

August 31, 2006

Mr. David A. Christian  
Senior Vice President and  
Chief Nuclear Officer  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN - KEWAUNEE  
POWER STATION

Dear Mr. Christian:

On August 7, 2006, the NRC staff completed its performance review of Kewaunee Power Station for the first half of the calendar year 2006 assessment cycle. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results over the previous 12 months. 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 the enclosed inspection plan do not include physical protection information. A separate letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" will include the physical protection review and a resultant inspection plan.

Plant performance for the most recent quarter at Kewaunee Power Station was within the Degraded Cornerstone Column of the NRC's Action Matrix based on one finding of substantial safety significance (Yellow) within the Mitigating Systems cornerstone. This Yellow finding, from the 4<sup>th</sup> quarter of 2005, involved the failure to provide adequate design control to ensure that Class I equipment was protected against damage from tornado- or seismic-induced flooding of the turbine building.

A 95002 supplemental inspection was conducted to review the corrective actions for the Yellow finding and to review corrective actions for a White finding from the 3<sup>rd</sup> quarter of 2005 associated with the design of the auxiliary feedwater system. As discussed in report 05000305/2006007, issued on July 3, 2006, the NRC concluded that the planned corrective actions were not sufficient to address the causes of the performance deficiencies associated with the violations. Consequently, these findings remained open. You have since informed us that you have revised your original evaluation and have planned additional corrective actions. The revised evaluation and your additional corrective actions were reviewed during the week of August 14 by NRC inspectors. A report of our review, with our conclusions on the corrective actions for the Yellow and White findings, will be issued at a later date.

Additionally, the staff has identified 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 Annual Assessment Letter for 2005, dated March 2, 2006, and first opened in our Annual Assessment Letter for 2004, dated March 2, 2005. For this mid-cycle 2006 assessment, we considered eight findings in the PI&R area with the same aspect of inadequate problem evaluation in our determination to continue the PI&R substantive cross-cutting issue. The findings with this common aspect included several Green findings and one Yellow finding and involved the Initiating Events, Mitigating Systems, Barrier Integrity, and Occupational Radiation Safety cornerstones. Because of the recurring substantive cross-cutting issue in PI&R, we request that you provide to us, within 45 days from the date of this letter, a written description of the actions that you will be taking to address the persistent performance problems in this area. We are aware that you have developed some actions to address these issues and have incorporated them into the Kewaunee Excellence Plan; however, the effectiveness of these actions has not yet been demonstrated. We will evaluate your progress in addressing this substantive cross-cutting issue through semi-annual trend reviews conducted during the end-of-cycle assessment. 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 has more confidence in the performance of your corrective action program to evaluate and correct problems.

For our determination of the human performance substantive cross-cutting issue, an issue first being identified in this mid-cycle performance review, we considered five findings with the same aspect of procedural compliance not maintained. All of the findings were Green and involved more than one cornerstone: Initiating Events, Mitigating Systems, and Public Radiation Safety. Four of the five findings were identified in the first two quarters of 2006 and involved human performance concerns such as failing to follow procedures during a reactor startup and failing to follow procedures to assess the extent of condition for a degraded fuse problem. We are aware of several actions that you have taken to address the human performance substantive cross-cutting issue and will assess your performance through routine baseline inspections. This substantive cross-cutting issue will remain open until the number of human performance findings with the same cross-cutting aspect is reduced or when the NRC has more confidence in your ability to identify and correct human performance issues.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through March 31, 2008. 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 9 months of the inspection plan are tentative and may be revised at the end-of-cycle review meeting.

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).

D. Christian

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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 Patrick Loudon at (630) 829-9627 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 Power Station Inspection/Activity Plan

cc w/encl: L. Hartz, Site Vice President  
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. Kitsemel, Public Service Commission of Wisconsin  
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

-3-

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cc w/encl: L. Hartz, Site Vice President  
C. Funderburk, Director, Nuclear Licensing  
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T. Breene, Manager, Nuclear Licensing  
L. Cuoco, Esq., Senior Counsel  
D. Zellner, Chairman, Town of Carlton  
J. Kitsembel, Public Service Commission of Wisconsin  
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  
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| DATE   | 08/24/06                     | 08/24/06 | 08/28/06  | 08/29/06  |

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**Kewaunee**  
**Inspection / Activity Plan**  
**09/01/2006 - 03/31/2008**

