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Sent: Wednesday, February 12, 2020 3:41 PM
To: Matthew.Cox@aps.com
Cc: Dixon-Herrity, Jennifer; Anderson, Joseph; Hoffman, Raymond; norris, michael; Michael.Dilorenzo@aps.com
Subject: Palo Verde Nuclear Generating Station, Unit 1 - Official RAIs for License Amendment Request Associated with Changes to Emergency Plan Staffing Requirements (EPID L-2019-LLA-0222)

By application dated October 18, 2019 (Agencywide Documents Access and Management System Accession No. ML19291F735), Arizona Public Service Company (APS, the licensee) requested changes to the Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (Palo Verde, PVNGS) Emergency Plan pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR). The proposed changes would revise the Palo Verde Emergency Plan to change the emergency response organization (ERO) staffing composition for certain ERO positions.

The proposed revisions include:

- Reduction of two on-shift Electrical Maintenance Technician positions;
- Reduction of one on-shift Maintenance Technician position;
- Reduction of two on-shift Radiation Protection (RP) Technician positions;
- Removal of on-shift Chemistry Technician from emergency plan; and
- Relocation of certain positions from the Emergency Plan to Emergency Plan Implementing Procedures.

The current Palo Verde Emergency Plan provides for augmentation of ERO positions within 60 minutes of and Alert or greater classification level during normal working hours and within 120 minutes during off hours. These positions include Emergency Direction and Control, Engineering Support, Communications, and Radiation Protection. The U.S. Nuclear Regulatory Commission (NRC) staff previously found the current Palo Verde ERO augmentation as reasonable based on the extensive on-shift capabilities provided in the Palo Verde Emergency Plan. The proposed Palo Verde Emergency Plan reduces those on-shift capabilities.

The NRC staff has reviewed your application and concluded that additional information is required for complete evaluation. We transmitted the draft requests for additional information (RAIs) for the subject license amendment on January 29, 2020, and at your request, held a clarification call on February 12, 2020. Attached please find the **official** RAIs from the NRC staff for the subject license amendment, and provide your responses by March 17, 2020, as mutually agreed during the clarification call. Your timely responses will allow the NRC staff to complete its review on schedule.

PVNGS-RAI-1

Concerning the Repair Team Activities Functional Area, Section 3.1.5.c, Non-License Operator (NLO) Training, on page 19 of Enclosure, "License Amendment Request Changes to Emergency Plan Staffing Requirements," provides that NLOs may be used for abnormal operating procedure/emergency operating procedure (AOP/EOP) actions and in-plant maintenance. In-plant maintenance would be under the oversight of the on-shift maintenance technicians as needed. The Emergency Plan (EP) Change Assessment for Section 3.2.9, "EP

Function: Repair Team Activities,” on page 39 of the Enclosure further provides that the current Palo Verde Emergency Plan allows the Repair Activities function to be performed as a collateral duty.

The NRC staff understands that NLOs are trained and qualified to perform a wide range of tasks associated with AOP/EOP actions, maintenance support activities such as pulling fuses or lifting/landing leads, and various additional tasks as governed by operations procedures with training that meets the requirements of 10 CFR 50.120, *Training and qualification of nuclear power plant personnel*.

- a. Please explain what training, consistent with 10 CFR 50.120, provides the NLOs with the knowledges, skills, and abilities to perform maintenance activities that are not specifically identified in operations procedures, such as AOPs/EOPs.
- b. If the NLOs are trained and proficient as maintenance technicians, please explain how oversight will be provided by the proposed on-shift maintenance staffing. The response should describe the training and qualifications of the on-shift maintenance staff to provide oversight.
- c. With the footnote “1” assigned to the personnel designated on-shift for the function of Repair Team Activities, it could be interpreted that NLOs would be able to fill these positions on-shift in lieu of qualified maintenance personnel. Please explain whether qualified maintenance personnel will be assigned to these positions on-shift at all times.

PVNGS-RAI-2

The current on-shift RP staffing includes 3 RP Technicians, 1 Radiation Monitoring (RM) Technician, 1 RM or RP Technician, 1 Survey Qualified Position, and 1 Radiation Field Assessment Team Driver. These RP positions are currently in addition to a RP Monitor/Group Lead on-shift position. The NRC staff found the original extension in augmentation time for RP staffing was based on the total on-shift RP staffing of eight RP Technicians. This RP Technician staffing was later modified and was compensated for by providing two/three RP task trained individuals that may, or may not be, fully qualified RP Technicians.

As proposed, the Palo Verde Emergency Plan does not provide 3 RP Technicians within 60 minutes or an additional 3 RP Technicians within 90 minutes of the declaration of an Alert or greater classification level as provided in Table B-1, “Emergency Response Organization Staffing and Augmentation Plan,” of NUREG-0654/FEMA-REP-1 (NUREG-0654), Revision 2. The staffing provided in Table B-1 is based, in part, on radiation protection and improvements, such as those provided by Section 3.1.6, “Radiation Protection Improvements,” of application Enclosure 1; however, there is no specific justification for the removal of the non-RP trained personnel assigned RP functions from the on-shift staffing.

- a. Please provide further justification for the removal of the non-RP trained personnel assigned RP functions from the on-shift staffing. Specifically, what functions were being performed until augmentation occurred and what are the impacts to the Radiation Protection function.
- b. Please explain what plant specific conditions that are unique to Palo Verde support extending the ERO response time of 3 RP Technicians from within 60 minutes and an additional 3 RP Technicians from within 90 minutes of the declaration of an Alert to 120

minutes of the declaration of an Alert or greater classification level during off hours or revise accordingly.

