



102-07413-MLL/TNW  
January 4, 2017

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U. S. Nuclear Regulatory Commission  
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- References:
1. Arizona Public Service (APS) Company Letter 102-07411, *Emergency License Amendment Request to Extend Diesel Generator 3B Completion Time*, dated December 30, 2016 [Agency Documents Access and Management System (ADAMS) Accession No. ML16365A240]
  2. APS Letter 102-07412, *Response to NRC Requests for Additional Information (RAIs) Regarding Emergency License Amendment Request (LAR) to Extend Diesel Generator 3B Completion Time*, dated January 2, 2017 (ADAMS Accession No. ML17002A001)

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station (PVNGS)  
Unit 3  
Docket No. STN 50-530  
Renewed Operating License No. NPF-74  
License Conditions Regarding Emergency License Amendment Request  
to Extend Diesel Generator 3B Completion Time**

Arizona Public Service Company submitted a risk-informed license amendment request (LAR) to extend the Palo Verde Nuclear Generating Station (PVNGS) Unit 3, Technical Specification (TS) required action 3.8.1.B.4 completion time from 21-days to 62-days in Reference 1 and responded to requests for additional information in Reference 2. The LAR is for the duration of the repair and testing needed to re-establish operability of the Unit 3 train 'B' emergency diesel generator (3B DG) that experienced a failure on December 15, 2016.

In Attachment 3 of Reference 1, APS identified 31 formal regulatory commitments. The commitments include compensatory measures intended to provide adequate risk management as well as actions related to the control of station activities during the extended 3B DG technical specification completion time. In a telephone conference with the NRC staff on Wednesday, January 4, 2017, changes to Attachment 3 of Reference 1 were discussed, which included deleting a commitment and revising the wording and elevating three of these formal regulatory commitments to license conditions. The Enclosure 1 to this letter is an updated Attachment 3 of Reference 1, documenting the changes. Enclosure 2 is a copy of the proposed revision to Appendix D to the Unit 3 operating license.

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In accordance with the PVNGS Quality Assurance Program, the Plant Review Board and the Offsite Safety Review Committee have reviewed and approved these license condition changes.

By copy of this letter, this letter is being forwarded to the Arizona Radiation Regulatory Agency in accordance with 10 CFR 50.91(b)(1).

Should you have any questions concerning the content of this letter, please contact Thomas Weber, Department Leader, Nuclear Regulatory Affairs, at (623) 393-5764.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: January 4, 2017  
(Date)

Sincerely,

MLL/TNW/CJS

Enclosure 1: Updated Attachment 3 of December 30, 2016, APS License Amendment Request

Enclosure 2: Proposed Revision to Appendix D to PVNGS Unit 3 Operating License

cc:	K. M. Kennedy	NRC Region IV Regional Administrator
	S. P. Lingam	NRC NRR Project Manager for PVNGS
	M. M. Watford	NRC NRR Project Manager
	C. A. Peabody	NRC Senior Resident Inspector for PVNGS
	T. Morales	Arizona Radiation Regulatory Agency (ARRA)

Enclosure 1

Updated Attachment 3 of December 30, 2016, APS License  
Amendment Request

## ATTACHMENT 3

### License Conditions and Commitments

#### **License Conditions**

1. The following equipment will be protected by signage/chains for the duration of the extended completion time to prevent inadvertent impact from walkdowns, inspections, maintenance and potential for transient combustible fires:
  - a. Both SBOGs
  - b. Unit 3 train 'A' DG
  - c. Unit 3 train 'A' Engineered Safety Features (ESF) Switchgear, DC equipment and DC Battery Rooms
  - d. Three AC portable diesel generators deployed at Unit 3 and their connections to the train 'B' FLEX 4.16 kV AC connection box
  - e. Diesel-driven FLEX SG Makeup Pump deployed at Unit 3
  - f. Turbine driven auxiliary feedwater pump
  - g. Fire pumps, diesel and electric

If any of the protected equipment identified above becomes unavailable, APS will enter MODE 3 within 6 hours for Unit 3. If restoration is completed within 6 hours this action is not required.

