

May 19, 2005

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

SUBJECT: DRESDEN NUCLEAR POWER STATION - INFORMATION REQUEST FOR AN  
NRC BIENNIAL SAFETY SYSTEM DESIGN AND PERFORMANCE  
CAPABILITY (SSDPC) BASELINE INSPECTION 05000237/2005009(DRS);  
05000249/2005009(DRS)

Dear Mr. Crane:

On July 25, 2005, the NRC will begin a biennial Safety System Design and Performance Capability (SSDPC) baseline inspection at the Dresden Nuclear Power Station. The schedule for on-site inspection activity is July 25 - 29, 2005, and August 8 - 12, 2005. This inspection will be performed in accordance with the NRC baseline Inspection Procedure 71111.21. The systems to be reviewed during this baseline inspection are emergency diesel generators and associated support systems.

Experience has shown that these baseline design 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 documents needed for the inspection. These documents have been divided into three groups. The first group is necessary to ensure that the inspection team is adequately prepared for the inspection. This information should be available to the Regional Office by no later than July 12, 2005. Insofar as possible, this information should be provided electronically to the lead inspector. The inspection team will review this information and, by July 20, 2005, will request specific items that should be available for review when the team arrives on site. The second group of requested documents contains additional items that the team will review, or need access to, during the inspection. Please have this information available by the first day of the on-site inspection, July 25, 2005. The third group lists information necessary to aid the inspection team in tracking issues identified as a result of the inspection. It is requested that this information be provided to the lead inspector as the information is generated during 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 onsite portions of the inspection.

The lead inspector for this inspection is Mr. Andrew Dunlop. We understand that our regulatory contact for this inspection is Mr. Joe Griffin of your organization. If there are any questions about the inspection or the material requested, please contact the lead inspector at (630) 829-9726 or via e-mail at [axd7@nrc.gov](mailto:axd7@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). ADAMS is 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 Nos. 50-237; 50-249  
License Nos. DPR-19; DPR-25

Enclosure: Safety System Design and Performance Capability  
Inspection (SSDPC) Document Request

cc w/encl: Site Vice President - Dresden Nuclear Power Station  
Dresden Nuclear Power Station Plant Manager  
Regulatory Assurance Manager - Dresden  
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  
Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer  
Chairman, Illinois Commerce Commission

The lead inspector for this inspection is Mr. Andrew Dunlop. We understand that our regulatory contact for this inspection is Mr. Joe Griffin of your organization. If there are any questions about the inspection or the material requested, please contact the lead inspector at (630) 829-9726 or via e-mail at axd7@nrc.gov.

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Enclosure: Safety System Design and Performance Capability  
 Inspection (SSDPC) Document Request

cc w/encl: Site Vice President - Dresden Nuclear Power Station  
 Dresden Nuclear Power Station Plant Manager  
 Regulatory Assurance Manager - Dresden  
 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  
 Assistant Attorney General  
 Illinois Department of Nuclear Safety  
 State Liaison Officer  
 Chairman, Illinois Commerce Commission

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DATE	05/17/05		05/18/05		05/19/05		

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INITIAL DOCUMENT REQUEST

**SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION (SSDPC)  
DOCUMENT REQUEST**

**Inspection Report:** 05000237/2005009(DRS); 05000249/2005009(DRS)  
**Inspection Dates:** July 25 - 29, 2005, and August 8 - 12, 2005  
**Inspection Procedures:** IP 71111.21, "Safety System Design and Performance Capability"  
**Lead Inspector:** Andrew Dunlop, Team Leader  
(630) 829-9726

***I. Information Requested for In-Office Preparation Week***

The following information is requested by July 12, 2005, or sooner, to facilitate the selection of specific items that will be reviewed during the on-site inspection week. The team will select specific items from the information requested below and submit a list to your staff by July 20, 2005. We request that the specific items selected from the lists be available and ready for review on the first day of inspection. If you have any questions regarding this information, please call the team leader as soon as possible. All information should be sent **electronically** if at all possible to (axd7@nrc.gov).

The items requested below apply **only** to the selected system(s):

Emergency Diesel Generators (EDGs) and associated support systems (e.g., EDG Air Start, EDG Lube Oil, EDG Fuel Oil, EDG Jacket Water Cooling, and EDG Room Cooling).

- (1) One copy of the system(s) description, design basis document(s), related training manual(s) and system health report(s).
- (2) One copy of the normal and abnormal operating procedures.
- (3) Five half-size (18" x 24") copies of the piping and instrument drawings (P&IDs) [paper copies].
- (4) Two half-size (18" x 24") copies of the electrical schematics, single-line and key diagrams [paper copies].
- (5) Name and phone numbers of the technical contact, a regulatory contact, and the design and system engineer(s) .
- (6) Current management and engineering organizational chart.

## INITIAL DOCUMENT REQUEST

- (7) List of analyses that either support or take credit for operation of the system(s). For each analysis, besides the number and title, include the purpose of the calculation, the date, a technical contact, and the current status (active, superceded, historical). Clarify any abbreviations or acronyms and give word titles for any numbers (e.g., "residual heat removal inner containment isolation valve" rather than "RH-2301-45B").

In addition to the above, specifically identify (by number) the calculation(s) that address each of the following areas. If a calculation cannot be identified for a particular area, please provide an explanation of why a calculation is not necessary.

