



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

June 19, 2018

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

**SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2—REQUEST FOR INFORMATION FOR AN NRC DESIGN BASES ASSURANCE INSPECTION (PROGRAM): IMPLEMENTATION OF THE ENVIRONMENTAL QUALIFICATION PROGRAM; INSPECTION REPORT 05000254/2018011; 05000265/2018011**

Dear Mr. Hanson:

On August 20, 2018, the U. S. Nuclear Regulatory Commission (NRC) will begin a Triennial Baseline Design Bases Assurance Inspection (Program) at Quad Cities Nuclear Power Station, Units 1 and 2. This inspection will be performed in accordance with NRC Baseline Inspection Procedure 71111.21N, Attachment 1.

The Design Bases Assurance Inspection will focus on the implementation of the electrical equipment Environmental Qualification (EQ) Program to verify you are maintaining the qualified status of equipment during the life of the plant. The EQ components to be reviewed during this baseline inspection will be identified during the in-office preparation week that occurs prior to the onsite inspection week.

The inspection will include two weeks of onsite inspection. The inspection team will consist of three NRC inspectors. The current inspection schedule is as follows:

- Preparation week: August 13–17, 2018;
- Onsite inspection weeks: August 20–24, 2018, and September 3–7, 2018.

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 onsite 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 July 23, 2018. By July 27, 2018, the lead inspector will communicate the initial selected set of approximately 12 EQ components.
- The second group of documents requested is those items needed to support our in-office preparation activities for the selected set of 9–12 EQ components. This set of documents should be provided to the lead inspector at the Regional Office no later than August 6, 2018. 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 August 20, 2018. 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. Benny Jose. We understand that our licensing contact for this inspection is Mr. Rick Swart of your organization. If there are any questions about the inspection or the material requested in the enclosure, please contact the lead inspector at 630-829-9756 or via e-mail at [Benny.Jose@nrc.gov](mailto:Benny.Jose@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.

This letter and its enclosure will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Benny Jose, Senior Reactor Engineer  
Engineering Branch 2  
Division of Reactor Safety

Docket Nos. 50–254, 50–265  
License Nos. DPR–29, DPR–30

Enclosure:  
Design Bases Assurance Inspection  
EQ Program Document Request

cc: Distribution via LISTSERV®

Letter to Bryan C. Hanson from Benny Jose dated June 19, 2018

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2—REQUEST FOR INFORMATION FOR AN NRC DESIGN BASES ASSURANCE INSPECTION (PROGRAM): IMPLEMENTATION OF THE ENVIRONMENTAL QUALIFICATION PROGRAM; INSPECTION REPORT 05000254/2018011; 05000265/2018011

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## DESIGN BASES ASSURANCE INSPECTION EQ PROGRAM DOCUMENT REQUEST

**Inspection Report:** 05000254/2018011; 05000265/2018011

**Inspection Dates:** August 20–24, 2018 and  
September 3–7, 2018.

**Inspection Procedure:** IP 71111.21N, “Design Bases Assurance Inspection (Program),” Attachment 1, “Environmental Qualification (EQ) under 10 CFR 50.49 Programs, Processes, and Procedures”

**Lead Inspector:** Benny Jose, Senior Reactor Engineer, DRS  
630-829-9756  
[Benny.Jose@nrc.gov](mailto:Benny.Jose@nrc.gov)

### ***I. Information Requested for Initial Inspection Scoping Activities***

The following information is requested by July 23, 2018, 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, 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 50 components required to meet environmental qualifications (EQ) from your site specific probabilistic safety analysis (PSA) sorted by Fussell Vesely Importance.
2. NRC Safety Evaluation Report(s) associated with EQ.
3. Electronic copies of Updated Final Safety Analysis Report, Technical Specifications, and Technical Specifications Bases. Specifically identify which Updated Final Safety Analysis Report sections address EQ (including seismic).
4. Identify the various EQ standards (including year, edition, or revision) that the station is committed to.
5. Site (and corporate if applicable) procedures associated with the Title 10 of the *Code of Federal Regulations*, Part 50.49, EQ Program for electrical components. Include procedures for procurement of qualified equipment, maintenance of qualified equipment, modification to qualified equipment (including Equivalency or Commercial Grade Dedication (CGD) Programs), and material storage and shelf life controls.
6. Copy of EQ Design Basis Document, if applicable.

Enclosure

## DESIGN BASES ASSURANCE INSPECTION EQ PROGRAM DOCUMENT REQUEST

7. Copy of any open licensing commitments related to EQ, if applicable.
8. Equipment Qualification Master List (EQML). Specific issues to be identified include: safety classification (safety-related or nonsafety-related), Regulatory Guide 1.97 instrumentation, EQ qualification (e.g. DOR, NUREG 588, 50.49), original or replaced after implementation of 50.49, and plant location.
9. List of any installed equipment removed from the EQML and basis for removal.
10. List of EQ solenoid valves that are normally continuously energized.
11. For units that have entered the period of extended operation If EQ files were reviewed for Aging Management effects of license renewal, identify which EQ files were modified/changed to incorporate appropriate actions for the period of extended operation. Copies of any EQ Aging Management Programs.
12. List or drawings of plant areas that are subjected to EQ, identifying design (limiting) temperature, both normal and accident, high energy line break, radiation levels, etc. that the associated equipment will have to be qualified to meet EQ. If unit has obtained a power uprate (greater than 5 percent) provide same information pre-uprate (earliest available if multiple uprates).
13. List of CGD evaluations performed, for which the dedicated parts have been issued for installation (parts issued for the last 10 years) on EQ applications in the plant. Include CGD evaluation number, name of part, component ID or description of the component the part was issued to repair, work order, and date issued or installed.
14. List of Corrective Action Documents related to the EQ program or EQ of specific components for the last 3 years.
15. Current management and engineering organizational chart.

### **II. Information Requested (for the approximate 9–12 selected components) to be Available by August 6, 2018.**

1. EQ summary report for each component/subcomponent.
2. Qualification Maintenance Requirement Sheet or equivalent.
3. List of corrective action documents associated with each of the selected components for the last 3 years.
4. Photos of any component in containment or high radiation areas, if available.
5. EQ file, including associated Qualification Test Reports.
6. Vendor manual (electronic copy or availability of hard copy during inspection).
7. Preventive maintenance template.

## DESIGN BASES ASSURANCE INSPECTION EQ PROGRAM DOCUMENT REQUEST

8. Last performed work order (WO) for each associated EQ preventive maintenance.
9. List of corrective maintenance WOs for the last 5 years. Include WO number, date performed, and brief one line description.
10. If repair work (e.g., a motor rewind) was performed under a purchase order, provide copy of the purchase order.
11. Thermal life calculation.
12. Any self-assessments of the EQ program in the last 3 years.

This information should be separated for each selected component, especially if provided electronically (e.g., folder with component name that includes EQ files, Qualification Test Reports, calculations, corrective action documents, maintenance history, etc.).

### ***III. Additional Information to be Provided on August 20, 2018 Onsite***

1. During the in-office preparation activities, the team 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 August 13, 2018.

### ***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 by 2:00 p.m. during the inspection to each team member).

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