS requires that the independent review function be performed under a written charter. VNC Safety Standard No. 1.1, "Charter - Vallecitos Technological Safety Council," Revision (Rev) 7 stipulates that the VTSC is responsible for reviewing Change Authorizations (CAs), reportable incidents, and facility changes. VNC Safety Standard No. 1.2, "VNC Regulatory Compliance Function Charter," Rev. 7, requires that the VNC Regulatory Compliance group review plant operations, changes to procedures, CAs, and retain exposure records. The VTSC was required to meet quarterly.

The inspector reviewed the VTSC meeting minutes from March 1999 to the present. These meeting minutes showed that the committee met as required by the TS with a quorum being present. The inspector also noted that the VTSC had considered the types of topics outlined by the TS.

It was noted that the Regulatory Compliance group completed audits of plant operations and reviewed changes to procedures and CAs. Audits were varied so that all aspects of the licensee's safety program were reviewed every two years. The inspector noted that the audits and the resulting findings were detailed and that the licensee's responses and corrective actions were acceptable.

c. Conclusions

Audits were being conducted by the Regulatory Compliance group and the VTSC reviewed the audits and the corrective actions as specified in the Technical Specifications.

3. Procedures (69001)

a. Inspection Scope

The inspector reviewed the following to ensure that the requirements of TS Section 6.3 were being met concerning written procedures:

- selected operations procedures
- selected safety procedures
- the process used to revise, review, and approve all facility procedures

b. Observations and Findings

The inspector verified that selected procedures and associated changes had been reviewed and approved in accordance with the TS, applicable administrative procedures, and the VNC Regulatory Compliance Function Charter. Changes were properly reflected in the copies of procedures in use by the Regulatory Compliance group and in the NTR control room.

c. Conclusions

Procedures were being reviewed and approved as required. Changes to procedures were acceptably reviewed and approved.

4. Radiation Protection Program (69001)

a. Inspection Scope

The inspector reviewed the following to verify compliance with 10 CFR 20 and the applicable licensee TS requirements and procedures:

- Radiation Monitoring (RM) survey records
- radiological signs and posting
- dosimetry records
- calibration records and periodic check records for radiation monitoring instruments
- the Radiation Protection Program
- the ALARA Program
- the bioassay program

The inspector also toured the licensee's facility and observed the use of dosimetry and radiation monitoring equipment. Licensee personnel were interviewed as well.

b. Observations and Findings

(1) Surveys

Daily, weekly, monthly, and other periodic contamination and radiation surveys were completed as required by TS. Results were evaluated to ensure that the survey results did not exceed set action levels. When surveys did indicate potential contamination, actions were taken to decontaminate the affected area.

(2) Postings and Notices

Copies of current notices to workers required by 10 CFR Part 19 were posted in appropriate areas in the facility. Posted copies of NRC Form-3 were the latest issue.

(3) Dosimetry

The licensee used a National Voluntary Laboratory Accreditation Program (NVLAP) accredited vendor to process personnel thermoluminescent dosimetry. An examination of the records for the past two years through the date of the inspection showed that all exposures were within NRC limits and licensee action levels. Dosimetry was acceptably used by facility personnel.

(4) Radiation Monitoring Equipment

Examination of selected radiation monitoring equipment demonstrated that the instruments had the acceptable up-to-date calibration sticker attached. The calibration of portable survey meters was typically completed by on-site personnel. Calibration frequency met procedural requirements and records were maintained as required.

(5) Radiation Protection Program

The licensee's Radiation Protection Program was established and described in various VNC Safety Standards and Regulatory Compliance Nuclear Safety procedures. The program was further outlined in SOP 7.1, "Radiation Protection Program." The program included a requirement that a review of the program be completed annually. The annual reviews were being completed as required. The program also outlined the requirements for training in radiation protection, as well as the policies and procedures to be used when working with radioactive materials and in facilities where radiological work was performed. The program appeared to be acceptable.

The licensee no longer routinely used respirators for radiological work. However, the capability was being maintained on site by emergency response personnel. The licensee's Respiratory Protection Program was being carried out as outlined in the procedure and associated instructions. They were conducting annual personnel physicals, and the equipment was being checked and maintained as required.

The inspector reviewed the Radiation Work Permits (RWPs) written and used during the past two years. It was noted that the controls specified in the RWPs were acceptable for the work being done. The RWPs had been reviewed and approved as required.

(6) ALARA Program

The ALARA Program was outlined and established in procedure, SOP 7.5, "Radiation Exposure and Control." The ALARA program provided guidance for keeping doses as low as reasonably achievable and was consistent with the guidance in 10 CFR 20.

(7) Bioassays

TS 6.3 requires that the licensee have procedures for various activities including radiation protection.

VNC Safety Standard No. 5.3.0, "Bioassay Program," Rev. 6, dated November 1996, Section 3.7 stipulates that an employee's supervisor or manager is responsible for initiating the action to begin bioassay sampling and for notifying Regulatory Compliance of all radionuclides with which their employees will be working. Written notification from supervision is to be made using form VNC-335. Form VNC-335 has a Frequency-Of-Exposure Table, which states that personnel regularly assigned to work in "Radioactive Material Areas" on a daily basis be counted four times per year.

VNC Safety Standard No. 5.3.1, "Internal Dosimetry and Dosimetry Classification," Rev. 7, dated December 1993, Section 6.2 requires that managers submit a listing of VNC employees annually reporting the individuals' dosimetry classification. The forms are to be submitted the first working day in April.

