



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

August 3, 2011

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Dominion Energy Kewaunee, Inc.  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

**SUBJECT: KEWAUNEE POWER STATION - NOTIFICATION OF AN NRC MANAGEMENT OF GAS ACCUMULATION IN EMERGENCY CORE COOLING, DEACY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS INSPECTION; AND REQUEST FOR INFORMATION 05000305/2011005 (DRS)**

Dear Mr. Heacock:

On November 14, 2011, the U. S. Nuclear Regulatory Commission (NRC) will begin the on-site portion of the Temporary Instruction (TI) 2515/177 inspection, "Gas Accumulation Management in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," at your Kewaunee Power Station. This inspection will be performed in accordance with NRC TI 2515/177 Procedure.

In order to minimize the impact that the inspection may have on the site and to ensure productive inspections, we have enclosed a request for documents needed for the inspection. The documents have been divided into three groups.

- The first group lists information necessary for our initial inspection scoping activities. This information should be available to the inspector no later than September 26, 2011. By September 30, 2011, the inspector will communicate the initial selected samples.
- The second group of documents requested are those items needed to support our in-office preparation activities. This set of documents should be available at the Regional Office no later than October 31, 2011. This information should be separated by information request number, especially if provided electronically (e.g., folder with the information request number). During the in-office preparation activities, the inspector may identify additional information needed to support the inspection.
- The last group includes additional information above, as well as plant specific reference material. This information should be available to the inspector on November 14, 2011. It is also requested that corrective action documents and/or questions developed during the inspection be provided to the inspector as the documents are generated.

Please send the information to the following e-mail address [nestor.feliz-adorno@nrc.gov](mailto:nestor.feliz-adorno@nrc.gov). A hard-copy with the required information is also an acceptable option. It is important that these documents be as complete as possible, in order to minimize the number of documents requested during the preparation week or during the on-site inspection.

D. Heacock

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If no activities were accomplished associated with a specific request, then provide a statement indicating that the request is not applicable.

The lead inspector for this inspection is Mr. Néstor J. Félix Adorno. If there are questions about the material requested, or the inspection, please call Mr. Félix Adorno at (630) 829-9739.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.”

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (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).

Sincerely,

/RA by R. C. Daley For/

Ann Marie Stone, Chief  
Engineering Branch 2  
Division of Reactor Safety

Docket Nos. 50-305  
License Nos. DPR-43

Enclosures: TEMPORARY INSTRUCTION 2515/177 DOCUMENT REQUEST

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## TEMPORARY INSTRUCTION 2515/177 DOCUMENT REQUEST

**Inspection Report:** 05000305/2011005(DRS)

**Inspection Dates:** November 14 - 18, 2011; and November 28 – December 02, 2011

**Inspection Procedure:** Temporary Instruction (TI) 2515/177, “Management of Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems”

**Inspectors:** Néstor J. Félix Adorno  
(630) 829-9739  
[nestor.feliz-adorno@nrc.gov](mailto:nestor.feliz-adorno@nrc.gov)

Jorge Corujo-Sandín  
(630) 829-9741  
[jorge.corujo-sandin@nrc.gov](mailto:jorge.corujo-sandin@nrc.gov)

### ***I. Information Requested By September 26, 2011***

1. Copy of the station response to Generic Letter (GL) 2008-01 and any supplemental report.
2. Copies of all the requests for additional information (RAIs) and the associated responses.
3. List of corrective action program documents (with a short description) associated with GL 2008-01, voids in piping, gas intrusion events, and pressure transients for the previous three years that affected the subject systems (i.e., emergency core cooling, decay heat removal, and containment spray systems).
4. List of the suction piping sections identified as susceptible to gas accumulation (the list should identify the corresponding system).
5. List of the discharge piping sections identified as susceptible to gas accumulation (the list should identify the corresponding system).
6. List of changes (with a short description and tracking number) to the Final Safety Evaluation Report (FSAR), Technical Specifications, Technical Specification Bases, and Technical Requirement Manual associated with the resolution of GL 2008-01.
7. List of calculations associated with GL 2008-01 (with a short description of the calculation and the change), including calculations that have been changed or created in response to GL 2008-01.

