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U.S. Nuclear Regulatory Commission  
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**Attn: Document Control Desk**

Subject: Annual Report for GETR, 2008  
Reference: License TR-1, Docket 50-70  
Enclosure: Annual Report No. 50

Enclosed is the Annual Report No. 50 for the deactivated General Electric Test Reactor (GETR) located at Vallecitos Nuclear Center near Sunol, California.

If there are any questions or additional information required, please contact me at the number above.

Sincerely,

Donald R. Krause,  
Manager,  
Regulatory Compliance and  
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c: John Buckley (email)

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**HITACHI**

GE Hitachi Nuclear Energy

*Vallecitos Nuclear Center  
Sunol, California*

**GENERAL ELECTRIC TEST REACTOR  
(DEACTIVATED)**

**ANNUAL REPORT NO. 50  
FOR THE YEAR 2008**

**LICENSE TR-1  
DOCKET 50-70**

**MARCH 2009**

**General Electric Test Reactor  
(Deactivated)****Annual Report No. 49**

General Electric Company has maintained the General Electric Test Reactor (GETR) in a deactivated status under the authority of Amendment No. 16 to License TR-1, Docket 50-70, issued September 30, 1992. In this annual report, a summary of the status of the facility for the period of January 1, 2008 to December 31, 2008 is presented.

**1.0 SUMMARY**

The facility remains in essentially the same condition described in Annual Report No. 48. Entry into the reactor building was made for routine radiation surveys and a general examination of conditions throughout the building.

Radiation levels remain essentially unchanged.

**2.0 STATUS OF FACILITY**

In accordance with written procedures, the Facility Manager controls access to the containment building and general systems. The facility continues to be in deactivated status. There were no changes authorized by the Facility Manager pursuant to 10CFR50.59(a) and completed in 2007.

**3.0 RADIATION AND CONTAMINATION**

Complete radiation and contamination surveys of the facility indicate that levels remain low. Results of the surveys are presented in Table 1. The radiation/contamination levels listed are representative but not necessarily maximum values.

The data below are from sample and dosimeter results accumulated during 2008. These data are for the entire VNC site and include the effects of operations other than GETR.

**3.1 GETR Stack**

Not operated.

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**3.2 Air Monitors** (Yearly average of all meteorological stations.)

Four environmental air monitoring stations are positioned approximately 90 degrees apart around the operating facilities of the site. Each station is equipped with a membrane filter that is changed weekly and analyzed for gross alpha and gross beta-gamma.

## Alpha Concentration:

Weekly Maximum,  $5.13 \text{ E-}13 \text{ } \mu\text{Ci/cc}$ Weekly Average,  $4.03 \text{ E-}14 \text{ } \mu\text{Ci/cc}$ 

## Beta Concentration:

Weekly Maximum,  $6.15 \text{ E-}12 \text{ } \mu\text{Ci/cc}$ Weekly Average,  $9.35 \text{ E-}14 \text{ } \mu\text{Ci/cc}$ **3.3 Gamma Radiation**

The yearly dose results for the year 2008 as determined from evaluation of site perimeter environmental monitoring dosimeters showed no departure from normal stable backgrounds.

**3.4 Vegetation**

No alpha, beta or gamma activity attributable to activities at the GETR facility was found on or in vegetation in the vicinity of the site.

**3.5 Off-Site**

Samples taken off the site indicate normal background for the area.

**4.0 ACTIVITIES**

Routine inspections were conducted during this report period. There were no preventive or corrective maintenance activities performed having safety significance during the reporting period.

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## 5.0 ORGANIZATION

The management and operations organization for the GETR changed in 2008. The VNC Site Manager for 2008 remained D. W. Turner. The GETR Facility Manager during 2008 was C. W. Bassett replaced by J. L. Grinold. The Manager, Regulatory Compliance and EHS was L. L. Mahlahla and changed to D. R. Krause.

## 6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated GETR is being maintained in a safe shutdown condition. The inspections, access control, and administratively controlled activities ensure maximum protection for the public health and safety. The procedures will be continued to maintain this high level of protection.

GE Hitachi Nuclear Energy  
Vallecitos Operations

J.L. Grinold, Manager  
Facilities Maintenance

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**Table 1**  
**Radiation and Contamination Level Data**  
**General Electric Test Reactor (Deactivated)**

| Date of Measurement:                                 | Contamination Levels             |        |   |           |  |       |
|--|----------------------------------|--------|---|-----------|--|-------|
|  | Radiation Levels<br>(mR/h Gamma) |        | Surface Smears<br>Beta-Gamma <sup>1</sup><br>(cpm/ft <sup>2</sup> ) |           | Airborne<br>Beta-Gamma <sup>2</sup><br>( $\mu\text{Ci/cc} \times 10^{-10}$ ) |       |
|  | 12/07                            | 12/08  | 12/07   | 12/08     | 12/07  | 12/08 |
| Reactor Enclosure                                    |                                  |        |   |           |  |       |
| Canal (field reading min.-max.)                      | <1 / 2.2                         | <1/4   | --  | --        | --   | --    |
| 3 <sup>rd</sup> Floor Zone (field reading min.-max.) | <1 / 2.5                         | <1/2   | 7.6K  | 500       | --   | --    |
| 3 <sup>rd</sup> Floor Clean Area                     | --                               | --     | <100  | 1000      | --   | --    |
| Top of Missile Shield (Point A)                      | <1 / <1                          | <1/2.5 | <100  | Not taken | 0.009  | .009  |
| 2 <sup>nd</sup> Floor (field reading min.-max.)      | <1 / 78                          | <1/40  | --  | --        | --   | --    |
| 2 <sup>nd</sup> Floor Clean Area                     | --                               | --     | <100  | 3000      | --   | --    |
| 1 <sup>st</sup> Floor Zone (field reading min.-max.) | <1 / 2.5                         | <1/3   | 1.4K  | 3000      | --   | --    |
| 1 <sup>st</sup> Floor Clean Area                     | --                               | --     | 200   | 2000      | --   | --    |
| Basement, Rod Work Area                              | <1 / 8                           | <1/20  | 1.2K  | 2000      | 0.008  | 0.008 |
| Basement Clean Area                                  | --                               | --     | 700   | 9000      | --   | --    |

Note:

Radiation levels, surface smears, and air samples may vary from survey to survey as they are taken in general areas rather than at specific locations.

<sup>1</sup> For conversion to d/m, assume an instrument efficiency of 20%.

<sup>2</sup> 24-hour decayed values