August 31, 2006

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

SUBJECT: BYRON STATION, UNITS 1 AND 2, INFORMATION REQUEST FOR AN NRC BIENNIAL BASELINE COMPONENT DESIGN BASES INSPECTION (CDBI) 05000454/2006009(DRS); 05000455/2006009(DRS)

Dear Mr. Crane:

On October 30, 2006, the NRC will begin a biennial baseline Component Design Bases Inspection (CDBI) at the Byron Station. A team of six inspectors will perform this 3-week inspection. This inspection will be performed in accordance with revised NRC Baseline Inspection Procedure (IP) 71111.21 and replaces the biennial Safety System Design and Performance Capability inspection.

The CDBI inspection focuses on components which have high risk and low design margins. The components to be reviewed during this baseline inspection will be identified during an in-office preparation week prior to the first week of on-site inspection. In addition, a number of risk significant operator actions and operating experience issues, associated with the component samples, will also be selected for review.

The inspection will include 3 weeks of on-site inspection. The inspection team will consist of six NRC inspectors, of which, five will focus on engineering and one on operations. The current inspection schedule is as follows:

- On-site weeks: October 30, 2006, November 13, 2006, and November 27, 2006.

The team will be preparing for the inspection mainly during the week of October 23, 2006, as discussed in the attached enclosure. A Region III Senior Reactor Analyst will accompany the inspection team during the week of October 30, 2006, to review probabilistic risk assessment data and assist in identifying risk significant components, which will be reviewed during the inspection.

Experience with previous baseline design inspections of similar depth and length has shown that these types of inspections are extremely resource intensive, both for the NRC inspectors and the licensee staff. In order to minimize the inspection impact on the site and to ensure a productive inspection for both parties, we have enclosed a request for information needed for the inspection.

It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the on-site portions of the inspection. Insofar as possible, this information should be provided electronically to the lead inspector. The information request has been divided into three groups:

- The first group lists information necessary for our initial inspection scoping activities. This information should be available to the lead inspector no later than September 28, 2006. By October 6, 2006, the lead inspector will communicate the initial selected set of 30 high risk components;

- The second group of documents requested are those items needed to support our in-office preparation activities. This set of documents, including the calculations associated with the initial selected components, should be available at the Regional Office no later than October 18, 2006. During the in-office preparation activities, the team may identify additional information needed to support the inspection; and

- The last group includes the additional information identified above, as well as plant specific reference material. This information should be available to the team on October 30, 2006. It is also requested that corrective action documents and/or questions developed during the inspection be provided to the lead inspector as the documents are generated.

The lead inspector for this inspection is Mr. John Jacobson. In order to facilitate the inspection, we request that a contact individual be assigned to each inspector to ensure information requests, questions, and concerns are addressed in a timely manner. If there are any questions about the inspection or the material requested in the Enclosure, please contact the lead inspector at (630) 829-9736 or via e-mail at jmj3@nrc.gov

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/

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

Docket No. 50-454; 50-455
License No. DPR-37; DPR-66

Enclosure: Component Design Bases Inspection (CDBI) Document Request

cc w/encl: Site Vice President - Byron Station
Plant Manager - Byron Station
Regulatory Assurance Manager - Byron Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission
B. Quigley, Byron Station

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).

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Engineering Branch 2
Division of Reactor Safety

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Enclosure: Component Design Bases Inspection (CDBI) Document Request

cc w/encl: Site Vice President - Byron Station
Plant Manager - Byron Station
Regulatory Assurance Manager - Byron Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer, State of Illinois
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission
B. Quigley, Byron Station

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INFORMATION REQUEST FOR BYRON STATION
COMPONENT DESIGN BASES INSPECTION (CDBI)

Inspection Report: 05000454/455/2006009(DRS)

Inspection Dates: October 30, 2006, November 13, 2006, and November 27, 2006

Inspection Procedure: IP 71111.21, "Component Design Bases Inspection"

