

**From:** [Gibson, Lauren](#)  
**To:** [Robert.Roehler@aps.com](mailto:Robert.Roehler@aps.com)  
**Subject:** PALO VERDE NUCLEAR GENERATING STATION - REQUEST TO REVISE TECHNICAL SPECIFICATIONS RELATED TO ATMOSPHERIC DUMP VALVES - AUDIT PLAN (TAC NOS. ME6566, ME6567, AND ME6568)  
**Date:** Monday, September 17, 2012 10:11:00 AM  
**Attachments:** [Audit Plan ME6566, 7, 8.pdf](#)

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Robert,

By letter dated June 22, 2011, Arizona Public Service Company, the licensee for the Palo Verde Nuclear Generating Station, submitted a request to revise Technical Specification Limiting Condition for Operation 3.7.4, "Atmospheric Dump Valves (ADVs)" (Agencywide Document Access and Management System Accession No. ML11182A908).

The Reactor Systems Branch staff has determined that an audit is necessary to complete the technical review of the proposed amendment.  
The audit plan is enclosed.

Please contact me if you have any questions.

Thank you,

Lauren

*Lauren K. Gibson*  
Project Manager  
Columbia Generating Station  
Palo Verde Nuclear Generating Station  
NRR/DORL/LPL4  
(301) 415-1056  
08-C8

PALO VERDE NUCLEAR GENERATING STATION  
REQUEST TO REVISE TECHNICAL SPECIFICATIONS FOR ATMOSPHERIC DUMP VALVES  
NUCLEAR REGULATORY COMMISSION CLOSEOUT-SITE AUDIT

Background and Regulatory Basis

By letter dated June 22, 2011, Arizona Public Service Company (APS), the licensee for the Palo Verde Nuclear Generating Station (PVNGS), submitted a request to revise Technical Specification (TS) Limiting Condition for Operation (LCO) 3.7.4, "Atmospheric Dump Valves (ADVs)" (Agencywide Document Access and Management System (ADAMS) Accession No. ML11182A908). The letter was supplemented by letters dated December 9, 2011 (ADAMS Accession No. ML11356A088), and January 27, 2012 (ADAMS Accession No. ML12046A649).

The requirement for LCOs in 10 CFR 50.36(c)(2) states as follows:

Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

When 10 CFR 50.36 was revised in 1968, and published in Volume 33 of the *Federal Register*, the Commission stated that the analysis and evaluation of the facility required under §50.34 must provide (1) the necessary information from which technical specifications will be selected, and (2) the detailed bases for the specifications derived (33 FR 18610). The requirements in 10 CFR 50.36 implement Section 182a. of the Atomic Energy Act, which states, in part:

In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications... in order to enable [the Commission] to find that the utilization or production of special nuclear material will... provide adequate protection to the health and safety of the public.

The NRC staff has requested additional information from the licensee to clarify the bases, from which the proposed limiting condition for operation, and associated remedial actions, were derived. The NRC staff requested the information to determine whether the proposed revision to the specification will provide adequate protection to the health and safety of the public.

The ADVs are required, in part, to mitigate the consequences of a postulated steam generator tube rupture event. Review guidance for postulated steam generator tube rupture events is provided in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," (SRP) Chapter 15.6.3, "Radiological Consequences of Steam Generator Tube Failure." The radiological acceptance criteria are based on 10 CFR 100, "Reactor Site Criteria," requirements. In particular, the staff reviews the post-accident thermal hydraulic profiles (SRP 15.6.3, Review Procedure 3), and the determination of the coolant flow through the failed tube (SRP 15.6.3, Review Procedure 9).

ENCLOSURE

### Audit Approach

In its December 9, 2011, response to NRC staff request for additional information (RAI) 1, the licensee provided additional information justifying the proposed conditions, required actions, and completion times associated with a failure to meet the proposed LCO. The January 27, 2012, response to NRC staff RAIs 2 and 3 provided a summary of the results of an analysis of a steam generator tube rupture from the degraded condition permitted by proposed LCO 3.7.4, Condition B, which would allow for inoperability of all ADVs. The purpose of this audit is to perform a detailed review of the analysis, and to compare its assumptions and modeling techniques to existing analyses of record, as well as to plant simulator exercises of tube rupture mitigation. The following activities are anticipated during the audit:

- Detailed review of current and existing steam generator tube rupture analyses
- Walk-down of key ADV system components, including valve, manual operators, and controls
- Observation of simulator mitigation of steam generator tube rupture scenarios

### Logistical Information

This site visit is expected to last approximately 3 days. The tentative schedule is as follows:

- Day 1 – Review and familiarize with calculations
- Day 2 – Continue calculation review and perform equipment walk down
- Day 3 – Simulator observation and discuss any open items and summarize additional information that will be required to complete review

The audit is proposed to take place November 27-29, 2012. NRC participants will include:

Benjamin Parks, NRR/DSS/SRXB  
Christopher Jackson, Chief, NRR/DSS/SRXB (tentative)  
Joshua Miller, NRR/DSS/SRXB (tentative)  
Stanley Gardocki, NRR/DSS/SBPB  
Lauren Gibson, NRR/DORL/LPL4

### Audit Deliverable

Material determined relevant to the NRC staff's decision making will be identified during the audit, and the NRC staff will request that the licensee submit this material formally.