



HITACHI

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March 30th, 2010

Subject: Annual Report for VBWR, 2009
Reference: License DRP-1, Docket 50-18
Enclosure: Annual Report No. 45

Enclosed is the Annual Report No. 45 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: 2010.03.30 13:24:24
-07'00'

David W. Turner
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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. 45
FOR THE YEAR 2009**

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

MARCH 2010

**Vallecitos Boiling Water Reactor
(Deactivated)**

Annual Report No. 45

GE Hitachi Nuclear Energy has maintained the Vallecitos Boiling Water Reactor (VBWR) in a deactivated status under the authority of Amendment No. 19 to License DPR-1, Docket 50-18. 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 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.

Dismantling operations did not significantly increase the site's airborne radiological effluent release rate. Continuous general air sampling was performed within the VBWR containment during dismantling operations for personnel monitoring and to assess the potential release of radiological effluents to the environment. Using The Comply Computer Code, a conservative estimate of the Effective Dose Equivalent to the public from all on site sources was less than 0.8 mrem/year.

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

Date of Measurement:	Contamination Levels					
	Radiation Levels (mR/h Gamma)		Surface Smears Beta-Gamma (dpm/ft ²)		Airborne Beta-Gamma* ($\mu\text{Ci/cc} \times 10^{-10}$)	
	12/08	12/09	12/08	12/09	12/08	12/09
Reactor Enclosure, Main Floor					0.02	11.4
General	<1.0	<1.0	750	2,500		
Top of Spent Fuel Pit Cover	<1.0	1.0	1,000	1,000		
Reactor Basement					0.02	4.69
Upper Level	<1.0	<1.0	--	1,000		
West Ladder, Bottom	5.0	<1.0	11,000	4,000		
East Ladder, Bottom	<1.0	<1.0	10,000	10,000		
Between Recirculation Pumps (located 2 feet above deck) (* RCPs removed)	<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.

* 24-hour decayed values