



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 EAST LAMAR BLVD  
ARLINGTON, TEXAS 76011-4511

May 23, 2012

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

**SUBJECT: PALO VERDE NUCLEAR GENERATING STATION – INITIAL INFORMATION  
REQUEST FOR NRC TRIENNIAL BASELINE COMPONENT DESIGN BASES  
INSPECTION NRC INSPECTION REPORT 05000528; 05000529;  
05000530/2012008**

Dear Mr. Edington:

On November 13, 2012, the NRC will begin a triennial baseline Component Design Bases Inspection at the Palo Verde Nuclear 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, operating experience, 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. This will be followed by 3-weeks of onsite inspection by the team. The inspection will consist of five NRC inspectors and two contractors, of which four will focus on engineering and one on operations. The current inspection schedule is as follows:

Onsite information gathering visit: Week of October 29, 2012  
Preparation Week: November 5, 2012  
Onsite weeks: November 13, 2012  
November 26, 2012  
December 10, 2012

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 three groups. The first group lists information necessary for the information gathering visit, general preparation, and sample selection. This information should be available to the regional office no later than October 15, 2012. If 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 is those items that the team will need access to the first day of onsite inspection to complete the required inspection samples. 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. Additional requests by inspectors will 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.

During the onsite portion of our inspection, we request that you make available a conference room large enough to accommodate the inspection team. In that conference room, please make available a computer with access to a printer, your condition reporting database, and your documentation database.

The lead inspector for this inspection is Matthew Young. We understand that our licensing engineer contact for this inspection is Del Elkinton. If there are any questions about the inspection or the requested materials, please contact the lead inspector at (817) 200-1545 or via e-mail at [matt.young@nrc.gov](mailto:matt.young@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.

R. Edington

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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). 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 Farnholtz, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket: 50-528; 50-529; 50-530  
License: NPF-41; NPF-51; NPF-74

Enclosure:  
Component Design Basis Inspection  
Document Request  
cc w/enclosure:

Electronic Distribution for Palo Verde

Electronic distribution by RIV:

- Regional Administrator ([Elmo.Collins@nrc.gov](mailto:Elmo.Collins@nrc.gov))
- Deputy Regional Administrator ([Art.Howell@nrc.gov](mailto:Art.Howell@nrc.gov))
- DRP Director ([Kriss.Kennedy@nrc.gov](mailto:Kriss.Kennedy@nrc.gov))
- DRP Deputy Director ([Troy.Pruett@nrc.gov](mailto:Troy.Pruett@nrc.gov))
- Acting DRS Director ([Tom.Blount@nrc.gov](mailto:Tom.Blount@nrc.gov))
- Acting DRS Deputy Director ([Patrick.Louden@nrc.gov](mailto:Patrick.Louden@nrc.gov))
- Senior Resident Inspector ([Tony.Brown@nrc.gov](mailto:Tony.Brown@nrc.gov))
- Resident Inspector ([Mica.Baquera@nrc.gov](mailto:Mica.Baquera@nrc.gov))
- Resident Inspector ([Dustin.Reinert@nrc.gov](mailto:Dustin.Reinert@nrc.gov))
- Branch Chief, DRP/D ([Ryan.Lantz@nrc.gov](mailto:Ryan.Lantz@nrc.gov))
- Senior Project Engineer ([Nick.Taylor@nrc.gov](mailto:Nick.Taylor@nrc.gov))
- Project Engineer, DRP/D ([David.You@nrc.gov](mailto:David.You@nrc.gov))
- Project Engineer, DRP/D ([Brian.Parks@nrc.gov](mailto:Brian.Parks@nrc.gov))
- Public Affairs Officer ([Victor.Dricks@nrc.gov](mailto:Victor.Dricks@nrc.gov))
- Public Affairs Officer ([Lara.Uselding@nrc.gov](mailto:Lara.Uselding@nrc.gov))
- Project Manager ([Balwant.Singal@nrc.gov](mailto:Balwant.Singal@nrc.gov))
- Acting Branch Chief, DRS/TSB ([Dale.Powers@nrc.gov](mailto:Dale.Powers@nrc.gov))
- RITS Coordinator ([Marisa.Herrera@nrc.gov](mailto:Marisa.Herrera@nrc.gov))
- Regional Counsel ([Karla.Fuller@nrc.gov](mailto:Karla.Fuller@nrc.gov))
- Technical Support Assistant ([Loretta.Williams@nrc.gov](mailto:Loretta.Williams@nrc.gov))
- Congressional Affairs Officer ([Jenny.Weil@nrc.gov](mailto:Jenny.Weil@nrc.gov))
- OEMail Resource

Inspection Reports/MidCycle and EOC Letters to the following:  
ROPreports

Only inspection reports to the following:  
RIV/ETA: OEDO ([Michael.McCoppin@nrc.gov](mailto:Michael.McCoppin@nrc.gov))  
DRS/TSB STA ([Dale.Powers@nrc.gov](mailto:Dale.Powers@nrc.gov))