2. The system load dispatcher will be contacted once per day to ensure no significant grid perturbations (high grid loading unable to withstand a single contingency of line or generation outage) are expected during the extended allowed outage time.

If at any time APS is notified by the system load dispatcher that a condition in the grid could result in the loss of all power to the switchyard, APS will enter MODE 3 within 6 hours for Unit 3. If the condition is resolved within 6 hours this action is not required.

3. In case APS determines prior to expiration of the extended completion time, a common failure mode does exist, then APS will shut down Unit 3.

#### **Commitments**

1. The redundant train 'A' DG (along with all of its required systems, subsystems, trains, components, and devices) will be verified OPERABLE (as required by Technical Specification) and no discretionary maintenance activities will be scheduled on the redundant (OPERABLE) DG.
2. No discretionary maintenance activities will be scheduled on the SBOGs.
3. No discretionary maintenance activities will be scheduled on the startup transformers.
4. No discretionary maintenance activities will be scheduled in the Salt River Project (SRP) switchyard or the unit's 13.8 kV power supply lines and transformers which could cause a line outage or challenge off site power availability to the unit utilizing the extended DG completion time.
5. All activity, including access, in the SRP switchyard shall be closely monitored and controlled.
6. The SBOGs will not be used for non-safety functions (i.e., power peaking to the grid).
7. All maintenance activities associated with Unit 3 will be assessed and managed per 10 CFR 50.65(a)(4) (Maintenance Rule). Planned work will be controlled during the

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License Conditions and Commitments

- extended completion time so that Unit 3 does not voluntarily enter a YELLOW Risk Management Action Level.
8. The OPERABILITY of the steam driven auxiliary feedwater pump will be verified before entering the extended DG completion time.
  9. The system dispatcher will be contacted once per day and informed of the DG status, along with the power needs of the facility.
  10. Should a severe weather warning be issued for the local area that could affect the SRP switchyard or the offsite power supply during the extended DG completion time, an operator will be available locally at the SBOG should local operation of the SBOG be required as a result of on-site weather related damage.
  11. No discretionary maintenance will be allowed on the main and unit auxiliary transformers associated with the unit.
  12. APS has provided three portable diesel generators to ensure the ability to bring Unit 3 to cold shutdown in the event of a LOOP during the extended time period that the Unit 3 train 'B' DG is inoperable. The three portable diesel generators operate in parallel as a set. The result is that the three portable diesel generators are sufficient to enable a cold shutdown of Unit 3 in the event of a LOOP with a single failure during the extended time period while the Unit 3 train 'B' DG is inoperable. The three portable diesel generators are deployed and physically connected to the Unit 3 train 'B' 4.16 kV AC FLEX connection box for the duration of the extended DG completion time.
  13. The portable DGs have been verified available and functional by the completion of a test run prior to the initial period of extended allowable outage time.
  14. A diesel-driven FLEX SG Makeup Pump is deployed to its FLEX pad at Unit 3 for the duration of the extended DG completion time.
  15. See License Condition 1 above.
  16. Establish transient combustible and hot work exclusion zones by procedure and using barriers/signage in the following compartments, and conducting shiftly walkdowns of these zones by the Fire Marshal or his designee:
    - a. Fire zones FCCOR2 (120' Corridor Building) and FCCOR2A (120' Corridor Riser Shaft)
    - b. Fire zones FCTB04 (upper level only, non-class DC Equipment, [FCTB04-TRAN1])
    - c. Fire zone FC86A (train 'A' Seismic Gap, make part of train 'A' Electrical Protected Equipment)
    - d. Fire zone FCTB100 zone ZT1G (SW corner, south half of 100' Turbine between columns TA and TC)
  17. An additional dedicated auxiliary operator will be added to each shift to implement the auxiliary feedwater cross-tie.
  18. A continuous fire watch with a fire extinguisher and training to utilize the extinguisher will be posted in fire zone FCCOR2 (120' Corridor Building).
  19. See License Condition 2 above.
  20. Component testing or maintenance of safety systems and important nonsafety equipment in the off-site power systems that can increase the likelihood of a plant transient (unit trip) or LOOP will be avoided.
  21. Discretionary work will be prohibited in the SRP switchyard during the extended Unit 3 train 'B' DG TS 3.8.1 Condition B required action completion time.

