



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

April 5, 2005

EA-05-037

Gregg R. Overbeck, Senior Vice
President, Nuclear
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 - NRC
INSPECTION REPORT 05000528/2005011, 05000529/2005011, AND
05000530/2005011

Dear Mr. Overbeck:

The US Nuclear Regulatory Commission (NRC) completed an in-office inspection conducted December 1, 2004, through March 4, 2005, regarding the Palo Verde Nuclear Generating Station, Units 1, 2, and 3. The inspection evaluated changes made by Palo Verde Nuclear Generating Station to the Palo Verde Emergency Plan through the 10 CFR 50.54(q) process. The enclosed report presents the results of this inspection.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records and interviews with personnel.

Based on the results of this inspection, one apparent violation was identified and is being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The current Enforcement Policy is included on the NRC's Web site at www.nrc.gov; select **What We Do, Enforcement**, then **Enforcement Policy**. The apparent violation involves an apparent decrease in effectiveness in the Palo Verde Emergency Plan resulting from changes made to station emergency action levels, as described in §1EP4 of the enclosed inspection report.

The circumstances surrounding this apparent violation, the significance of the issue and the need for lasting and effective corrective action were discussed with members of your staff at an onsite inspection exit meeting on March 4, 2005.

Before the NRC makes a final enforcement decision, we are providing you an opportunity to either (1) respond to the apparent violation addressed in this inspection report within 30 days of the date of this letter or (2) request a predecisional enforcement conference. If a conference is held, it will be open for public observation. The NRC will also issue a meeting notice to announce the conference. Please contact Mr. Anthony T. Gody, Branch Chief, Operations Branch, at 817-860-8159 within 7 days of the date of this letter to notify the NRC of your intended response.

If you choose to provide a written response, it should be clearly marked as a "Response to An Apparent Violation in NRC Inspection Report 05000528/2005011, 05000529/2005011, and 05000530368/2005011; EA-05-037," and should include: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a predecisional enforcement conference.

In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if you choose to provide one) will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Dwight D. Chamberlain
Director, Division of Reactor Safety

Dockets: 50-528, 50-529, 50-530
Licenses: NPF-41, NPF-51, NPF-74

Enclosure:
NRC Inspection Report 05000528; 05000529; 05000530/2005011
w/Attachment: Supplemental Information

Arizona Public Service Company

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cc w/Enclosure

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SISP Review Completed: _____ ADAMS: : Yes No Initials: _____
 : Publicly Available Non-Publicly Available Sensitive : Non-Sensitive

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Dockets: 50-528, 50-529, 50-530
Licenses: NPF-41, NPF-51, NPF-74
Report No: 05000528; 05000529; 05000530/2005011
Licensee: Arizona Public Service Company
Facility: Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Location: 5951 S. Wintersburg, Tonopah, Arizona
Dates: December 1, 2004 through March 4, 2005
Inspector: Paul J. Elkmann, Emergency Preparedness Inspector
Approved Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000528; 05000529; 05000530/2005011; Arizona Public Service Company; December 1, 2004, through March 4, 2005; Palo Verde Nuclear Station, Units 1, 2 & 3; Review of Changes to Emergency Plan

The inspection was conducted in-office by a regional emergency preparedness inspector. The inspection identified an apparent violation. The significance of the issue is indicated by its color (Green, White, Yellow, Red) using Inspection Manual Chapter 609, "Significance Determination Process," or by the NRC Enforcement Policy, Supplement VIII. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified Findings

Cornerstone: Emergency Preparedness

- The inspector identified an apparent violation of 10 CFR 50.54(q) for implementing a change to emergency action levels, which decreased the effectiveness of the emergency plan. Emergency Plan Implementing Procedure 99, "EPIP Standard Appendices," Revision 2, removed from two emergency action levels site boundary exposure rate as measured in the environment as a classifiable condition.

Implementation of changes to emergency action levels, which decreased the effectiveness of the emergency plan was a performance deficiency. The finding is more than minor because removal of a classifiable condition from licensee emergency action levels has the potential to impact safety, and licensee implementation of a change to their emergency plan, which decreases the effectiveness of the plan without prior NRC approval, impacts the regulatory process. This finding is an apparent violation of 10 CFR 50.54(q). The licensee has entered this issue into their corrective action system as Condition Report/Disposition Request 2774185 (Section 1EP4).