The inspector reviewed the bioassay records for the three individuals who routinely work at the NTR and enter a radioactive material area almost daily. The type of bioassays routinely used by the licensee for personnel working at the NTR is a whole body count (WBC). It was noted that, in 1999, one of these individuals only received three counts, not the required four. The licensee reviewed the problem and found that the WBC had been missed due to an apparent error in scheduling.

The licensee was informed that failure to perform one of the four required whole body counts in one year for one individual who was assigned to work in radioactive material areas on a daily basis was an apparent violation of procedure and TS 6.3 (VIO 50-73/2000-201-01).

c. Conclusions

Surveys were being completed as required by TS. Postings met regulatory requirements. Personnel dosimetry was being worn as required and doses were within the licensee's procedural action levels and the NRC's regulatory limits. Radiation monitoring equipment was being maintained and calibrated as required. The Radiation Protection Program and the ALARA Program satisfied regulatory requirements. One apparent violation was noted for failure to provide four whole body counts per year for an individual assigned to work in radioactive material areas as required by procedure.

5. Effluent and Environmental Monitoring (69001)

a. Inspection Scope

The inspector reviewed the following to verify compliance with the requirements of 10 CFR 20 and TS Sections 4.4 and 6.5.1.e:

- the environmental monitoring program
- annual VNC effluent monitoring and environmental surveillance program reports
- counting and analysis records

b. Observation and Findings

The inspector determined that gaseous releases continued to be monitored as required, were adequately documented, and were within the annual dose constraint of 10 CFR 20.1101 (d), Appendix B concentrations, and TS limits. There were no liquid releases of radioactivity in water or to the ground water greater than those limits specified in 10 CFR 20, Appendix B, Table 2, Column 2.

c. Conclusion

Effluent monitoring satisfied license and regulatory requirements and releases were within the specified regulatory and TS limits.

6. Transportation (86740)

a. Inspection Scope

The inspector interviewed licensee personnel and reviewed various records to verify compliance with procedural requirements for transferring licensed material.

b. Observations and Findings

Through records reviews and discussions with licensee personnel, the inspector determined that the licensee continued to transfer solid waste to their materials license for shipment and disposal. The transfers were documented and appeared to be in compliance with procedure.

c. Conclusions

Radioactive material was transferred to the licensee's materials license for shipment and disposal according to procedure.

7. Physical Security (81401, 81402, 81431)

a. Inspection Scope

To verify compliance with the licensee's NRC-approved Physical Security Plan (PSP) and to assure that changes, if any, to the plan had not reduced its overall effectiveness, the inspector reviewed:

- logs, records, and reports
- the security organization
- key control
- intruder detection and physical barriers
- access controls
- procedures

b. Observations and Findings

The inspector determined that the various aspects of the licensee's physical protection program conformed to NRC requirements and to the licensee's implementing procedures.

c. Conclusion

The NRC-approved security program at the facility was being acceptably carried out.

8. Material Control and Accounting (85102)

a. Inspection Scope

To verify compliance with 10 CFR 70, the inspector reviewed:

- storage areas

- annual inventory results
- associated records and reports

b. Observations and Findings

Records showed that physical inventories were conducted at least annually as required by 10 CFR 70.51(d). Nuclear Material Transaction Reports (DOE/NRC Form 471) and Material Status Reports (DOE/NRC Form 742) were being submitted by the licensee as required by 10 CFR 74.13(1).

c. Conclusion

No deficiencies were identified in the licensee's Material Control and Accounting program.

9. Exit Interview

The inspection scope and results were summarized on June 29, 2000, 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. Although proprietary material was provided to and reviewed by the inspector, no such material is included in this report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Bassett, Manager, Regulatory Compliance
E. Ehrlich, Manager, NTR
C. Hamilton, Licensing Engineer
W. Kreutel, Senior Reactor Operator
B. Murray, Senior Licensing Engineer
T. Peterson, Senior Reactor Operator-in-training
M. Rogers, Specialist, Radiation Monitoring
G. Stimmell, Manager, V&MO
H. Stuart, Specialist, Radiological Engineering

INSPECTION PROCEDURES USED

IP 69001 Class II Non-Power Reactors
IP 81401 Plans, Procedures, and Reviews
IP 81402 Reports of Safeguards Events
IP 81431 Fixed Site Physical Protection of Special Nuclear Material of Low Strategic Significance
IP 85102 Material Control and Accounting - Reactors
IP 86740 Inspection of Transportation Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-73/2000-201-01	VIO	Failure to perform one of the four whole body counts in one year as required by procedure for an individual who is regularly assigned to work in radioactive material areas around the NTR on a daily basis.
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Closed

None

LIST OF ACRONYMS USED

ALARA	As low as reasonably achievable
CA	Change Authorization
CFR	Code of Federal Regulations
IP	Inspection Procedure
kW	Kilowatt
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accreditation Program
PDR	Public Document Room
PSP	Physical Security Plan
RM	Radiation Monitoring
RWP	Radiation Work Permit
SNM	Special Nuclear Material
TS	Technical Specification
VIO	Violation
V&MO	Vallecitos and Morris Operations
VNC	Vallecitos Nuclear Center
VTSC	Vallecitos Technological Safety Council
WBC	Whole Body Count