SUNSI Review Completed: Yes ADAMS: Yes No Initials: MRY  
Publicly Available  Non-Publicly Available  Sensitive  Non-Sensitive  
MLXXXXXXXXXX

RIV:RI:DRS/EB1	RIV:BC/EB1			
M. Young	T. Farnholtz			
<b>/RA/</b>	<b>/RA/</b>			
05/21/2012	5/22/12			

**INFORMATION REQUEST FOR PALO VERDE NUCLEAR GENERATING STATION  
COMPONENT DESIGN BASES (CDBI) INSPECTION**

Inspection Report: 0500050528/2012008  
0500050529/2012008  
0500050530/2012008

Information Gathering Dates: October 30 – November 1, 2012

On-site Inspection Dates: November 13 – 16, 2012  
November 26 – 30, 2012  
December 10 – 14, 2012

Inspection Procedure: IP 71111.21, "Component Design Bases  
Inspection"

Lead Inspector/Team Leader: Matthew Young  
817-200-1545  
matt.young@nrc.gov

***I. Information Requested Prior to the information Gathering Visit (October 15, 2012)***

The following information (Section I of this enclosure) should be sent to the Region IV office in hard copy or electronic format (ims.certrec.com or compact disc, preferred), in care of Matthew Young, by October 15, 2012, to facilitate the reduction in the items to be selected for a final list during the preparation week November 5, 2012. 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 inspectors, 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. Provide a list of the top 500 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. Site top 10 issues list.
7. Any pre-existing evaluation or list of components and associated calculations with low design margins, (i.e., pumps closest to the design limit for flow or pressure, diesel generator close to design required output, heat exchangers close to rated design heat removal, etc.).
8. List of motor operated valves (MOVs) in the valve program, with design margin and risk ranking.
9. List of air operated valves (AOVs) in the valve program, with design margin and risk ranking.
10. List of high risk maintenance rule systems/components and functions; based on engineering or expert panel judgment.
11. Structure, system and components in the Maintenance Rule (a)(1) category.
12. A list of operating experience evaluations for the last 2 years.
13. A list of all time-critical operator actions in procedures.
14. A list with description of permanent and temporary modifications sorted by the top 50 components identified in Item 1.
15. List of current "operator work arounds/burdens."
16. List of root cause evaluations associated with component failures or design issues initiated/completed in the last 5 years.
17. Current management and engineering organizational charts.
18. Palo Verde Nuclear Generating Station IPE and IPEEE, if available electronically.
19. Mechanical piping drawings for:
  - Engineered safety features
  - Emergency core cooling systems
  - Emergency diesel generators

20. Electrical one-line drawings for:
  - Offsite power/switchyard supplies
  - Normal AC power systems
  - Emergency AC/DC power systems including 120VAC power, and
  - 125VDC/24VDC safety class systems
21. List of any common-cause failures of components in the last 3 years.
22. An electronic copy of the licensing basis documents (i.e., Updated Final Safety Analysis Report, Technical Specifications).
23. An electronic copy of the System Health notebooks.
24. System Description Manuals with simplified drawings of plant systems

**II. Information Requested to be Available on First Day of the Onsite Week (November 13, 2012)**

1. List of condition reports (corrective action documents) associated with each of the selected components for the last 5 years.
2. The corrective maintenance history associated with each of the selected components for the last 2 years.
3. Copies of calculations associated with each of the selected components (if not previously provided), excluding data files. Please review the calculations and also provide copies of reference material (such as drawings, engineering requests, and vendor letters).
4. Copies of operability evaluations associated with each of the selected components and plans for restoring operability, if applicable.
5. Copies of selected operator work-around evaluations associated with each of the selected components and plans for resolution, if applicable.
6. Copies of any open temporary modifications associated with each of the selected components, if applicable.
7. Trend data on the selected electrical/mechanical components' performance for last 3 years (for example, pumps' performance including in-service testing, other vibration monitoring, oil sample results, etc., as applicable).
8. A copy of any internal/external self-assessments and associated corrective action documents generated in preparation for the inspection.
9. A copy of engineering/operations related audits completed in the last 2 years.

10. Procedures used to accomplish selected operator actions.
11. List of licensee contacts for the inspection team with pager or phone numbers.

**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).
3. Reference materials (available electronically and as needed during all onsite weeks):

General set of plant drawings  
Procurement documents for components selected  
Plant procedures (normal, abnormal, emergency, surveillance, etc.)  
Vendor manuals

Inspector Contact Information:

Matthew Young  
Reactor Inspector  
(817) 200-1545  
[matt.young@nrc.gov](mailto:matt.young@nrc.gov)

Mailing Address:

US NRC, Region IV  
Attn: Matthew Young  
1600 East Lamar Blvd  
Arlington, TX 76011-4511