Report Details

1. **Reactor Safety** **Cornerstone: Emergency Preparedness**

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of Revision 29 to the Palo Verde Nuclear Generating Station Emergency Plan, and Revision 2 to Emergency Plan Implementing Procedure 99, "EPIP Standard Appendices," both submitted September 1, 2004. Emergency Plan Revision 29 implemented changes to the on-shift staffing of the shift technical advisor and satellite technical support center communicator, as previously approved by the NRC. Emergency Plan Implementing Procedure 99, Revision 2, revised Appendix A (Emergency Action Levels) and Appendix P (Emergency Action Level Basis) as follows:

- Changed the dose threshold in Emergency Action Levels 3-1 and 3-2 from 1000 mrem per year to 0.1 mrem per hour.
- Changed the dose threshold in Emergency Action Levels 3-8 and 3-9 from 1E4 mrem per year to 1 mrem per hour.
- Changed the dose threshold in Emergency Action Levels 3-14 and 3-15 from 100 mrem per hour to 100 mrem received at any time.
- Changed the dose threshold in Emergency Action Levels 3-17 and 3-18 from 1000 mrem per hour to 1000 mrem received at any time.
- Changed Emergency Action Levels 3-16 and 3-19, from "Site Boundary dose rate > 100/1000 mrem/h deep dose equivalent (DDE) as measured with portable instrumentation OR valid dose projection > 100/1000 mrem TEDE [total effective dose equivalent] or > 500/5000 thyroid CDE [committed dose equivalent] at the Site Boundary" to "Field survey result or valid dose assessment indicates > 100/1000 mrem TEDE or > 500/5000 thyroid CDE at the Site Boundary."

These revisions were compared to their previous revisions, to the criteria of Nuclear Energy Institute 99-01, "Methodology for Development of Emergency Action Levels," Revision 2, to the NRC Safety Evaluation transmitted to the licensee March 19, 2004, and to the requirements of 50.54(q), 10 CFR 50.47(b), and 10 CFR Part 50, Appendix E, to determine if the revisions decreased the effectiveness of the emergency plan.

b. Findings

Introduction. An apparent violation was identified for implementation of a decrease of effectiveness in the licensee's emergency plan, in violation of the requirements of 10 CFR 50.54(q). The licensee implemented a change to their emergency action levels,

which removed a classifiable condition from one emergency action level at the Site Area Emergency level, and one at the General Emergency level.

Description. The NRC identified that on September 1, 2004, the licensee implemented a change to its emergency action level scheme, which was an apparent decrease in effectiveness of the licensee's emergency plan, because a previously classifiable condition based on exposure rate measured in the environment was removed from two emergency action levels. Specifically, Emergency Action Levels 3-16 and 3-19 were changed from, "Site Boundary dose rate > 100/1000 mrem/h deep dose equivalent as measured with portable instrumentation OR valid dose projection > 100/1000 mrem TEDE or > 500/5000 thyroid CDE at the Site Boundary," to "Field survey result or valid dose assessment indicates > 100/1000 mrem TEDE or > 500/5000 thyroid CDE at the Site Boundary."

The inspector determined that, as revised, the previously classifiable condition, "site Boundary dose rate > 100/1000 mrem/h deep dose equivalent," was removed from the emergency action level scheme. The revised emergency action levels did not continue to meet the standards of 50.47(b)(4) because they were inconsistent with the licensee's approved technical basis, NUMARC/NESP-007, Revision 2, in that, example Initiating Conditions AS1 and AG1 include classification based on field survey results (DDE). The inspector also determined that revised Emergency Action Levels 3-16 and 3-19 could not be implemented as written because field survey results would not directly indicate TEDE or thyroid CDE values and the licensee did not provide methods for the emergency director to determine TEDE from field results.