## TEMPORARY INSTRUCTION 2515/177 DOCUMENT REQUEST

### ***II. Information Requested By October 31, 2011***

1. Copies of program documents and procedures developed to implement the resolution of GL 2008-01.
2. Copies of the selected corrective action program documents.
3. Copies of the selected licensing and design basis document changes.
4. Copies of the selected calculations.
5. List of commitments (with a description) done in response to GL 2008-01.
6. List of actions that were completed in response to GL 2008-01.
7. List of outstanding actions that will be completed in response to GL 2008-01 and the completion schedule (include the documents that are tracking their completion such as work orders or corrective action documents).
8. Copies of all the corrective actions identified in the nine-month response and supplemental reports.
9. List (with a short description) of gas intrusion mechanisms that apply to the plant and the affected system locations (e.g., identify the source, conditions, and expected void locations).
10. Design basis documents of the subject systems.
11. Design basis documents of keep-full systems of the subject systems.
12. Copies of the construction code pages of the subject systems that discuss water hammer or flow-induced dynamic loading. Also, include the associated Design Specification pages.
13. Provide the following description for the pumps of the subject systems:  
(1) flowrate at best efficiency point; (2) maximum and minimum flowrate during accident conditions and shutdown cooling; (3) number of pump stages; (4) if a pump is multi-stage, indicate if the shaft is stiff or flexible (include the basis for this determination); (5) pump head required; and (6) un-degraded pump head.
14. Copies of self-assessments associated with the implementation of the GL 2008-01 program and the associated corrective action program documents (include the attachments, if any).
15. Copies of corrective action program implementing procedures.
16. Copies of the operability determination procedures.

## TEMPORARY INSTRUCTION 2515/177 DOCUMENT REQUEST

17. Electronic copies of piping and instrumentation diagrams (P&IDs) of the subject systems.
18. If available, electronic copies of the current Technical Specifications, Technical Specifications Basis, Final Safety Analysis Report, and Technical Report Manual.

### **III. Information Requested to be Available on First Day of Inspection, November 14, 2011**

1. Copies of surveillance procedures associated with the resolution of GL 2008-01 and the results of the last two surveillances for the subject systems.
2. Copies of the modification packages for hardware modifications as part of the resolution of GL 2008-01.
3. Copies of procedures use for detecting and determining void volumes.
4. Copies of procedures use for filling and venting.
5. Copies of surveillance procedures that establish flow at the subject systems (e.g., surveillances where the pumps are operated)
6. Subject systems walkdown work documents associated with the resolution of GL 2008-01 and the results of these walkdowns.
7. Copies of the engineering evaluations performed for all identified voids.
8. Provide a list of all piping locations that are currently voided and their associated evaluation.
9. Copies of trends of periodic gas accumulation monitoring results (e.g., venting, UTs).
10. Copy of the design change review checklist.
11. Copies of training documents that ensure that personnel are aware of gas-related concerns. Include the scheduled or attendance list of training that was already conducted.
12. Copy of the void transport analysis.
13. Basis for the void acceptance criteria (e.g., calculation). If applicable, provide the justification for any deviation from the void acceptance criteria established by the Office of Nuclear Reactor Regulations (NRR).
14. Basis for horizontal pipe acceptance criteria (e.g., calculation).

## **TEMPORARY INSTRUCTION 2515/177 DOCUMENT REQUEST**

15. If applicable, provide a list of inaccessible locations where plant walkdowns of the subject systems have not been completed. Include an explanation of why each area is considered inaccessible.
16. Hardcopies of isometric drawings of the subject systems (11"X17" or similar size is preferred if legible).
17. Hardcopies of piping and instrumentation diagrams (P&IDs) of the subject systems (11"X17" or similar size is preferred if legible).

If you have questions regarding the information requested, please contact the lead inspector.

D. Heacock

-2-

If no activities were accomplished associated with a specific request, then provide a statement indicating that the request is not applicable.

The lead inspector for this inspection is Mr. Néstor J. Félix Adorno. If there are questions about the material requested, or the inspection, please call Mr. Félix Adorno at (630) 829-9739.

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Sincerely,

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Ann Marie Stone, Chief  
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Letter to Mr. David A. Heacock from Ms. Ann Marie Stone dated August 3, 2011.

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