Lead Inspector: John Jacobson, Lead Inspector
(630) 829-9736 JMJ3@nrc.gov

I. Information Requested Prior to the On-site Inspection Activities
(by September 28, 2006, or sooner)

The following information is requested by September 28, 2006, or sooner, to facilitate inspection preparation. If you have any questions regarding this information, please call the team leader as soon as possible. (Please provide the information electronically in "pdf" files, Excel, or other searchable formats, preferably on CDROM. The CDROM should contain descriptive names, and be indexed and hyperlinked to facilitate ease of use. Information in "lists" should contain enough information to be easily understood by someone who has a knowledge of pressurized water reactor technology).

1. Risk ranking of top 100 components from your site specific probabilistic safety analysis (PSA) sorted by Risk Achievement Worth (RAW). Include values for Birnbaum Importance, Risk Reduction Worth (RRW), and Fussell-Veseley (FV) (as applicable);

2. Provide a list of the top 500 cut-sets from your PSA;

3. Risk ranking of operator actions from your site specific PSA sorted by RAW. Provide copies of your human reliability worksheets for these items;

4. If you have an External Events or Fire PSA Model, provide the information requested in Items 1 and 2 for external events and fire;

5. Any pre-existing evaluation or list of components and associated calculations with low design margins, (i.e., pumps closest to the design limit for flow or pressure, diesel generator close to design required output, heat exchangers close to rated design heat removal etc.);

6. List of high risk Maintenance Rule systems/components based on engineering or expert panel judgement;

7. A list of operating experience evaluations for the last 3 years;

8. A list of modifications sorted by component identified in Item 1;

9. List of and information on any common cause failure of components experienced in the last 5 years at your facility;

10. A list of the design calculations which provide the design margin information for components included in Item 1;

11. List of Root Cause Evaluations associated with component failures or design issues initiated/completed in the last 5 years;

12. Current management and engineering organizational chart;

13. List of MOVs in the program, design margin and risk ranking;

14. List of SSCs in the maintenance rule (a)(1) category; and

15. Site Top Ten issues list.

***II. Information Requested (for the approximate 30 selected components) to be Available by* October 18, 2006**

List of condition reports (corrective action documents) associated with each of the selected components for the last 3 years.

The corrective maintenance history associated with each of the selected components for the last 2 years.

1. Copies of calculations associated with each of the selected components, excluding data files. Please review the calculations and also provide copies of referenced material (such as drawings, engineering requests, vendor letters);

2. Copies of operability evaluations associated with each of the selected components and plans for restoring operability, if applicable;

3. Copies of selected operator work-around evaluations associated with each of the selected components and plans for resolution, if applicable;

4. Copies of any open temporary modifications associated with each of the selected components, if applicable;

5. Trend data on the selected electrical/mechanical components' performance for last three years (For example, pumps' performance including in-service testing, other vibration monitoring, oil sample results, (etc., as applicable); and

6. Audits completed in the last 2 years.

INFORMATION REQUEST FOR BYRON STATION
COMPONENT DESIGN BASES INSPECTION (CDBI)

III. Additional Information to be Provided on October 30, 2006, On-site

Request for the additional information as needed will be provided during the week of October 23, 2006. The lead inspector will provide a list of added information.

IV. Information Requested to be provided throughout the inspection

1. Copies of any corrective action documents generated as a result of the team's questions or queries during this inspection;

2. Copies of the list of questions submitted by the team members and the status/resolution of the information requested (provide daily during the inspection to each team member);

3. Reference materials (if available on electronic media, please provide a copy);

4. General set of plant drawings;

5. IPE/PRA report; and

6. Procurement documents for components selected (verify retrievable):

   - Plant procedures (normal, abnormal, emergency, surveillance, etc.);
   - Technical Specifications;
   - Updated Final Safety Analysis Report; and
   - Vendor manuals.

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

Enclosure