



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

**REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511**

March 7, 2018

Mr. Robert S. Bement  
Executive Vice President Nuclear/  
Chief Nuclear Officer  
Arizona Public Service Company  
P.O. Box 52034, MS 7602  
Phoenix, AZ 85072-2034

**SUBJECT: PALO VERDE NUCLEAR GENERATING STATION – NOTIFICATION OF NRC  
DESIGN BASES ASSURANCE INSPECTION (PROGRAMS)  
05000528/2018011, 05000529/2018011, AND 05000530/2018011 INITIAL  
REQUEST FOR INFORMATION**

Dear Mr. Bement:

On April 24, 2018, the NRC will begin an inspection at the Palo Verde Nuclear Generating Station. A three-person team will perform this inspection using NRC Inspection Procedure 71111.21N, "Design Bases Inspection (Programs)," Attachment 1, "Environmental Qualification under 10 CFR 50.49 Programs, Processes, and Procedures."

This inspection will evaluate the implementation of the environmental qualification of electrical equipment program, as required by the Palo Verde Nuclear Generating Station Operating License. Additionally, the team will perform an inspection of the equipment qualification documentation files to verify that electrical equipment important to safety meets the requirements of 10 CFR 50.49. The team will select components that will be subjected to harsh environments and required mitigate the consequences of a design basis accident.

The inspection will include an information gathering site visit by the team leader and risk analyst, and two weeks of on-site inspection by the team. The inspection will consist of three NRC inspectors. The current inspection schedule is as follows:

On-site Information Gathering Visit: April 24–26, 2018  
Preparation Weeks: April 30–May 4 and May 14–18, 2018  
On-site Weeks: May 7–11 and May 21–25, 2018

The purpose of the information gathering visit is to meet with members of your staff to become familiar with the Palo Verde Nuclear Generating Station environmental qualification program. The lead inspector will request a meeting with your personnel to discuss the site environmental qualification program and procedures. Additionally, the lead inspector will request a discussion with your staff to become familiar with the equipment qualification regulations and standards to which the site is committed. Additional information and documentation needed to support the inspection will be identified during the inspection, including interviews with engineering managers and engineers.

Our experience with these inspections has shown that they are 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, we have enclosed a request for information needed for the inspection. This information should be made available to the lead inspector on or before the April 24, 2018, visit. Since the inspection will be concentrated on the environmental qualification of the equipment, the equipment qualification master list should be available to review during the information gathering visit to assist in our selection of components.

It is requested that this information be provided to the lead inspector as the information is generated during the inspection. Additional requests by inspectors will be made during the on-site week for specific documents needed to complete the review of that component/selection. 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. In order to facilitate the inspection, we request that a contact individual be assigned to each inspector to ensure information requests, questions, and concerns are addressed in a timely manner.

The lead inspector for this inspection is Wayne Sifre. We understand that our licensing engineer contact for this inspection is Sean Dornseif. If there are any questions about the inspection or the requested materials, please contact the lead inspector by telephone at 817-200-1193 or by e-mail at [Wayne.Sifre@nrc.gov](mailto:Wayne.Sifre@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 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," a copy of this letter will be made 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/*

Thomas R. Farnholtz, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos. 50-528, 50-529, and 50-530  
License Nos. NPF-41, NPF-51, and NPF-74

Enclosure: Initial Request for Information

cc: Electronic Distribution

PALO VERDE NUCLEAR GENERATING STATION – NOTIFICATION OF NRC DESIGN BASES ASSURANCE INSPECTION (PROGRAMS) 05000528/2018011, 05000529/2018011, AND 05000530/2018011 INITIAL REQUEST FOR INFORMATION - March 7, 2018

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**Initial Request for Information  
Design Bases Inspection (Programs), Environmental Qualification  
Palo Verde Nuclear Generating Station**

Inspection Report: 05000528/2018011, 05000529/2018011,  
050005302018011

Information Gathering Dates: April 24–26, 2018

Inspection Dates: May 7–11, 2018, May 21-25, 2018

Inspection Procedure: IP 71111, Attachment 21N, “Design Bases Inspection  
(Programs)”

