

March 3, 2008

Mr. David A. Christian  
President and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: ANNUAL ASSESSMENT LETTER - KEWAUNEE POWER STATION  
(05000305/2008001)

Dear Mr. Christian:

On February 12, 2008, the NRC staff completed its performance review of Kewaunee Power Station. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2007. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only - Security Related Information" will include the Security Cornerstone review and resultant inspection plan.

Overall, Kewaunee Power Station operated in a manner that preserved public health and safety and met all cornerstone objectives with moderate degradation in safety performance. Plant performance for the most recent quarter was within the Degraded Cornerstone column of the NRC's Action Matrix based on one inspection finding of substantial safety significance (Yellow) within the Mitigating Systems Cornerstone. This Yellow finding, from the first quarter of 2007, involved the failure to evaluate and repair a fuel oil leak on an emergency diesel generator. In addition to the Yellow finding, the Unplanned Scrams Performance Indicator (PI) was White for the first three quarters of 2007.

On October 22, 2007, we were notified by your staff of your readiness for the NRC to conduct a supplemental inspection to review the actions taken to address the Yellow finding and the White PI. Starting the week of November 26, 2007, we conducted this inspection, using supplemental Inspection Procedure 95002, "Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area," issued October 16, 2006. Based on the results of the inspection, we concluded that the planned corrective actions were sufficient to address the causes of the performance deficiencies associated with the issues. Additionally, as part of the 95002 inspection, the inspectors reviewed the results of your 2007 Safety Culture Self-Assessment and found that it adequately identified safety culture components that warranted improvement. This self-assessment was conducted on your initiative and followed-up on a similar voluntary safety culture assessment conducted at Kewaunee in 2006.

Additionally, the staff has continued to identify substantive cross-cutting issues in the areas of problem identification and resolution (PI&R) and human performance. The substantive cross-cutting issue in the PI&R area is a continuation of the cross-cutting issue discussed in our Mid-Cycle Assessment Letter, dated August 31, 2007, and first opened in our Annual Assessment Letter for 2004, dated March 2, 2005. During this assessment period, there were 11 inspection findings that were attributable, at least in part, to weaknesses in PI&R. Because 7 of these findings shared the common aspect of inadequate problem evaluation (P.1(c)), the substantive cross-cutting issue in PI&R will remain open. This substantive cross-cutting issue will remain open until the number of findings with the same aspect is reduced or when the NRC gains confidence in the performance of your corrective action program to evaluate and correct problems. The NRC plans to evaluate your progress through routine baseline inspections, trend reviews, and an additional biennial PI&R inspection in the second quarter of 2008. Our most recent PI&R inspection was completed in May 2007.

In our Mid-Cycle Assessment Letter, dated August 31, 2007, we advised you of the continuing substantive cross-cutting issue in the area of human performance, which was first opened in our Mid-Cycle Assessment Letter, dated August 31, 2006. During this assessment period, there were 12 inspection findings that were attributable, at least in part, to weaknesses in human performance, 5 of which were identified in the most recent 2 quarters. Because there were 7 findings sharing the common aspect of failure to follow procedures (H.4(b)) and 4 findings sharing the common aspect of failure to provide complete, accurate, and up-to-date procedures (H.2(c)), the substantive cross-cutting issue in human performance will remain open. This substantive cross-cutting issue will remain open until the number of findings with the same cross-cutting aspect is reduced or when the NRC gains confidence in your ability to identify and correct human performance issues.

On October 4, 2007, we held a public meeting with you to discuss your ongoing efforts to address the repetitive substantive cross-cutting issues in the areas of PI&R and human performance (a summary of that meeting is located in the NRC's ADAMS document system, accession numbers ML072900573 and ML072780504). At that meeting, you discussed both your efforts to date at addressing the cross-cutting issues and your plans moving forward to close out the issues. Since October, the NRC has observed some improvement in the area of PI&R and human performance. These improvements have been observed by the resident inspectors during their routine inspection activities and, to a lesser degree, by the inspectors during the 95002 inspection completed in December 2007. However, additional time for your corrective actions and improvements initiatives to be in effect is necessary. Consequently, we request that you discuss the progress of your actions to address the repetitive substantive cross-cutting issues at the 2007 end-of-cycle assessment meeting scheduled for April 1, 2008.