PVNGS-RAI-3

Section 3.2.11, "EP Function: Field Monitoring Teams," of the Enclosure includes 1 RP Technician and Radiation Field Assessment Team Driver. APS provides that the licensee has manned an additional RP Technician on-shift to perform the Field Monitoring function until augmented. However, the licensee is also proposing to remove two individuals who were qualified to perform certain RP tasks. As such, the licensee is proposing to replace three individuals, one of which may have been a RP Technician, with one RP Technician. The NRC staff could not identify a technical evaluation supporting this change.

- a. Please provide further justification that supports replacing three RP personnel with one RP Technician. This justification should discuss the functions/tasks performed by the RP personnel proposed for removal as on-shift staffing positions.
- b. Please explain how the proposed RP staffing supports performance of the Field Monitoring EP Function without impacting the capability to perform the Radiation Protection Function.
- c. If the licensee proposes to use task qualified personnel to perform the Field Monitoring EP Function, please explain who will provide RP oversight as required.

PVNGS-RAI-4

APS provided that the Engineering Director will be removed from a Palo Verde Emergency Plan minimum staffing position to a position controlled by an emergency plan implementing procedure (EPIP). Additionally, the licensee proposed to move the Engineering Manager position from the Palo Verde Emergency Plan to a position controlled by an EPIP.

- a. Please provide a justification, in greater detail, that supports removing the Engineering Director as a minimum staff augmentation position. The NRC staff does understand that this position is not included in NUREG-0654, Revision 2, but could not determine whether the proposed change could impact the performance of the Engineering EP Function.
- b. Please provide a justification, in greater detail, that supports removing the Engineering Manager from the Palo Verde Emergency Plan. The NRC staff does understand that this position is not included in NUREG-0654, Revision 2, but could not determine whether the proposed change could impact the performance of the Engineering EP Function.
- c. The proposed Electrical/Instrument and Control Engineer, Reactor Analyst, and Mechanical Engineer will continue to report to the Engineering Manager. In the current Palo Verde Emergency Plan, the Engineering Manager reports to the Engineering Director. Please explain how the proposed minimum staff positions for the Electrical/Instrument and Control Engineer, Reactor Analyst, and Mechanical Engineer functions can be performed when the Engineering Manager and Engineering Director positions are not Palo Verde minimum staff positions or revise accordingly.

PVNGS-RAI-5

Section 3.2.7, "EP Function: Engineering," of the Enclosure implies that every shift technical advisor (STA) is trained and proficient as an STA, an electrical engineer, a mechanical engineer, and a maintenance supervisor for multiple disciplines. Although STAs attend a training program that meets the systematic approach to training requirements of 10 CFR 50.120(b)(2)(iii), "Shift technical advisor," they are not typically trained pursuant to the training requirements of 10 CFR 50.120(b)(2)(ix), "Engineering support personnel".

- a. Please provide further justification that supports the STAs training and proficiency to perform the mechanical and the electrical/instrument and control engineer function or revise accordingly.
- b. Please provide further justification that supports the STAs training and proficiency to perform mechanical, and electrical/instrument and control maintenance and troubleshooting in accordance with existing Palo Verde maintenance procedures or revise accordingly.
- c. If the Palo Verde STAs are currently qualified as electrical engineers, mechanical engineers, and maintenance supervisors, please explain how these additional training and proficiencies are/will be documented and maintained in the Palo Verde Emergency Plan.

PVNGS-RAI-6

Section 3.2.10, "EP Function: Repair Team Activities," of the Enclosure provides that the Shift Manager/Emergency Coordinator position is used for the Repair Team Supervisor position. Additionally, this section states that under the Palo Verde Maintenance Program, experienced craft technicians act as lead technicians on back shifts. Although this statement could imply that lead craft technicians are currently available on back shifts, the NRC staff could not identify any lead craft technicians as required ERO positions in either the current or proposed Palo Verde Emergency Plans until 120 minutes after the declaration of an Alert or greater classification level during off hours.

- a. Please clarify whether lead craft technicians are provided on back shifts at Palo Verde.
- b. Please explain how the proposed reduction in qualified maintenance personnel on-shift, and reliance on Shift Manager/Emergency Coordinator position in the Repair Team Supervisor position, supports plant maintenance and troubleshooting in accordance with Palo Verde procedures to effectively perform the Repair Team Activities function until augmented.
- c. Please explain what plant specific conditions that are unique to Palo Verde support extending the ERO response time of the OSC Manager from within 60 minutes and two OSC Repair Team Coordinators from within 90 minutes of the declaration of an Alert to 120 minutes of the declaration of an Alert classification level during off hours or revise accordingly.

PVNGS-RAI-7

Section 3.2.12, "EP Function: Media Information," of the Enclosure provides that the Palo Verde Communication Department provides for the Joint Information Center (JIC) functions until the JIC is activated and turnover of responsibility occurs. It further states that the activation time provides for a specific timeframe in the Emergency Plan to fill the JIC minimum staff positions and sooner than that stipulated in the draft guidance.

Please clarify how the JIC is able to activate and receive the responsibility for JIC functions with only the JIC Manager designated as the minimum staffing to activate the JIC.

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