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DWT-2011-06

March 31, 2011

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Subject: Annual Report for VBWR, 2010
Reference: License DRP-1, Docket 50-18
Enclosure: Annual Report No. 46

Enclosed is the Annual Report No. 46 for the deactivated Vallecitos Boiling Water Reactor (VBWR) 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 Yours,

 Digitally signed by
David W. Turner
Date: 2011.03.31
14:25:45 -07'00' 

David W. Turner
Manager, Vallecitos Nuclear Center

cc: John Buckley, NRC (by e-mail)
Robert Evans, Region IV (by e-mail)

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*Vallecitos Nuclear Center
Sunol, California*

**VALLECITOS BOILING WATER REACTOR
(DEACTIVATED)**

**ANNUAL REPORT NO. 46
FOR THE YEAR 2010**

**LICENSE DPR-1
DOCKET 50-18**

MARCH 2011

**Vallecitos Boiling Water Reactor
(Deactivated)**

Annual Report No. 46

GE Hitachi Nuclear Energy has maintained the Vallecitos Boiling Water Reactor (VBWR) in a deactivated status under the authority of Amendment No. 21 to License DPR-1, Docket 50-18, issued Oct 22, 2007. In this annual report, a summary of the status of the facility for the period of January 1, 2009 to December 31, 2009 is presented, as required by paragraph 5.d.2 of the license.

1.0 SUMMARY

All reactor systems have been removed from the containment except for the reactor vessel. The water level within the reactor vessel was monitored and has remained essentially constant throughout the report period.

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 in safe storage condition.

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.

4.0 ACTIVITIES

Routine inspections were conducted during this report period. No other significant activities occurred at VBWR.

5.0 ORGANIZATION

The organizational structure was static during 2010. The Vallecitos Nuclear Center (VNC) Site Manager is D. W. Turner. The VBWR Facility Manager is M. R. Schrag. The Manager, Regulatory Compliance and EHS is D. R. Krause.

6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated VBWR 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

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by David W.
Turner

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D. W. Turner
Manager Vallecitos Nuclear Center

**Table 1
Radiation and Contamination Level Data
Vallecitos Boiling Water Reactor (Deactivated)**

Report Year:	Contamination Levels					
	Radiation Levels (mR/h Gamma)		Surface Smears Beta-Gamma (dpm/ft ²)		Airborne Beta-Gamma* ($\mu\text{Ci/cc} \times 10^{-10}$)	
	2009	2010	2009	2010	2009	2010
Reactor Enclosure, Main Floor					0.02	0.42
General	<1.0	<1.0	2,500	5,000		
Top of Spent Fuel Pit Cover	<1.0	1.0	1,000	1,500		
Reactor Basement					0.17	0.08
Upper Level	<1.0	<1.0				
Basement Sump	5.0	<1.0	10,000	16,000		
East Ladder, Bottom	<1.0	<1.0	10,000	10,000		
Deck/Reactor Vessel Head	<1.0	<1.0				

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.

Survey Dates:

2009 - 01/20/2010

2010 - 12/11/2010

Survey Point Changes:

West Ladder Removed - Replaced with Basement Sump survey point.

Between Recirc Pumps removed - Replaced with Deck/Reactor Vessel Head survey point.

* 24-hour decayed values