| Unit Number | Inspection Activity | Title   | No. of Staff on Site | Planned Dates Start | Planned Dates End | Inspection Type      |
|-------------|---------------------|---|----------------------|---------------------|-------------------|----------------------|
|             | <b>ISI</b>          | <b>- INSERVICE INSPECTION</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7111108P         | Inservice Inspection Activities - PWR   |                      | 09/04/2006          | 09/29/2006        | Baseline Inspections |
|             | <b>BI</b>           | <b>- ALARA &amp; ACCESS CONTROL</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112102          | ALARA Planning and Controls   |                      | 09/11/2006          | 09/15/2006        | Baseline Inspections |
|             | <b>MOD5059</b>      | <b>- MODIFICATIONS/50.59 INSPECTION</b>   | <b>2</b>             |                     |                   |                      |
| 1           | IP 7111102          | Evaluation of Changes, Tests, or Experiments  |                      | 10/23/2006          | 11/17/2006        | Baseline Inspections |
| 1           | IP 711117B          | Permanent Plant Modifications   |                      | 10/23/2006          | 11/17/2006        | Baseline Inspections |
|             | <b>CDBI</b>         | <b>- COMPONENT DESIGN BASES INSPECTION</b>  | <b>6</b>             |                     |                   |                      |
| 1           | IP 7111121          | Component Design Bases Inspection   |                      | 01/29/2007          | 03/02/2007        | Baseline Inspections |
|             | <b>7112202</b>      | <b>- RADWASTE AND TRANSPORTATION</b>  | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112202          | Radioactive Material Processing and Transportation                                      |                      | 03/05/2007          | 03/09/2007        | Baseline Inspections |
|             | <b>HEATSINK</b>     | <b>- BIENNIAL HEAT SINK INSPECTION</b>  | <b>1</b>             |                     |                   |                      |
| 1           | IP 7111107B         | Heat Sink Performance   |                      | 04/16/2007          | 04/20/2007        | Baseline Inspections |
|             | <b>PI&amp;R</b>     | <b>- PI&amp;R INSPECTION</b>  | <b>1</b>             |                     |                   |                      |
| 1           | IP 71152B           | Identification and Resolution of Problems   |                      | 04/30/2007          | 05/18/2007        | Baseline Inspections |
|             | <b>7112102</b>      | <b>- ACCESS CONTROL &amp; ALARA</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112101          | Access Control to Radiologically Significant Areas                                      |                      | 05/07/2007          | 05/11/2007        | Baseline Inspections |
| 1           | IP 7112102          | ALARA Planning and Controls   |                      | 05/07/2007          | 05/11/2007        | Baseline Inspections |
|             | <b>7112103</b>      | <b>- INSTRUMENTATION AND SCBA</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112103          | Radiation Monitoring Instrumentation and Protective Equipment                           |                      | 05/21/2007          | 05/25/2007        | Baseline Inspections |
|             | <b>7112203</b>      | <b>- REMP</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112203          | Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P |                      | 06/25/2007          | 06/29/2007        | Baseline Inspections |
|             | <b>MAINRULE</b>     | <b>- MAINTENANCE EFFECTIVENESS INSPECTION</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7111112B         | Maintenance Effectiveness   |                      | 07/30/2007          | 08/03/2007        | Baseline Inspections |
|             | <b>7112101</b>      | <b>- ACCESS CONTROL &amp; ALARA</b>   | <b>1</b>             |                     |                   |                      |
| 1           | IP 7112101          | Access Control to Radiologically Significant Areas                                      |                      | 08/06/2007          | 08/10/2007        | Baseline Inspections |
| 1           | IP 7112102          | ALARA Planning and Controls   |                      | 08/06/2007          | 08/10/2007        | Baseline Inspections |
|             | <b>FY 2007</b>      | <b>- KEWAUNEE INIT PREP 09/2007</b>   | <b>3</b>             |                     |                   |                      |
| 1           | W90162              | OL - INITIAL EXAM - KEWAUNEE - SEP/OCT 2007   |                      | 09/10/2007          | 09/14/2007        | Not Applicable       |
|             | <b>FY 2008</b>      | <b>- KEWAUNEE INIT EXAM 10/2007</b>   | <b>3</b>             |                     |                   |                      |
| 1           | W90162              | OL - INITIAL EXAM - KEWAUNEE - SEP/OCT 2007   |                      | 10/01/2007          | 10/12/2007        | Not Applicable       |
|             | <b>FPI</b>          | <b>- FIRE PROTECTION INSPECTION - TRIENNIAL</b>   | <b>3</b>             |                     |                   |                      |
| 1           | IP 7111105T         | Fire Protection [Triennial]   |                      | 10/01/2007          | 10/19/2007        | Baseline Inspections |
|             | <b>EP BI</b>        | <b>- BASELINE EP EXERCISE INSP</b>  | <b>1</b>             |                     |                   |                      |
| 1           | IP 7111401          | Exercise Evaluation   |                      | 12/03/2007          | 12/07/2007        | Baseline Inspections |

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

**Kewaunee**  
**Inspection / Activity Plan**  
**09/01/2006 - 03/31/2008**

| Unit Number | Inspection Activity | Title                              | No. of Staff on Site | Planned Dates Start | Planned Dates End | Inspection Type      |
|-------------|---------------------|------------------------------------|----------------------|---------------------|-------------------|----------------------|
|             | <b>EP BI</b>        | <b>- BASELINE EP EXERCISE INSP</b> | <b>1</b>             |                     |                   |                      |
| 1           | IP 71151-EP01       | Drill/Exercise Performance         |                      | 12/03/2007          | 12/07/2007        | Baseline Inspections |
| 1           | IP 71151-EP02       | ERO Drill Participation            |                      | 12/03/2007          | 12/07/2007        | Baseline Inspections |
| 1           | IP 71151-EP03       | Alert & Notification System        |                      | 12/03/2007          | 12/07/2007        | Baseline Inspections |