The inspector reviewed emergency plan implementing procedures associated with dose assessment and development of protective action recommendations, and interviewed emergency response organization personnel. The inspector noted that Emergency Plan Implementing Procedure EPIP-01, "Satellite Technical Support Center," Step 7.2.2, requires the radiological field assessment team to inform the radiological coordinator if any emergency action level thresholds were exceeded. The inspector noted that Emergency Plan Implementing Procedure EPIP-01 was not revised, with two changes to Emergency Action Levels 3-16 and 3-19, and that the classifiable condition of >100/1000 mrem/hr DDE remained as a site area emergency/general emergency, respectively. The radiological field teams would report both open and closed window dose rate readings to the radiological coordinator. During interviews, the licensee indicated that both the operations support center and the emergency operations facility would use this data in conjunction with Emergency Plan Implementing Procedures EPIP-02, "Operations Support Center Actions," and EPIP-04, "Emergency Operations Facility Actions," to also convert the field data into thyroid CDE or TEDE and provide the results to the emergency coordinator. The inspector noted that both Procedures EPIP-02 and -04 contained tables with the appropriate site boundary dose rate DDE thresholds for both Site Area Emergency and General Emergency. The licensee indicated that the emergency coordinator would be able to predicably and properly classify the event. The inspectors concluded that the emergency coordinator would likely be given an appropriate recommendation based on Procedures EPIP-02 and -04; however given the actual wording of Emergency Action Levels 3-16 and 3-19, it was not apparent that the emergency coordinator would develop predictable and appropriate event classifications as would have been the case with the previous versions

of EALs 3-16 and 3-19. Therefore, the inspectors identified that the changes to EALs 3-16 and 3-19 represented an apparent decrease in effectiveness of the licensee's emergency plan.

Analysis. Implementation of changes to emergency action levels, which decreased the effectiveness of the emergency plan, was a performance deficiency. The finding had a credible impact on the emergency preparedness cornerstone objective because a licensee is less capable of implementing adequate measures to protect the health and safety of the public during a radiological emergency if emergency conditions are removed from licensee emergency action levels. This finding is more than minor because (1) the removal of a classifiable condition from licensee emergency action levels has the potential to impact safety; and (2) licensee implementation of a change to their emergency plan, which decreases the effectiveness of the plan without prior NRC approval, impacts the regulatory process. The finding also involves an apparent violation of NRC requirements, subject to enforcement action under the terms of the NRC Enforcement Policy (see discussion below).

Enforcement. Licensee implementation, without prior NRC approval, of an emergency action level change, which decreases the effectiveness of the emergency plan, is an apparent violation of 10 CFR 50.54(q), which states, in part, "A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans that meet the standards in §50.47(b) and the requirements in Appendix E of this part. . . . The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of §50.47(b) and the requirements of Appendix E to this part.

In accordance with Manual Chapter 0609, Appendix B, §2.2(e) and §4.4, the inspector evaluated the significance of the finding using NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), Section IV, "Significance of Violations." The finding was determined to be an apparent violation subject to potential escalated enforcement action because the reduction in effectiveness constituted a failure to implement planning standard 10 CFR 50.47(b)(4), which is a planning standard related to assessment (NUREG-1600, Supplement VIII, "Emergency Preparedness").

This issue has been entered into the licensee's corrective action system as Condition Report/Disposition Request 2774185 [05000528/2005011-01, 05000529/2005011-01, 05000530/2005011-01, Change to radiological emergency action levels, which decreased the effectiveness of the emergency plan].

4. OTHER ACTIVITIES

4OA6 Meetings, Including Exit

A regional emergency preparedness inspector presented the inspection results at an onsite exit interview conducted March 4, 2005, to Mr. G. Overbeck, Senior Vice President, and other members of his staff, who acknowledged the finding. The inspector

confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Crozier, Governmental Liaison
T. Gray, Department Leader, Radiological Services
D. Marks, Compliance Section Leader, Nuclear Regulatory Affairs
D. Mauldin, Vice President, Engineering and Support
E O'Neill, Department Leader, Emergency Preparedness
D. Straka, Senior Consultant, Regulatory Affairs
G. Overbeck, Senior Vice President

NRC

R. Lantz, Senior Emergency Preparedness Inspector

ITEM OPENED AND DISCUSSED

Opened

05000528/2005011-01,	APV	Change to radiological emergency action levels which
05000529/2005011-01,		decreased the effectiveness of the emergency plan (1EP4)
05000530/2005011-01		