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22. TS required systems, subsystems, trains, components, and devices that depend on the remaining power sources will be verified to be operable and positive measures will be provided to preclude discretionary testing or maintenance activities on these systems, subsystems, trains, components, and devices.
23. Steam-driven emergency feed water pump will be controlled as protected equipment.
24. Deleted.
25. Availability of the portable DGs will be verified once per shift.
26. Approval of transient combustibles and hot work in Unit 3 will be controlled by the outage control center (OCC).
27. There will be an OCC position responsible for oversight and monitoring of the compensatory measures and the actions described in this attachment.
28. See License Condition 3 above.
29. An auxiliary operator (AO) on each shift will be dedicated to perform pre-start checks of the portable generators each shift. This dedicated AO will perform the emergency start of the portable generators when directed and monitor their operation. The dedicated AO will have no other assigned duties during the extended completion time.
30. In the event of a reactor trip with a loss of off-site power, the Area 4 (Control Building) AO, will perform the required electrical system alignments, as directed by the control room, to restore power to the 'B' train Class 1 E 4.16 kV bus using the portable generators, in accordance with station procedures.
31. In the event of a reactor trip with a loss of off-site power, one of the on-shift reactor operators will be assigned to perform and direct actions to restore power to the 'B' train Class 1 E 4.16 kV bus using the portable generators. During the event, this reactor operator will not be assigned other duties until completion of power restoration.

**Enclosure 2**

**Proposed Revision to Appendix D to PVNGS  
Unit 3 Operating License**

Amendment Number	Additional Conditions	Implementation Date
200	<ol style="list-style-type: none"><li data-bbox="386 300 1092 961">1. The following equipment will be protected by signage/chains for the duration of the extended completion time to prevent inadvertent impact from walkdowns, inspections, maintenance and potential for transient combustible fires:<ol style="list-style-type: none"><li data-bbox="435 520 651 552">a. Both SBOGs</li><li data-bbox="435 556 737 588">b. Unit 3 train 'A' DG</li><li data-bbox="435 592 1040 699">c. Unit 3 train 'A' Engineered Safety Features (ESF) Switchgear, DC equipment and DC Battery Rooms</li><li data-bbox="435 703 1068 810">d. Three AC portable diesel generators deployed at Unit 3 and their connections to the train 'B' FLEX 4.16 kV AC connection box</li><li data-bbox="435 814 987 879">e. Diesel-driven FLEX SG Makeup Pump deployed at Unit 3</li><li data-bbox="435 884 1008 915">f. Turbine driven auxiliary feedwater pump</li><li data-bbox="435 919 873 951">g. Fire pumps, diesel and electric</li></ol><p data-bbox="435 995 1073 1176">If any of the protected equipment identified above becomes unavailable, APS will enter MODE 3 within 6 hours for Unit 3. If restoration is completed within 6 hours this action is not required.</p></li><li data-bbox="386 1199 1081 1379">2. The system load dispatcher will be contacted once per day to ensure no significant grid perturbations (high grid loading unable to withstand a single contingency of line or generation outage) are expected during the extended allowed outage time.<p data-bbox="435 1423 1086 1635">If at any time APS is notified by the system load dispatcher that a condition in the grid could result in the loss of all power to the switchyard, APS will enter MODE 3 within 6 hours for Unit 3. If the condition is resolved within 6 hours this action is not required.</p></li><li data-bbox="386 1659 1086 1768">3. In case APS determines prior to expiration of the extended completion time, a common failure mode does exist, then APS will shut down Unit 3.</li></ol>	The amendment shall be implemented prior to the expiration of the 21 day Technical Specification Completion Time, or January 5, 2017, at 3:56 AM Mountain Time.