November 29, 2004

Mr. Christopher M. Crane, President
and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION REGARDING MAIN STEAM LINE HIGH FLOW INSTRUMENTATION AMENDMENT REQUEST (TAC NOS. MC3413 AND MC3414)

Dear Mr. Crane:

By letter dated June 10, 2004, Exelon Generation Company, LLC submitted an amendment request to support replacement of main steam line high flow instrumentation for the Quad Cities Nuclear Power Station (QCS), Units 1 and 2. The staff has identified the need for additional information to complete their review of this amendment request. This request for additional information (RAI) was mailed electronically to your staff on November 18, 2004. Your response to this RAI is needed within sixty days of the date of this letter in order for the staff to complete their review of this amendment request by the March 2005 refueling outage at QCS, Unit 1.

If your staff has any questions about this RAI please contact me at 301-415-2863.

Sincerely,

/RA/

Lawrence Rossbach, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-254 and 50-265

Enclosure: Request for Additional Information

cc w/encl: See next page

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DATE	11/23/04	11/23/04	11/29/04

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Quad Cities Nuclear Power Station, Units 1 and 2
Request for Additional Information
Main Steam Line High Flow Amendment Request

A. The staff has determined that setpoint Allowable Values (AV) established by means of Instrumentation, Systems and Automation Society (ISA) 67.04 Part 2 Method 3 do not provide adequate assurance that a plant will operate in accordance with the assumptions upon which the plant safety analyses have been based. These concerns have been described in various public meetings. The presentation used in public meetings in June and July, 2004, to describe the staff concerns is available on the public website under ADAMS accession number ML041810346[1].

The staff is currently formulating generic action on this subject. It is presently clear, however, that the staff will not be able to accept any requested Technical Specification (TS) changes that are based upon the use of Method 3, unless the method is modified to alleviate the staff concerns. In particular, each setpoint limit in the TSs must ensure at least 95 percent probability with at least 95 percent confidence that the associated action will be initiated with the process variable no less conservative than the initiation value assumed in the plant safety analyses. In addition, the operability of each instrument channel addressed in the setpoint-related TSs must be ensured by the TSs. That is, conformance to the TS must provide adequate assurance that the plant will operate in accordance with the safety analyses. Reliance on settings or practices outside the TS and not mandated by them is not adequate.

The staff has determined that AV computed in accordance with ISA Method 1 or 2 do provide adequate assurance that the safety analysis limits will not be exceeded. The staff has also determined that an entirely different approach, based upon the performance of an instrument channel rather than directly upon the measured trip setting, can also provide the required assurance. This alternative approach, designated Performance-Based TSs, sets limits on acceptable nominal setpoints and upon the observed deviation in the measured setpoint from the end of one test to the beginning of the next. This approach has been accepted for use at R. E. Ginna Nuclear Power Plant (GNPP), and is discussed in a safety evaluation (SE) available via ADAMS as accession number ML041180293. The referenced SE is specific to GNPP, and is cited here only as a general example for other plants. It is up to the licensee to modify the approach as necessary to meet the indicated objectives for the particular plant(s) in question. In addition, licensees are welcome to propose alternative approaches that provide the indicated confidence, but such alternative approaches must be presented in detail and must be shown explicitly to provide adequate assurance that the safety analysis assumptions will not be violated.

The Nuclear Energy Institute (NEI) has indicated an intent to submit a white paper

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[1] Go to www.nrc.gov, click on “Electronic Reading Room,” then “Documents in ADAMS,” then “Web-Based Access,” then “Advanced Search,” and enter the Accession number into the Accession Number box near the top of the page. Click on the “Search” button near the bottom of the page. Click on the icon under “Image File” on the search results page. NOTE: You will need Adobe Acrobat Reader to open this file. NOTE: Public access to ADAMS has been temporarily suspended so that security review of publicly available documents may be performed and potentially sensitive information removed. Please check the NRC Web site for updates on the resumption of ADAMS access.

concerning this matter for U. S. Nuclear Regulatory Commission consideration. Receipt of that white paper is anticipated in late November 2004. Licensees may choose to endorse whatever approach and justification is described in that white paper, or to act independently of the NEI. If the NEI approach is found to be acceptable to the staff, it will be necessary for each licensee who chooses to use it to affirm that the salient conditions, practices, etc. described in it are applicable to their individual situations.

Please indicate how you wish to proceed in regard to the Setpoint-Related TS changes addressed in your request. Following are some examples of acceptable actions:

1. Demonstrate that the approach that you have used to develop the proposed limits provides adequate assurance that the plant will operate in accordance with the safety analyses. Show that operability is ensured in the TSs.

2. Suspend consideration of setpoint-related aspects of your request pending generic resolution of the staff concern.

3. Revise your request to incorporate Method 1, Method 2, or Performance-Based TSs.

4. Revise your request to incorporate some other approach that you demonstrate to provide adequate confidence that the plant will operate in accordance with the safety analyses and show that operability is ensured in the TSs.

B. The amendment request proposes to add surveillance requirements 3.3.6.1.3 and 3.3.7.1.3 for the trip units with a surveillance interval of 92 days. Explain the basis for the proposed trip unit calibrations and their frequency.

Quad Cities Nuclear Power Station Units 1 and 2

cc:

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