

December 28, 2016

NOTE TO COMMISSIONERS' ASSISTANTS

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FROM: Robert J. Lewis **/RA/**
Assistant for Operations, OEDO

SUBJECT: ISSUANCE OF EMERGENCY LICENSE AMENDMENT TO PALO VERDE
NUCLEAR GENERATING STATION, UNIT 3

On December 15, 2016, the train B emergency diesel generator (DG) at Palo Verde Nuclear Generating Station (Palo Verde), Unit 3 suffered a failure of a connecting rod and piston. Arizona Public Service Company (the licensee) is currently repairing the DG and collecting and analyzing data associated with its failure. By letter dated December 21, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML16356A689](#)), and supplemented by letter dated December 23, 2016 (ADAMS Accession No. [ML16358A715](#)), the licensee submitted an emergency license amendment request for Palo Verde, Unit 3. The licensee requested a one-time extension of the DG completion time described in Technical Specification (TS) 3.8.1.B.4 from 10 days to 21 days to enable the licensee to continue the ongoing repair and data analysis without shutting the unit down.

The staff issued the amendment and accompanying safety evaluation on December 23, 2016 (ADAMS Accession No. [ML16358A676](#)). As documented in the safety evaluation, the staff reviewed the request based on the requirements of General Design Criterion (GDC) 17,

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“Electric power systems,” and GDC 18, “Inspection and testing of electric power systems,” in Appendix A to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), as well as 10 CFR 50.36, “Technical specifications,” and 10 CFR 50.65, “Requirements for monitoring the effectiveness of maintenance at nuclear power plants.” The staff also used the guidance in Regulatory Guide (RG) 1.93, “Availability of Electric Power Sources,” RG 1.155, “Station Blackout,” RG 1.177, “An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications,” and Branch Technical Position 8-8, “Onsite (Emergency Diesel Generators) and Offsite Power Sources Allowed Outage Time Extensions.”

The staff reviewed the need for the TS change (including the emergency circumstances), the defense in depth for onsite and offsite electrical power sources, the safety margin at the facility, and the use of risk management and compensatory measures (documented as formal regulatory commitments) during the extended completion time period. While this one-time amendment was not submitted as a risk-informed request, the staff also considered the risk insights provided by the licensee regarding the incremental conditional core damage probability and incremental large early release probability for the plant-specific configuration. To compensate for the train B DG being out of service, the licensee is staging three portable diesel generators as backups, with additional capability available from the plant’s two 100-percent-capacity station blackout generators. The licensee is also crediting a FLEX steam generator makeup pump as part of its compensatory measures. The licensee is also ensuring that no discretionary maintenance activities will be scheduled on the redundant operable DG, the station blackout generators, the startup transformers, the Salt River Project switchyard, nor the unit’s power supply lines and transformers.

The staff concluded that: (1) the amendment does not (a) involve a significant increase in the probability or consequences of an accident previously evaluated; (b) create the possibility of a new or different kind of accident from any accident previously evaluated; or (c) involve a significant reduction in a margin of safety; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (3) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (4) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Any subsequent request by the licensee for additional time to complete repair of the DG would be evaluated by the staff on its own merits.

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