- Breaker and fuse coordination calculations;
- Diesel loading calculations;
- Instrument uncertainty calculations;
- Room temperature environmental qualification calculations for major equipment;
- Relay setting calculations;
- Setpoint calculations for all technical specification or emergency operation procedure equipment;
- Time delay calculations (for any component incorporating time delay features);
- Undervoltage and degraded voltage calculations;
- Voltage drop calculations for all major electrical components (motors, MOVs);
- Check valve leakage criteria calculations;
- Design basis (flow rates, levels, pressures, temperatures) confirmation calculations (including NSSS calculations);
- Heat exchanger calculations;
- NPSH and total dynamic head calculations;
- Operability determination support calculations;
- Pressure transient/water hammer evaluations;
- Pump minimum recirculation flow calculations;
- Relief valve sizing calculations;
- Tank over-pressurization calculations; and
- Tank sizing calculations.

- (8) List of all major modifications or set-point changes made to the selected system(s) since pre-operational testing. Major changes are those that significantly affected the way the system operated, for example, replacement of major components, modification to electrical control logic, etc. Please include the number and title, the modification purpose (description), the date, the status (whether the calculation is active, canceled, superceded, or under revision) and a technical contact. Spell out abbreviations, or acronyms and give word titles for any numbers. Note if any of the modifications required prior NRC approval. One way to provide this information is by providing the first sheet of the modification (not the cover letter).

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- (9) List of open temporary modifications, if any.
- (10) List of the selected system(s) electrical equipment/components that have been removed from the licensee's EQ Program, if any.
- (11) List of condition reports (corrective action documents) that are in one of the following categories. For each condition report, besides the number and title, clearly designate the status (open/closed), the importance ranking, the date initiated, the date closed (if applicable), the status of corrective actions, and a technical contact. (Note: it is not necessary to provide a separate list for each category.)
  - Any EDG or support system condition report initiated more than two years prior to the inspection that is still open;
  - Any EDG or support system condition report (open or closed) initiated in the last two years that required an apparent or root cause analysis (i.e., Category 1 or 2 condition reports);
  - Any EDG or support system condition report (open or closed) initiated in the last two years that required an operability determination (include determination); and
  - Any condition report (open or closed) initiated in the last two years that related to problems with the quality of engineering (not system specific).
- (12) The corrective maintenance history of major components for the last two years.
- (13) List of operability evaluations as far back as retrievable. Include both those currently relied upon and those that were previously relied upon for operability.
- (14) List of Engineering Related Operator Workarounds.

### **II. Information Requested to be Available on First Day of Inspection (July 25, 2005)**

We request that the following information be available to the team once they arrive on-site. The team will select the specific documents that will be reviewed for items (1) through (5) by July 20, 2005. Some documents, such as the Updated Final Safety Analysis Report or the Technical Specification, do not need to be solely available to the team (i.e., they can be located in a reference library) as long as the team has ready access to them. However, they should be located prior to the inspection team arriving on-site such that if the team requests any of these documents they are available within a short time (i.e., less than two hours).

- (1) Copies of the selected calculations indicated by subject area in item I.7, excluding data files. Please review the calculations and also provide copies of referenced material (such as drawings, engineering requests, vendor letters).
- (2) Copies of the selected MAJOR design changes, modifications, and set-point changes as indicated in item I.8. For each modification, as a minimum provide

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the purpose, the 10 CFR 50.59 evaluation or screening, and the completed post-modification test.

- (3) Copies of the selected condition reports (corrective action documents) indicated in item I.11, including any associated root/apparent cause analyses and operability determinations.
- (4) Copies of selected operability evaluations indicated in item I.13 and plans for restoring operability, if applicable.
- (5) Copies of selected work-around evaluations indicated in item I.14 and plans for resolution.
- (6) Copies of any open temporary modifications.
- (7) An Index of the surveillances for ALL Technical Specification equipment completed during the last two years.
- (8) List of all maintenance, surveillance, and annunciator response procedures related to the systems. Include name as well as number. For the surveillance procedures, provide a cross-reference which shows how each technical specification requirement is being met.
- (9) One copy of each major equipment drawing (valves, pumps, tanks, strainers), including pump head curves (1/2 size, 18" x 24").
- (10) Copies of isometric drawings for major flow paths (1/2 size).
- (11) Copies of elementary diagrams (1/2 size).
- (12) Index of wiring diagrams (1/2 size).
- (13) Copies of loop drawings (1/2 size).
- (14) Copies of instrumentation and control logic drawings (1/2 size).
- (15) Maintenance history of major components for the last two years.
- (16) Trend data on the EDG fuel oil transfer pumps performance (over last three years) including inservice testing, other vibration monitoring, oil sample results, etc., as applicable.
- (17) Inservice testing valve tables for EDG and support systems.
- (18) Inservice testing basis document for EDG and support systems (if available).

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- (19) A copy of any self-assessments and associated corrective action documents generated in preparation for the inspection.
- (20) One copy of the current plant organization charts.
- (21) Reference materials (make available if needed):
  - Equipment qualification binders;
  - General set of plant drawings;
  - IPE/PRA report;
  - Pre-operational tests, including documents showing resolution of deficiencies;
  - Procurement documents for major components in each system (verify retrievable);
  - Relevant operating experience information (such as vendor letters or utility experience);
  - Standards used in system design (such as IEEE, ASME, TEMA);
  - System procedures;
  - Technical Specifications;
  - Technical Data Book (if applicable);
  - Updated Final Safety Analysis Report; and
  - Vendor manuals.

### ***III. 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).

If you have questions regarding the information requested, please contact the team leader.