In addition, we request that you provide us a written response to the substantive cross-cutting issues raised in this letter, including your focused areas of concern, the status of the associated corrective action, and a current assessment of personnel performance and the corrective action program. Furthermore, in this response provide an updated assessment of the station's safety culture. Again include your focused areas of concern and the status of the associated corrective actions. This response should be sent to the NRC within 30 days of the receipt of this letter.

The enclosed inspection plan details the inspections, including baseline and other infrequently conducted inspections, less those related to security, scheduled through June 30, 2009. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the mid-cycle review.

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

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Michael Kunowski at (630) 829-9618 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

James L. Caldwell  
Regional Administrator

Docket No. 50-305  
License No. DPR-43

Enclosure: Kewaunee Inspection/Activity Plan

DISTRIBUTION:  
See next page

Letter to D. Christian from J. Caldwell dated March 3, 2008

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(05000305/2008001)

cc w/encl: S. Scace, Site Vice President  
T. Webb, Director Nuclear Safety & Licensing  
C. Funderburk, Director, Nuclear Licensing  
and Operations Support  
T. Breene, Manager, Nuclear Licensing  
L. Cuoco, Esq., Senior Counsel  
D. Zellner, Chairman, Town of Carlton  
J. Kitsembel, Public Service Commission of Wisconsin  
P. Schmidt, State Liaison Officer, State of Wisconsin  
Mayor of Kewaunee  
City Council President  
Chair, Manitowoc County Board  
County Executive  
Chair, Kewaunee County Board  
Director, Manitowoc County Emergency Management Agency  
Director, Kewaunee County Emergency Management Agency  
City Manager of Two Rivers  
Village President of Mishicot  
INPO

D. Christian

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See next page

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OFFICE	RIII		RIII						
NAME	RSkokowski for MKunowski: cms		CPederson		JCaldwell				
DATE	2/27/08		2/27/08		2/28/08				

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[ROPreports@nrc.gov](mailto:ROPreports@nrc.gov) (inspection reports, final SDP letters, any letter with an IR number)

