

March 20, 2003

Mr. John L. Skolds, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNITS 1 AND 2  
ANNOUNCEMENT OF BASELINE INSPECTION

Dear Mr. Skolds:

On May 5, 2003, the NRC will begin the required biennial inspection of safety system design and performance capability at your Byron Station, Units 1 and 2. This inspection will be performed in accordance with the NRC baseline inspection procedures 71111.21. The system/components to be reviewed during the SSDI baseline inspection are the auxiliary feedwater and DC power systems.

Experience has shown that the baseline design inspections are extremely resource intensive both for the NRC inspectors and the utility staff. In order to minimize the impact that the inspection has on the site and to ensure a productive inspection for both sides, we have enclosed a request for documents needed for the inspection. The documents have been divided into two groups. The first group lists information necessary in order to ensure the inspection team is adequately prepared for the inspection. This information should be available to the Regional Office by no later than April 21, 2003. In so far as possible, this information should be provided electronically to the lead inspector.

The second group of documents requested are those items which the team will review or need access to during the inspection. It is important that these documents be as complete as possible, in order to minimize the number of documents requested during the preparation week or during the onsite inspection.

The lead inspector for this inspection is Andrew Dunlop. If there are any questions about the material requested, or the inspection, please call the lead inspector at 630-829-9726 or e-mail him at axd7@nrc.gov.

In accordance with 10 CFR 2.790 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/**

David E. Hills, Chief  
Mechanical Engineering Branch  
Division of Reactor Safety

Docket Nos. 50-454; 50-455  
License Nos. NPF-37; NPF-66

Enclosure: Initial Document Request

cc w/encl: Site Vice President - Byron  
Byron Station Plant Manager  
Regulatory Assurance Manager - Byron  
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 - Braidwood and Byron  
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## Initial Document Request

### I. Information Requested Expeditiously

The following information is requested to be provided as soon as possible, but no later than April 21, 2003. In so far as possible, information should be provided electronically.

#### **Safety System Design and Performance Capability Inspection (SSDI)**

The items requested below apply **only** to the selected systems (auxiliary feedwater and DC power systems):

1. One copy of the system description, training manual, design basis document, and system health report (as appropriate).
2. One copy of the normal and abnormal operating procedures.
3. Six half-size copies of the piping and instrument drawings (Flow Diagrams).
4. Two half-size copies of the single-line and key electrical diagrams.
5. PRA information (CDF, RRW, RAW, F-V) for system components, as applicable.
6. Name and phone numbers of the technical contact, a regulatory contact, and the design and system engineer(s).
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. 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 areas, 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
8. List of all major modifications made to the selected systems since pre-operational testing. Major changes are those that significantly affected the way the system operated, for example, replacement of major components. 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.
  9. List of all major setpoint changes made to the systems since pre-operational testing, unless included as part of Item 8. Major changes are those that significantly affected the way the system operated. Please include the number and title, the component affected, the purpose, the date, and a technical contact. Spell out abbreviations, or acronyms and give word titles for any numbers.
  10. List of open temporary modifications.
  11. List of corrective action documents (CRs) that are in one of the following categories. For each CR, 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 CR initiated more than two years prior to the inspection that is still open
    - Any CR (open or closed) initiated in the last two years that required an apparent or root cause analysis (i.e., Category 1 or 2 CR)
    - Any CR (open or closed) initiated in the last two years that required an operability determination (include determination)
    - Any CR (open or closed) initiated in the last two years that related to problems with quality of engineering (not system specific)

## II. Information Requested to be Available on First Day of Inspection

We request that the following information be available to the team once it arrives onsite. Some documents, such as the Updated Final Safety Analysis Report (UFSAR) or the Technical Specification (TS), 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.

1. Copies of the 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 all MAJOR design changes, modifications and setpoint changes as indicated in items I.8 and I.9. For each modification, as a minimum provide the purpose, the 10 CFR 50.59 evaluation or screening, and the completed post-modification test.
3. Copies of any open temporary modifications.
4. Copies of all corrective action documents (CRs) indicated in item I.11, including any associated root/apparent cause analyses and operability determinations.
5. Copies of the surveillances for ALL Technical Specification equipment within the auxiliary feedwater and DC power systems completed during the last two years.
6. List of all maintenance, surveillance, and annunciator response procedures related to the auxiliary feedwater and DC power 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.
7. One copy of each major equipment drawing (valves, pumps, tanks, strainers), including pump head curves (1/2 size).
8. Copies of isometric drawings for major flow paths (1/2 size).
9. Copies of elementary diagrams (1/2 size).
10. Copies of wiring diagrams (1/2 size).
11. Copies of loop drawings (1/2 size).
12. Copies of instrumentation and control logic drawings (1/2 size).
13. Maintenance history of major components for last two years.
14. Trend data on the auxiliary feedwater pump performance (over last three years) including inservice testing, other vibration monitoring, oil sample results, etc., as applicable.
15. A copy of any self-assessments and associated corrective action documents generated in preparation for the inspection.
16. One copy of the current plant organization charts and site telephone list.
17. Reference materials:
  - Equipment qualification binders
  - General set of plant drawings (Flow Diagrams) (1/2 size)
  - 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
- Updated Final Safety Analysis Report
- Vendor manuals