

March 26, 2007

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

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2 – INFORMATION REQUEST FOR AN
NRC BIENNIAL BASELINE COMPONENT DESIGN BASES INSPECTION
05000456/2007009(DRS); 05000457/2007009(DRS)

Dear Mr. Crane:

On July 23, 2007, the NRC will begin a biennial baseline Component Design Bases Inspection (CDBI) at the Braidwood Station, Units 1 and 2. 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 the 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 on-site, including the information gathering during the first on-site week. The inspection team will consist of six NRC inspectors, of whom five will focus on engineering and one on operations. The current inspection schedule is as follows:

- July 23 through July 27, 2007;
- August 6 through August 10, 2007; and
- August 20 through August 24, 2007.

The team will be preparing for the inspection, mainly during the week of July 16, 2007, as discussed in the attached enclosure. A Region III Senior Reactor Analyst may accompany the inspection team during the week of July 23, 2007, 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 type 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 June 25, 2007. By July 5, 2007, the lead inspector will communicate the initial selected set of approximately 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 July 11, 2007. During the in-office preparation activities, the team may identify additional information needed to support the inspection.
- The last group includes the additional information above as well as plant specific reference material. This information should be available to the team on the first day of the inspection. It is also requested that corrective action documents and questions developed during the inspection be provided to the inspectors throughout the inspection.

The lead inspector for this inspection is Mr. John Jacobson. We understand that our licensing contact for this inspection is Mr. M. Cichon of your organization. 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. 50-456; 50-457
License No. NPF-72; NPF-77

Enclosure: Component Design Bases Inspection Document Request

See Attached Distribution

C. Crane

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

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

Docket No. 50-456; 50-457
License No. NPF-72; NPF-77

Enclosure: Component Design Bases Inspection Document Request

See Attached Distribution

DOCUMENT NAME: C:\FileNet\ML070851356.wpd

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OFFICE	RIII		RIII		RIII		RIII	
NAME	JJacobson: Is		LKozak		AMStone			
DATE	03/22/07		03/23/07		03/26/07			

OFFICIAL RECORD COPY

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

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**COMPONENT DESIGN BASES INSPECTION
INFORMATION REQUEST**

Site: Braidwood Station, Units 1 and 2

Inspection Report: 05000456/2007009(DRS); 05000457/2007009(DRS)

Inspection Dates: July 23 through July 27, August 6 through August 10; and August 20 through August 24, 2007

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

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

I. Information Requested Prior to the On-site Information Gathering/Inspection Week

The following information is requested by June 25, 2007, or sooner, to facilitate inspection preparation. If you have any questions regarding this information, please call the lead inspector as soon as possible. (Please provide the information electronically in "pdf" files, Excel, or other searchable formats, preferably either through electronic mail or 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 light water reactor technology).

1. Provide a risk ranking of top 150 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). If possible, list the system, train, and PSA failure mode for each component.
2. Provide a list of the top 200 cut-sets from your PSA.
3. If you have an External Events or Fire PSA Model, provide the information requested in Items 1 and 2 for external events and fire. Provide narrative description of each coded event (including fire, flood zone description).
4. Provide a risk ranking of operator actions from your site specific PSA sorted by RAW. Provide copies of your human reliability worksheets for these items.
5. Provide a list of PSA assumptions regarding operator actions.
6. Provide 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.).

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7. Provide a list of available design (setup) margins for valves in the motor-operated valve (MOV) and air-operated valve (AOV) programs.
8. Provide a list of high risk Maintenance Rule systems/components based on engineering or expert panel judgement.
9. Provide a list of structures, systems, or components (SSCs) in the Maintenance Rule (a)(1) category.
10. Provide the site top ten issues list (if applicable).
11. Provide information on any common cause failure of components experienced in the last five years at your facility.
12. Provide a list of Root Cause Evaluations associated with component failures or design issues initiated or completed in the last five years.

II. *Information requested (for the approximately 30 selected components) to be available by July 11, 2007. This information should be separated for each selected component, especially if provided electronically (e.g., folder with component name that includes calculations, condition reports, maintenance history, etc). Please provide separate disks for electrical and mechanical components.*

1. Provide a list and copies of condition reports (corrective action documents) associated with each of the selected components for the last four years.
2. Provide the completed corrective maintenance history associated with each of the selected components for the last four years. Please ensure this list only includes completed activities and does not include routine surveillances.
3. Provide copies of calculations associated with each of the selected components (if not previously provided), excluding data files. Please review the calculations and provide copies of referenced material (such as drawings, engineering requests, or vendor letters).
4. Provide a list of modifications associated with each of the selected components. This list should include a descriptive paragraph on the purpose of the modification. Please ensure this list only includes design completed (not canceled) modifications.
5. Provide copies of electrical single-lines and mechanical piping and instrumentation drawings.
6. Provide copies of operability evaluations associated with each of the selected components and plans for restoring operability, if applicable.

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7. Provide copies of any operator work-around evaluations associated with each of the selected components and plans for resolution, if applicable.
8. Provide copies of any open temporary modifications associated with each of the selected components, if applicable.
9. Provide 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).
10. Provide System Health Reports, System Descriptions, and/or Design Basis Documents that are associated with each of the selected components.
11. Provide copies of operating experience evaluations associated with the selected components for the last three years.
12. Provide copies of any simulator scenarios, lesson plans, or job performance measures for the selected operator actions.
13. Provide copies of the emergency operating procedures, normal and abnormal operating procedures, and any alarm response procedures for the selected operator actions.
14. Provide a copy of any engineering or operations related audits completed in the last two years which addressed the selected components.
15. Provide a copy of the current management and engineering organizational chart. Highlight or otherwise provide the names of any inspection contacts or inspector shadows.
16. Provide electronic copies of Updated Final Safety Analysis Report, Technical Specifications, Technical Specifications Bases, and Technical Requirements Manual; if available.
17. Provide a copy of any internal/external self-assessments and associated corrective action documents generated in preparation for the inspection.

III. Additional Information to be Provided on July 23, 2007 On-site (for final 15 - 20 selected components)

1. A request for any additional information needed will be provided during the week of July 16, 2007. The lead inspector will provide a list of added information.

The lead inspectors may request hard copies of information provided electronically, especially drawings and calculations.

2. One complete set of piping and instrumentation drawings (P and IDs) and one-line electrical drawings (paper copies).
3. The following background materials may be requested. It is recommended that these materials be identified and located prior to the inspection:
 - IPE/PRA report;
 - Procurement documents for components selected;
 - Plant procedures (normal, abnormal, emergency, surveillance, etc.); and
 - Vendor manuals.
4. Please arrange for an overview walkdown of the selected components. This should include any required radiological briefings. For any components not normally accessible, please arrange for a briefing on what conditions prevent access to the components.
5. If plant information, such as corrective action documents or procedures, is available electronically onsite, please consider providing access for the inspectors, along with simple instructions.

IV. Information Requested to be provided throughout the inspection

- 1 Provide copies of any corrective action documents generated as a result of the team's questions or queries during this inspection. This includes and licensee-identified corrective action documents generated while answering an inspector question. Please provide two copies: one to the inspector and one to the lead inspector. At the end of the inspection, please provide the lead inspector with a complete list of all corrective action documents generated as a result of the inspection.
- 2 Provide copies of the list of questions submitted by the team members and the status/resolution of the information requested. Each inspector should receive at least a copy of his/her open questions, while the lead inspector should receive a complete list. At the end of the inspection, please provide the lead inspector with a complete electronic copy of the database.

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