June 29, 2006

EA-06-112

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

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING AND NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 05000254/2006014) QUAD CITIES NUCLEAR POWER STATION UNIT 1

Dear Mr. Crane:

The purpose of this letter is to provide you the final results of our significance determination of the preliminary White finding identified in Nuclear Regulatory Commission (NRC) Inspection Report 05000254/2006012; 05000265/2006012, issued May 30, 2006. The inspection finding was assessed using the Significance Determination Process and was preliminarily characterized as White (i.e., a finding with low to moderate increased importance to safety, which may require additional NRC inspection). The White finding involved the failure to establish measures to ensure that the Unit 1 electromatic relief valves (ERVs) remained suitable for operation prior to implementing your 2002 extended power uprate (EPU).

In a telephone conversation with Mr. Mark Ring of the NRC, Region III, on June 7, 2006, Mr. Wally Beck of your staff indicated that Exelon Nuclear did not contest the characterization of the risk significance of this finding and that you declined your opportunity to discuss this issue in a Regulatory Conference or provide a written response.

After considering the information developed during the inspection, the NRC has concluded that the inspection finding is appropriately characterized as White (i.e., an issue with low to moderate increased importance to safety).

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified White finding. Such appeals will be considered to have merit only if they meet the criteria given in NRC Inspection Manual Chapter 0609, Attachment 2.

The NRC has also determined that the failure to establish measures to ensure that the electromatic relief valve design remained suitable for operation in an extended power uprate environment is a violation of 10 CFR 50, Appendix B, Criterion III, as cited in the attached Notice of Violation (Notice). The circumstances surrounding the violation are described in detail

in the May 30, 2006, inspection report. In accordance with the NRC Enforcement Policy, the Notice of Violation is considered escalated enforcement action because it is associated with a White finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response.

Because plant performance for this issue has been determined to be in the regulatory response band, we will use the NRC Action Matrix, to determine the most appropriate NRC response for this event. We will notify you, by separate correspondence, of that determination.

For administrative purposes, this letter is issued as a separate NRC Inspection Report, No. 05000254/2006014, and the above violation is identified as VIO 05000254/2006014-01: "Failure to establish measures to ensure that the Unit 1 ERV actuators remained suitable for operation while operating at EPU power levels." Accordingly, Apparent Violation (AV) 05000254/2006012-01 is closed.

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). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at www.nrc.gov; select **What We Do, Enforcement,** then **Significant Enforcement Actions**.

Sincerely,

/RA by Geoffrey E. Grant Acting for/

James L. Caldwell
Regional Administrator

Docket No. 50-254
License No. DPR-29

Enclosure: Notice of Violation

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in the May 30, 2006, inspection report. In accordance with the NRC Enforcement Policy, NUREG-1600, the Notice of Violation is considered escalated enforcement action because it is associated with a White finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response.

Because plant performance for this issue has been determined to be in the regulatory response band, we will use the NRC Action Matrix, to determine the most appropriate NRC response for this event. We will notify you, by separate correspondence, of that determination.

For administrative purposes, this letter is issued as a separate NRC Inspection Report, No. 05000254/2006014, and the above violation is identified as VIO 05000254/2006014-01: Failure to establish measures to ensure that the Unit 1 ERV actuators remained suitable for operation while operating at EPU power levels. Accordingly, apparent violation (AV) 05000254/2006012-01 is closed.

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). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. The NRC also includes significant enforcement actions on its Web site at www.nrc.gov; select **What We Do, Enforcement,** then **Significant Enforcement Actions**.

Sincerely,
/RA by Geoffrey E. Grant Acting for/
James L. Caldwell
Regional Administrator

Docket No. 50-254
License No. DPR-29

Enclosure: Notice of Violation

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OFFICE	RIII		RIII		RIII		OE		RIII		RIII	
NAME	PPelke		SWest for MSatorius		KO'Brien		DSolorio[1]		BBerson		GGrant for JCaldwell	
DATE	06/28/2006		06/28/2006		06/28/2006		06/28/2006		06/28/2006		06/28/2006	

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[1] OE concurrence received on 06/28/2006 by D. Solorio per e-mail from D. Starkey

cc w/encl: Site Vice President - Quad Cities Nuclear Power Station
Plant Manager - Quad Cities Nuclear Power Station
Regulatory Assurance Manager - Quad Cities Nuclear Power Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Senior Vice President - Mid-West Regional
Operating Group
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing - Mid-West Regional
Operating Group
Manager Licensing - Dresden and Quad Cities
Senior Counsel, Nuclear, Mid-West Regional
Operating Group
Document Control Desk - Licensing
Vice President - Law and Regulatory Affairs
Mid American Energy Company
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Iowa
Chairman, Illinois Commerce Commission
D. Tubbs, Manager of Nuclear
MidAmerican Energy Company

Letter to C. Crane from J. Caldwell dated June 29, 2006

SUBJECT: NOTICE OF VIOLATION

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NOTICE OF VIOLATION

Exelon Nuclear
Exelon Generation Company, LLC
Quad Cities Nuclear Power Station, Unit 1

Docket No. 50-254
License No. DPR-29
EA-06-112

During an NRC inspection conducted May 5 through 23, 2006, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

> Title 10 CFR 50, Appendix B, Criterion III, Design Control, requires, in part, that measures be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components.
>
> Contrary to the above, the licensee failed to establish measures to ensure that the application of the electromatic relief valve (ERV) actuators (which are essential to perform the safety-related reactor vessel depressurization and reactor overpressure protection functions) was reviewed and remained suitable for operation prior to implementing an extended power uprate (EPU) for Unit 1 in November 2002. This resulted in multiple ERVs becoming inoperable and unavailable due to being subjected to significantly higher vibration levels during Unit 1 operation at EPU power levels.
>
> This violation is associated with a White Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Exelon Nuclear is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the Quad Cities Nuclear Power Station, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as "Reply to a Notice of Violation; EA-06-112" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams/html, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is

necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within 2 working days.

Dated this 29th day of June 2006.