UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352
November 18, 2015

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; REQUEST FOR INFORMATION FOR AN NRC PILOT COMPONENT DESIGN BASES INSPECTION; INSPECTION REPORT 05000237/2016008; 05000249/2016008

Dear Mr. Hanson:

On February 8, 2016, the U.S. Nuclear Regulatory Commission (NRC) will begin the pilot team portion of the triennial baseline Component Design Bases Inspection (CDBI) at Dresden Nuclear Power Station, Units 2 and 3. This inspection will be performed in accordance with NRC Baseline Inspection Procedure 71111.21M.

The CDBI focuses on the design, maintenance, and operation of risk significant components associated with one or more accident scenario or systems. The components to be reviewed during this baseline inspection will be identified during the in-office preparation week that occurs prior to the first on-site inspection week. In addition, operating experience issues, associated with the component samples, will also be selected for review. The inspection team may request scenarios to be performed on the simulator. This request would require support from your simulator staff to validate scenarios, simulator time, and a crew to perform the actions which would most likely occur during the second on-site week. The team will work closely with your staff early on during the inspection process to ensure this activity can be accomplished with minimal impact.

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

- On-site weeks: February 8 - 12, 2016; and
  February 22 - 26, 2016.

The team will be preparing for the inspection, mainly during the week of February 1 - 5, 2016, as discussed in the enclosure.

Experience with previous baseline design inspections of similar depth and length has shown that this type of inspection is 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 provided to the lead inspector no later than December 18, 2015. By January 8, 2016, the lead inspector will communicate the initial selected set of approximately 15 components.

- The second group of documents requested is 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 provided to the lead inspector at the Regional Office no later than January 27, 2016. 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 onsite on February 8, 2016. 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 Andrew Dunlop. We understand that our licensing contact for this inspection is D. J. Walker 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) 829-9726 or via e-mail at Andrew.Dunlop@nrc.gov.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, “Public Inspections, Exemptions, Requests for Withholding,” of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public

inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Christine A. Lipa, Chief
Engineering Branch 2
Division of Reactor Safety

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure:
Information Request for Component
Design Bases Inspection

cc w/encl: Distribution via LISTSERV®

INFORMATION REQUEST FOR COMPONENT DESIGN BASES INSPECTION

Inspection Report: 05000237/2016008; 05000249/2016008

Inspection Dates: February 8 - 12, 2016; and
February 22 - 26, 2016

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

Lead Inspector: Andrew Dunlop, Lead Inspector
(630) 829-9726
Andrew.Dunlop@nrc.gov

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

The following information is requested by December 18, 2015, 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 some portable electronic media (e.g., CD-ROM, DVD, flash drive, etc.). The portable electronic media 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 knowledge of light water reactor technology).

1. Risk-ranking of top 250 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. Risk-ranking of top 100 containment-related components (i.e. Large Early Release Frequency (LERF)) from your site specific PSA sorted by RAW.

3. Provide a list of the top 200 cut-sets from your PSA.

4. Provide a list of the top 100 cut-sets for each initiator modeled in the PSA that contributes more than 5 percent to the baseline plant core damage frequency (CDF).

5. Copies of PSA "system notebooks" and latest PSA summary document.

6. List of time critical operator actions. Identify those actions that do not have job performance measures (JPMs).

7. Provide copies of the emergency operating procedures (EOPs).

8. 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).

9. Electronic copy of the site Individual Plant Examination of External Events (IPEEE), if available.

10. 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.).

11. List of available design (setup) margins in both the open and closed direction (identify safety-related direction) for valves in the motor-operated valve (MOV) and air-operated valve (AOV) programs. Identify the basis for how the margin was determined.

12. List of high risk Maintenance Rule systems/components based on engineering or expert panel judgment (i.e., those systems/components not identified in the PSA).

13. Structures, systems, and components (SSCs) in the Maintenance Rule (a)(1) category for the last 3 years.

14. Site top 10 issues list (if applicable).

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

16. Information of any common cause failure of components experienced in the last 5 years at your facility.

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

18. List of open operability evaluations.

19. List of components/systems considered operable but degraded/nonconforming.

20. Current management and engineering organizational chart.

21. Electronic copies of Updated Final Safety Analysis Report, Technical Specifications, Technical Specifications Bases, and Technical Requirements Manual.

22. Major one line electrical drawings (ac and dc) and key diagrams (paper copies).

23. Electronic copy of Piping and Instrumentation Drawings (P&IDs) (if available).

II. Information Requested (for the approximate 15 selected components) to be Available by January 27, 2016, (will be reviewed by the team in the Regional office during the week of February 1, 2016).

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.).

1. List of condition reports (corrective action documents) associated with each of the selected components for the last 6 years.

2. The maintenance history (corrective, preventive, and elective) associated with each of the selected components for the last 10 years. Identify frequency of preventive maintenance activities.

3. Copies of calculations associated with each of the selected components (if not previously provided), excluding data files. Please review the calculations and also provide copies of important referenced material (such as drawings, engineering requests, and vendor letters). [Pipe stress calculations are excluded from this request]

4. System Health Reports, System Descriptions, Design Basis Documents, and/or Training Lesson Plans associated with each of the selected components.

5. A list of modifications, including equivalency evaluations and setpoint changes, 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.

6. Copies of operability evaluations (open/closed for last 3 years) associated with each of the selected components and plans for restoring operability, if applicable.

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

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

9. Trend data on the selected electrical/mechanical components' performance for last 3 years (For example, pumps' performance including in-service testing, other vibration monitoring, oil sample results, etc., for valves: stroke time and leak rate results, etc.).

10. Provide copies of the normal and abnormal operating procedures associated with the selected components and selected scenarios.

11. A copy of any internal/external self-assessments and associated corrective action documents generated in preparation for the inspection.

12. Copy of latest completed tests and surveillances for each component, for example:

    - Pumps: comprehensive test, quarterly test, flow balance, etc.
    - Valves: stroke time testing, diagnostic testing, leak testing, interlocks, etc.
    - Heat Exchangers/room coolers: thermal performance, clean/inspect, fan flows, etc.

    Acceptance criteria basis calculations should also be included.

13. A copy of engineering/operations related audits completed in the last 2 years.

III. Additional Information to be Provided on February 8, 2016, On-Site (for final selected components)

1. During the in-office preparation activities, the team will be making final selections and may identify additional information needed to support the inspection. The lead inspector will provide a list of the additional information needed during the week of February 1, 2016.

2. Schedule of any testing/maintenance activities to be conducted on the selected components during the three on-site inspection weeks.

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. One complete set of P&IDs (paper copies).

4. Reference materials. (make available if needed during all on-site weeks):

    - Individual Plant Examination/Probabilistic Risk Assessment (IPE/PRA) report;
    - Procurement documents for components selected (verify retrievable);
    - Plant procedures (normal, abnormal, emergency, surveillance, etc.); and
    - Vendor manuals.

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

inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Christine A. Lipa, Chief
Engineering Branch 2
Division of Reactor Safety

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure:
Information Request for Component
Design Bases Inspection

cc w/encl: Distribution via LISTSERV®

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