



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 15, 2010

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3, AND QUAD CITIES
NUCLEAR POWER STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL
INFORMATION RELATED TO ALTERNATE METHOD OF VERIFYING
DRYWELL LEAKAGE (TAC NOS. ME2148 THRU ME2151)

Dear Mr. Pardee:

By letter to the Nuclear Regulatory Commission (NRC) dated August 28, 2009 (Agencywide Documents Access and Management System Accession No. ML092400548), Exelon Generation Company, LLC (EGC) submitted a request to revise Technical Specification 3.4.5, "RCS Leakage Detection Instrumentation," to support implementation of an alternate method of verifying that leakage in the drywell is within limits for the Dresden, Units 2 and 3, and Quad Cities Nuclear Power Station, Units 1 and 2.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. On January 11, 2010, your staff notified the NRC staff that a conference call to clarify the NRC staff's request would not be needed, and that EGC would provide a response by February 5, 2010.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-1055.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher Gratton".

Christopher Gratton, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254, and 50-265

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

DRAFT REQUEST FOR ADDITIONAL INFORMATION

DRESDEN NUCLEAR POWER STATION, UNITS 1 AND 2

AND

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-237, 50-249, 50-254, AND 50-265

In reviewing the Exelon Generation Company's (Exelon's) submittal dated August 28, 2009 (Agencywide Documents Access and Management System Accession No. ML092400548), that proposes to revise Technical Specification (TS) 3.4.5, "RCS Leakage Detection Instrumentation," to support implementation of an alternate method of verifying that leakage in the drywell is within limits for the Dresden Nuclear Power Station, Units 1 and 2 (Dresden), and Quad Cities Nuclear Power Station, Units 1 and 2, (Quad Cities), the Nuclear Regulatory Commission staff has determined that the following information is needed in order to complete its review:

Background: Regulatory Guide (RG) 1.45 provides guidance for the design and capabilities of Reactor Coolant System (RCS) leakage detection equipment. Dresden's two drywell sumps meet the criteria of RG 1.45 as stated in the Dresden Updated Final Safety Analysis Report (UFSAR) and license amendment request (LAR). Dresden TS 3.4.4 requires RCS unidentified leakage to be less than 5 gallons per minute (gpm), verified on a 12-hour period. Quad Cities' two drywell sumps also meet the criteria of RG 1.45 as stated in the Quad Cities UFSAR and LAR. Quad Cities TS 3.4.4 requires RCS unidentified leakage to be less than 5 gpm, verified on a 12-hour period.

Issue: Unidentified leakage is collected in the drywell floor drain sump (DWFDS) and must be verified less than 5 gpm on a 12-hour period. In the event that the DWFDS should become inoperable, the proposed alternate method of detecting drywell leakage would allow the DWFDS to overflow into the drywell equipment drain sump (DWEDS), which normally collects only identified leakage. In order to verify the unidentified leakage rate in this configuration, all leakage collected in the DWEDS would be conservatively treated as unidentified leakage. The licensee proposes that this arrangement would be effective for collecting and verifying the unidentified leakage rate as long as the DWFDS was overflowing to the DWEDS. However, the volume of the Dresden DWFDS is 1000 gallons (as stated in the Dresden UFSAR, Section 5.2.5) and the sump would not begin overflowing to the DWEDS until this volume had been filled. Assuming an average unidentified leakage rate of 0.2 gpm and 12 hours of collected leakage before the DWFDS monitoring system was determined to be inoperable, the time to fill the DWFDS would be about 70 hours. Under this time period, the licensee would not be able to verify that unidentified leakage is below the TS limit of 5 gpm because the DWFDS would not overflow to the DWEDS. The Quad Cities UFSAR does not state the volume of Quad Cities drywell sumps in Section 5.2.5, however, the same issue as with the Dresden drywell sumps would apply to the Quad Cities drywell sumps.

Request: Provide additional information that would clarify the physical layout or operation of the proposed alternate method of leakage detection and identify the length of time before the DWFDS would overflow to the DWEDS for both Dresden and Quad Cities. Also, provide a justification for any amount of time that the proposed alternate arrangement would not be able to quantify unidentified leakage for both plants.

January 15, 2010

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Sincerely,

/RA/

Christopher Gratton, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254, and 50-265

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Request for Additional Information

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ADAMS Accession No. ML100120014

OFFICE	LPL3-2/PM	LPL3-2/LA	LPL3-2/BC
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DATE	1/15/10	1/15/10	1/15/10

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