



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-4005

March 27, 2008

Mr. David Turner, Plant Manager  
General Electric Company  
Vallecitos Nuclear Center  
6705 Vallecitos Road  
Sunol, California 94586

SUBJECT: NRC INSPECTION REPORT 070-00754/08-001

Dear Mr. Turner:

An NRC inspection was conducted on February 25 through 29, 2008, at your Vallecitos Nuclear Center site. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspection included an examination of selected procedures and representative records, observations of activities, and interviews with personnel. The enclosed report presents the results of that inspection.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and Enclosure 1 will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agency wide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Enclosure 2, transmitted under a separate letter, contains sensitive, unclassified security information, and is therefore deemed Official Use Only and will not be placed in the Public Document Room or the Publicly Available Records component of the NRC's ADAMS document system.

Should you have any questions concerning this inspection, please contact Mr. Emilio M. Garcia, Health Physicist, at (530) 756-3910 or the undersigned at (817) 860-8197.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack E. Whitten".

Jack E. Whitten, Chief  
Nuclear Materials Safety Branch B

Docket No.: 070-00754

License No.: SNM-960

Enclosures:

- 1) NRC Inspection Report 070-00754/08-001
- 2) Official Use Only - Security-Related Information

GE Vallecitos Nuclear Center

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cc w/enclosure 1: w/out enclosure 2:  
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U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 070-00754  
License No.: SNM-960  
Report No.: 070-00754/08-001  
Licensee: General Electric Company  
Facility: Vallecitos Nuclear Center (VNC)  
Location: Sunol, California  
Dates: February 25 through 29, 2008  
Inspector: Emilio M. Garcia, Health Physicist  
Approved By: Jack E. Whitten, Chief  
Nuclear Materials Safety Branch B  
Attachment: Supplemental Inspection Information

ENCLOSURE

## EXECUTIVE SUMMARY

Vallecitos Nuclear Center  
NRC Inspection Report 070-00754/08-001

This routine announced inspection included a review of radiation protection, management organization and controls, nuclear criticality safety, and follow-up of previous inspection findings.

### Radiation Protection

- Areas of the radiation protection program reviewed were in compliance with regulatory requirements and license conditions. Occupational exposures were below regulatory limits (Section 1).

### Management Organization and Controls

- The licensee continued to staff management level positions with individuals that met the academic training and experience specified in their license application. The Vallecitos Technological Safety Council continued to function as required by the license (Section 2).

### Nuclear Criticality Safety Program

- Radiological controls, housekeeping and fire protection practices were being implemented in accordance with license requirements (Section 3).

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## Report Details

### Summary of Plant Status

During the inspection, activities in progress included research of unirradiated and irradiated uranium reactor fuel and irradiated hardware.

#### **1 Radiation Protection (83822)**

##### 1.1 Inspection Scope

The inspector reviewed the licensee's radiation protection program for compliance with the requirements of 10 CFR Part 20 and the license.

##### 1.2 Observations and Findings

The inspector reviewed recent audits, self-assessment, and similar evaluations of the radiation protection program performed in calendar year 2007 and in 2008 as of the time of the inspection. On March 21, 2007, the State of California performed an inspection of the licensee's cobalt-60 manufacturing license. A letter dated March 22, 2007, from the State of California Department of Health Services states that no items of noncompliance were identified.

During August 28 through 29, 2007, American Nuclear Insurers staff performed a Nuclear Insurance Inspection. This inspection included the subject area of Radiation Safety. This inspection identified two recommendations. The licensee entered these recommendations into the Licensee's Audit Tracking System (ATS). One of the items remained open at the time of the inspection.

The inspector reviewed the licensee's exposure records for 2007 to ensure that no individual exceeded the regulatory limits specified in 10 CFR 20.1201. Exposure monitoring consisted of external and internal doses. Occupational doses included combined exposures obtained from radioactive materials licensed by both the NRC and the State of California, including the NRC's special nuclear materials (SNM) and test reactor licenses.

At the time of the inspection the licensee had not completed their collection and evaluation of all monitoring records for 2007. The inspector reviewed selected records. All personnel exposures were below the regulatory limits specified in 10 CFR Part 20. The highest total effective dose equivalent exposure was 1.270 rems with a regulatory limit of 5 rems. Doses to the lens of the eye, skin of the whole body, and extremity dose were well below regulatory limits.

All doses were from external sources only. There were no assigned committed effective dose equivalent exposures during 2007. Based on whole body counting results, no radioactive material was detected in site personnel in quantities approaching the investigation levels.

