



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

April 20, 2016

Mr. Randall K. Edington
Executive Vice President Nuclear/CNO
Arizona Public Service Company
P.O. Box 52034, MS 7602
Phoenix, AZ 85072-2034

**SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 -
NOTIFICATION OF NRC COMPONENT DESIGN BASES INSPECTION
(05000528/2016007; 05000529/2016007; 05000530/2016007) AND INITIAL
REQUEST FOR INFORMATION**

Dear Mr. Edington:

On July 18, 2016, the U.S. Nuclear Regulatory Commission (NRC) will begin a triennial baseline Component Design Bases Inspection at the Palo Verde Generating Station. A seven-person team will perform this inspection using NRC Inspection Procedure 71111.21, "Component Design Bases Inspection."

The inspection focuses on components and operator actions that have high risk and low design margins. The samples reviewed during this inspection will be identified during an information gathering visit and during the subsequent in-office preparation week. In addition, a number of operating experience issues will also be selected for review.

The inspection will include an information gathering site visit by the team leader and a senior reactor analyst, and 3-weeks of onsite inspection by the team. The inspection will consist of five NRC inspectors and two contractors, of which six will focus on engineering and one on operations. The current inspection schedule is as follows:

Onsite Information Gathering Visit: July 18 – 22, 2016

Preparation Week: July 25 – 29, 2016

Onsite Weeks: August 1 – 5, 15 – 19, and August 29 – September 2, 2016.

The purpose of the information gathering visit is to meet with members of your staff to identify potential risk-significant components and operator actions. The lead inspector will also request a tour of the plant with members of your operations staff and probabilistic safety assessment staff. During the onsite weeks, several days of time will be needed on the plant-referenced simulator in order to facilitate the development of operator action-based scenarios. Additional

information and documentation needed to support the inspection will be identified during the inspection, including interviews with engineering managers, engineers, and probabilistic safety assessment staff.

Our experience with these inspections has shown that they 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, we have enclosed a request for information needed for the inspection. The request has been divided into two groups. The first group lists information necessary for the information gathering visit and for general preparation. This information should be available to the regional office no later than July 11, 2016. Insofar as possible, this information should be provided electronically to the lead inspector. Since the inspection will be concentrated on high risk/low margin components, calculations associated with your list of high risk components should be available to review during the information gathering visit to assist in our selection of components based on available design margin.

The second group of documents requested 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. An additional request will be made by the team during the preparation week once the specific components have been selected. Additional requests by inspectors will also be made throughout all three onsite weeks 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 onsite 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 Mr. Dave Heckman. 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.

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," 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).

R. Edington

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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; 50-530
License Nos: NPF-41; NPF-51; NPF-74

Enclosure: Component Design Bases
Inspection Request for Information

**Initial Request for Information
Component Design Bases Inspection
Palo Verde Nuclear Generating Station**

Inspection Report: 05000528/2016007, 05000529/2016007, 05000530/2016007

Information Gathering Dates: July 18 – 22, 2016

Inspection Dates: August 1 – 5, 2016, August 15 – 19, 2016,
August 29 – September 2, 2016

Inspection Procedure: IP 71111.21, “Component Design Bases Inspection”

Lead Inspector: Wayne Sifre, Senior Reactor Inspector

I. Information Requested Prior to Information Gathering Visit (July 18, 2016)

The following information (Section I of this enclosure) should be sent to the Region IV office in hard copy or electronic format (Certrec IMS preferred), to the attention of Wayne Sifre by July 11, 2016, to facilitate the reduction in the items to be selected for a final list during the preparation week July 25, 2016. The inspection team will finalize its sample selections during the prep week and will provide an additional information request with specific items by sample. This information shall be made available by the first day of the onsite portion of the inspection. 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/or only hard copy formats are available, please inform the inspector(s), and provide subject documentation during the first day of the onsite inspection.

1. An Excel spreadsheet of equipment basic events (with definitions) including importance measures sorted by risk achievement worth (RAW) and Fussell-Vesely (FV) from your internal events probabilistic risk assessment (PRA). Include basic events with RAW value of 1.3 or greater.
2. A list of the top 50 cut-sets from your PRA.
3. Copies of PRA “system notebooks,” and the latest PRA summary document.
4. An excel spreadsheet of PRA human action basic events or risk ranking of operator actions from your site specific PSA sorted by RAW and FV. Provide copies of your human reliability worksheets for these items.

5. If you have an external events or fire PSA model, provide the information requested in items 1-4 for external events and fire.
6. Any pre-existing evaluation or list of components and associated calculations with low design margins.
7. A list of high risk maintenance rule systems/components and functions; based on engineering or expert panel judgment.
8. A list of operating experience evaluations for the last 2 years.
9. A list of all time-critical operator actions in procedures.
10. A list of permanent and temporary modifications sorted by component identified in Item 1.
11. A list of current "operator work arounds/burdens."
12. A list of the design calculations, which provide the design margin information for components included in Item 1. (Calculations should be available during the information gathering visit).
13. List of root cause evaluations associated with component failures or design issues initiated/completed in the last 5 years.
14. A copy of the current management and engineering organizational charts.
15. A copy of the Palo Verde Nuclear Generating Station IPEEE, if available electronically.
16. A list of any common-cause failures of components in the last 3 years.
17. An electronic copy of the Design Bases Documents.
18. An electronic copy of the System Health notebooks.
19. A copy of any internal/external self-assessments and associated corrective action documents generated in preparation for the inspection.
20. A copy of engineering/operations related audits completed in the last 2 years.
21. A list of motor operated valves (MOVs) in the program, design margin and risk ranking.
22. A list of air operated valves (AOVs) in the valve program, design margin and risk ranking.
23. Structure, system, and components in the Maintenance Rule (a)(1) category.

24. Site top 10 issues list, if available.
25. Procedures used to accomplish operator actions associated with the basic events in your PRA.
26. A list of licensee contacts for the inspection team with pager or phone numbers.
27. Electronic copies of the Technical Specifications, Technical Specifications Bases, and the Updated Final Safety Analysis Report.

II. 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).

Inspector Contact Information:

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Sincerely,

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Enclosure: Component Design Bases
Inspection Request for Information

ADAMS ACCESSION NUMBER: ML16111B331

<input type="checkbox"/> SUNSI Review By: WSifre	ADAMS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive	Keyword: NRC-002
OFFICE	DRS/EB1	C:EB1		
NAME	WSifre	TFarnholtz		
SIGNATURE	/RA/	/RA/		
DATE	4/19/16	4/20/16		

OFFICIAL RECORD COPY

Letter to Randall K. Edington from Thomas Farnholtz, dated April 20, 2016

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