Lead Inspector: Wayne C. Sifre, Senior Reactor Inspector

***I. Information Requested for Information Gathering Visit (April 24, 2018)***

The following information should be provided to the lead inspector in hard copy or electronic format (Certrec IMS preferred), to the attention of Wayne Sifre by April 23, 2018, to facilitate the reduction in the items to be selected for a final list of components. The inspection team will finalize the selected list during the prep week using the documents requested in this enclosure. The specific items selected from the lists shall be available and ready for review on the day indicated in this request. \*Please provide requested documentation electronically in “pdf” files, Excel, or other searchable formats, if possible. The information 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 pressurized water reactor technology. If requested documents are large and only hard copy formats are available, please inform the inspector(s), and provide subject documentation during the first day of the on-site inspection.

1. List of components that are in the equipment qualification master list. If plant is approved to categorize structures, systems, and component in accordance with 10 CFR 50.69, please provide the Risk Informed Safety Category of the component.
2. Listing of the equipment qualification master list components sorted by Birnbaum risk importance.
3. List of all post-accident monitoring instrumentation components and locations.
4. Documents which show the environmental service conditions expected for areas in which the equipment qualification components are located.
5. Palo Verde Nuclear Generating Station, word-searchable Updated Final Safety Analysis Report (UFSAR), License Conditions, and Technical Specifications. Specifically, identify which UFSAR sections address environmental (including seismic) qualification, seismic.

Enclosure

6. NRC safety evaluation report(s) associated with Palo Verde Nuclear Generating Station environmental qualification program.
7. Identify the various environmental qualification standards (including year, edition, or revision) that Palo Verde Nuclear Generating Station is committed.
8. Identify whether Palo Verde Nuclear Generating Station has entered its period of extended operation (i.e., operation past the original 40-year license period).
9. Site (and corporate if applicable) procedures associated with the 10 CFR 50.49 environmental qualification program for electrical components. Additionally, please provide similar procedures used to verify mechanical components meet their 10 CFR Part 50, Appendix A, Criterion 4, "Environmental and Dynamic Effects Design Bases." Include procedures for procurement of qualified equipment, maintenance of qualified equipment, and modification to qualified equipment (including equivalency or commercial grade dedication programs).
10. Site high energy line break analyses, including associated plant area drawings.
11. Procedures for material storage and shelf life controls.
12. List of commercial grade dedication evaluations performed, for which the dedicated parts have been issued for installation on equipment qualification applications in the plant, for the previous five years. Include description of the component the part was issued to repair, work order, and date issued or installed.
13. List of condition reports related to the equipment qualification program or environmental qualification of components (both electrical and mechanical) for the previous 5 years.
14. Lists of modifications, repairs, or replacement of equipment qualification master list components completed for the previous 5 years.
15. List of modifications, repairs, or replacements of containment penetrations for the previous 5 years.
16. List of components removed from the environmental qualification program since beginning of operation.
17. Any self-assessments and quality assurance assessments of the environmental qualification program performed in the previous 5 years.
18. List of systems, system numbers/designators, and corresponding names.

**II. Discussions Requested**

1. Interview with representative to discuss site environmental qualification service condition analyses for plant areas, including plant drawings and assumptions. This includes analysis for areas that are subject to high energy line breaks (HELB).
2. Interview with representative to discuss environmental qualification mandated maintenance elements are integrated into plant programs and procedures.
3. Interview with representative to discuss maintaining qualification for plant/equipment that entered its period of extended operation, if applicable.

**III. Information Requested for Inspection Preparation (April 30, 2018)**

1. Equipment qualification documentation files, including test reports, for the electrical components selected by the lead inspector listed on the equipment qualification master list.
2. References associated with the electrical components equipment qualification document files.
3. Vendor manuals and technical sheets associated with the selected electrical components.
4. Tours of the rooms in which the selected electrical components are installed.
5. Tour of stored selected electrical components in the warehouse.

Inspector Contact Information:

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