During calendar year 2007, the licensee had three declared pregnant workers. As of February 27, 2008, the licensee had one declared pregnant worker for 2008.  
Regulation

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§20.1208 specifies an occupational dose equivalent limit of 0.5 rems to an embryo/fetus of a declared pregnant worker during the entire pregnancy. During the gestation periods, the embryos/fetuses received doses below the detection level of the monitoring system, which was 0.001 rems. The licensee has never had a planned special exposure.

### 1.3 Conclusions

Areas of the radiation protection program reviewed were in compliance with regulatory requirements and license conditions. Occupational exposures were below regulatory limits.

## **2 Management Organization and Controls (IP 88005)**

### 2.1 Inspection Scope

The inspector reviewed recent changes in the management organization and records of the meetings of the Vallecitos Technological Safety Council (VTSC)

### 2.2 Observations and Findings

No significant managerial changes had occurred since this area was last inspected in May 2007. The licensee continued to staff management level positions with individuals that met the academic training and experience specified in their license application. Three additional positions had been added to the staff. A Physical Security Specialist and a Chemist were added to the staff on February 4, 2008; Administrative Assistant was added to the staff on February 25, 2008.

Section 4.4 of Appendix A to the license application provides requirements for the Vallecitos Technological Safety Council. This Council is an independent review body and consists of at least five senior staff members. The Council is responsible for reviewing reportable incidents, the nuclear safety program, and major facility changes. The Council is required to meet quarterly. The inspector confirmed that the Council had met quarterly since the beginning of 2007 and that all meetings included a quorum of members. Minutes reviewed by the inspector documented that the council had performed the responsibilities designated in Section 4.4 of Appendix A to the license application.

### 2.3 Conclusions

The licensee continued to staff management level positions with individuals that met the academic training and experience specified in their license application. The Vallecitos Technological Safety Council continued to function as required by the license.

## **3 Nuclear Criticality Safety Program (88020)**

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### 3.1 Scope of Inspection

The inspector conducted tours of the site to review activities in progress and to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements.

### 3.2 Observations and Findings

The inspector conducted tours of the gallery hot cells, the dry pit, the storage pool and the hillside storage.

The inspector conducted independent radiological surveys using a Ludlum Model 2401-EC survey meter (NRC No. 21175G, calibration due date July 10, 2008). Radiological controls, including postings and barriers, were in place. Good housekeeping and fire protection practices were noted in all areas toured.

### 3.3 Conclusions

Radiological controls, housekeeping and fire protection practices were being implemented in accordance with license requirements.

## 4 **Followup (92701)**

The inspector reviewed topics in this area that contained sensitive unclassified security-related information, and is therefore deemed Official Use Only, and is described in Enclosure 2.

## 5 **Exit Meeting Summary**

The inspector presented the inspection results to the Manager, Vallecitos Nuclear Center and other members of licensee staff at the exit meeting on February 29, 2008. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.

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## PARTIAL LIST OF PERSONS CONTACTED

J. Ayala, Specialist, Radiation Monitoring  
C. Bassett, Manager, Facilities Maintenance  
S. French, Physical Security Specialist  
L. Mahlahla, Manager, Regulatory Compliance and Environmental Health and Safety  
B. Neri, Principal Facilities Maintenance Technician (Fire Chief)  
H. Stuart, Specialist Radiological Engineer  
D. Turner, Manager, Vallecitos Nuclear Center

## INSPECTION PROCEDURES USED

IP 83822, Radiation Protection  
IP 88005, Management Organization and Controls  
IP 88020, Nuclear Criticality Safety  
IP 88045, Environmental Protection  
IP 88055, Fire Protection  
IP 92701, Followup

## ITEMS OPENED, CLOSED OR DISCUSSED

### Opened

None.

### Closed

None.

### Discussed

None.

ATTACHMENT

## LIST OF ACRONYMS USED

ATS	Audit Tracking System
CFR	Code of Federal Regulations
GE	General Electric
SNM	Special Nuclear Material
VNC	Vallecitos Nuclear Center
VTSC	Vallecitos Technological Safety Council

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 bcc w/enclosures (1&2 (via e-mail distribution):  
 LDWert  
 CLCain  
 JEWhitten  
 MTAdams, NMSS/FCSS/FCFB  
 EMGarcia  
 RJEvans  
 RITS Coordinator  
 FCDB  
 RIV Materials Docket File

SUNSI Review Complete: EMG ADAMS: Yes No Initials: EMG  
Publicly Available Non-Publicly Available Sensitive Non-Sensitive

DOCUMENT NAME: S:\DNMS\Fcdb\emg\87075401.doc final r:\dnms\

RIV.DNMS.NMSB-B	C.NMSB-B
EMGarcia	JEWhitten
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