**Kewaunee**  
**Inspection / Activity Plan**  
**03/01/2008 - 06/30/2009**

Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	End	Inspection Type
<b>2515/166 - TI 2515/166 PWR SUMP INSPECTION</b>		<b>1</b>			
IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-02]		03/24/2008	03/28/2008	Safety Issues
<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>			
IP 7112101	Access Control to Radiologically Significant Areas		04/07/2008	04/11/2008	Baseline Inspections
IP 7112102	ALARA Planning and Controls		04/07/2008	04/11/2008	Baseline Inspections
<b>BI ENG - ENGINEERING INSERVICE INSPECTION/150/172</b>		<b>2</b>			
IP 2515/150	Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles (NRC ORDER EA-03-009)		03/31/2008	04/25/2008	Safety Issues
IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds		03/31/2008	04/25/2008	Generic Safety Inspecti
IP 7111108P	Inservice Inspection Activities - PWR		03/31/2008	04/25/2008	Baseline Inspections
<b>BI PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>3</b>			
IP 71152B	Identification and Resolution of Problems		05/19/2008	06/06/2008	Baseline Inspections
<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>			
IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		07/14/2008	07/18/2008	Baseline Inspections
IP 71151-BI01	Reactor Coolant System Activity		07/14/2008	07/18/2008	Baseline Inspections
IP 71151-OR01	Occupational Exposure Control Effectiveness		07/14/2008	07/18/2008	Baseline Inspections
IP 71151-PR01	RETS/ODCM Radiological Effluent		07/14/2008	07/18/2008	Baseline Inspections
<b>ISFSI - ISFSI INSPECTION</b>		<b>1</b>			
IP 60855	Operation Of An ISFSI		07/01/2008	09/30/2008	Other Routine
IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants		07/01/2008	09/30/2008	Other Routine
<b>BI EP - EP ROUTINE INSPECTION / PI VERIFICATION</b>		<b>1</b>			
IP 7111402	Alert and Notification System Testing		08/04/2008	08/08/2008	EP Baseline Inspection
IP 7111403	Emergency Response Organization Augmentation Testing		08/04/2008	08/08/2008	EP Baseline Inspection
IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		08/04/2008	08/08/2008	EP Baseline Inspection
IP 71151-EP01	Drill/Exercise Performance		08/04/2008	08/08/2008	Baseline Inspections
IP 71151-EP02	ERO Drill Participation		08/04/2008	08/08/2008	Baseline Inspections
IP 71151-EP03	Alert & Notification System		08/04/2008	08/08/2008	Baseline Inspections
<b>2515/172 - TI 2515/172 RCS WELD INSPECTION</b>		<b>1</b>			
IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds		08/11/2008	08/15/2008	Generic Safety Inspecti
<b>BI ENG - FIRE PROTECTION INFO GATHERING TRIP</b>		<b>3</b>			
IP 7111105T	Fire Protection [Triennial]		08/11/2008	08/15/2008	Baseline Inspections
<b>BI ENG - TRIENNIAL FIRE PROTECTION INSPECTION</b>		<b>3</b>			
IP 7111105T	Fire Protection [Triennial]		08/25/2008	09/12/2008	Baseline Inspections
<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>			
IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		11/03/2008	11/07/2008	Baseline Inspections

**Kewaunee**  
**Inspection / Activity Plan**  
**03/01/2008 - 06/30/2009**

Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
			Start	End	
<b>2515/171 - TI 2515/171 B5B PHASE 2 AND 3</b>		<b>2</b>			
IP 2515/171	VERIFICATION OF SITE SPECIFIC IMPLEMENTATION OF B.5.B PHASE 2 & 3 MITIGATING STRATEGIES		11/17/2008	11/21/2008	Generic Safety Inspecti
<b>BI OL - BIENNIAL REQUAL. PROGRAM INSPECTION</b>		<b>2</b>			
IP 7111111B	Licensed Operator Requalification Program		11/17/2008	11/21/2008	Baseline Inspections
<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>			
IP 7112102	ALARA Planning and Controls		01/12/2009	01/16/2009	Baseline Inspections
<b>TI - TEMPORARY INSTRUCTION 2515/172</b>		<b>1</b>			
IP 2515/172	Reactor Coolant System Dissimiliar Metal Butt Welds		02/02/2009	02/06/2009	Generic Safety Inspecti
<b>OL EXAM - OPERATOR LICENSING EXAM</b>		<b>3</b>			
W90181	OL - INITIAL EXAM - APRIL 2009 - KEWA		03/23/2009	03/27/2009	Not Applicable
W90181	OL - INITIAL EXAM - APRIL 2009 - KEWA		04/13/2009	04/24/2009	Not Applicable
<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>			
IP 7112101	Access Control to Radiologically Significant Areas		04/06/2009	04/10/2009	Baseline Inspections
<b>RENEWAL - LICENSE RENEWAL INSPECTION</b>		<b>5</b>			
IP 71002	License Renewal Inspection		05/04/2009	05/22/2009	License Renewal Inspe
<b>BI EP - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>1</b>			
IP 7111401	Exercise Evaluation		06/22/2009	06/26/2009	EP Baseline Inspection
IP 71151-EP01	Drill/Exercise Performance		06/22/2009	06/26/2009	Baseline Inspections
IP 71151-EP02	ERO Drill Participation		06/22/2009	06/26/2009	Baseline Inspections
IP 71151-EP03	Alert & Notification System		06/22/2009	06/26/2009	Baseline Inspections