



EA-12-049

DWIGHT C. MIMS
Senior Vice President, Nuclear
Regulatory & Oversight

**Palo Verde
Nuclear Generating Station**
P.O. Box 52034
Phoenix, AZ 85072
Mail Station 7605
Tel 623 393 5403

102-06758-DCM/MAM/TLC
August 28, 2013

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

- References:
1. NRC Order Number EA-12-049, *Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events*, dated March 12, 2012
 2. APS Letter 102-06614, *Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)*, dated October 29, 2012
 3. APS Letter 102-06670, *APS Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)*, dated February 28, 2013
 4. APS Letter 102-06733, *Response to Request for Additional Information for the PVNGS Overall Integrated Plan in Response to the March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)*, dated July 18, 2013

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528, 50-529, and 50-530
APS First 6-Month Status Report on the PVNGS Overall
Integrated Plan for Mitigation Strategies for Beyond-Design-
Basis External Events (Order Number EA-12-049)**

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Arizona Public Service Company (APS). Reference 1 was immediately effective and directs APS to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool

AS/ NRC

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cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance and an overall integrated plan (OIP) pursuant to Section IV, Condition C. Reference 2 provided the APS initial status report regarding mitigation strategies. In Reference 3, APS provided the PVNGS OIP.

After reviewing the PVNGS OIP for mitigation strategies, the NRC issued a request for additional information (RAI) to APS. On July 18, 2013, APS provided a response to the NRC RAI regarding the PVNGS OIP for mitigation strategies (Reference 4).

Reference 1 also requires submission of a status report at 6-month intervals following submittal of the OIP. NEI 12-06, *Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*, Revision 0, provides direction regarding the content of the status reports. The enclosure to this letter provides the first 6-month status report on the PVNGS OIP for mitigation strategies pursuant to Section IV, Condition C.2, of Reference 1.

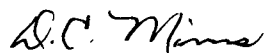
No commitments are being made to the NRC by this letter.

Should you have any questions concerning the content of this letter, please contact Mark McGhee, Department Leader, Regulatory Affairs, at (623) 393-4972.

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

Executed on 8/28/13
(Date)

Sincerely,



Enclosure: APS First 6-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

DCM//MAM/TLC/hsc

cc:	E. J. Leeds	NRC Director Office of Nuclear Reactor Regulation
	S. A. Reynolds	NRC Region IV Regional Administrator
	J. K. Rankin	NRC NRR Project Manager
	J. P. Reynoso	NRC Senior Resident Inspector for PVNGS
	J. A. Kratchman	NRR/JLD/PMB, NRC
	E. E. Bowman	NRR/DPR/PGCB, NRC

ENCLOSURE

**APS First 6-Month Status Report for the Implementation
of Order EA-12-049, Order Modifying Licenses with
Regard to Requirements for Mitigation Strategies for
Beyond-Design-Basis External Events**

APS First 6-Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

1 Introduction

APS developed an Overall Integrated Plan (OIP) (Reference 2 in Section 8), documenting the diverse and flexible strategies (FLEX), in response to Reference 1. This attachment provides an update of milestone accomplishments since submittal of the Overall Integrated Plan, including any changes to the compliance method, schedule, or need for relief or relaxation and the basis, if any.

2 Milestone Accomplishments

The following milestone(s) have been completed since the development of the OIP, and are current as of July 31, 2013.

- **Develop Storage Plan:** A location for the onsite FLEX equipment storage facility has been selected (See Open Item 1 [OI1] in Section 6 of this enclosure). The storage facility will be a single, stand-alone structure and seismically designed to American Society of Civil Engineers (ASCE) 7-10, *Minimum Design Loads for Buildings and Other Structures*. Contracts have been issued for building construction and storage facility design engineering is ongoing. The seismic basemat and tie-downs for FLEX equipment (N+1) will be completed in Fall 2014 at the completion of Unit 1 refueling cycle 18. The storage facility to shelter FLEX equipment from the environment will be completed in Fall 2015. Refer to the Milestone Schedule Status Table in Section 3 of this enclosure for significant milestones.
- **Pressurized Water Reactor Owners Group (PWROG) issued Nuclear Steam Supply System (NSSS)-specific guidelines:** The PWROG-approved Combustion Engineering (CE) NSSS generic FLEX Support Guidelines (FSGs) were transmitted to APS for implementation on May 17, 2013.

3 Milestone Schedule Status

The following table provides an update to Attachment 2 of the OIP. This section provides the activity status of each item and whether the expected completion date has changed. The provided dates are for planning purposes and subject to change as design and implementation details are developed. The 6-month status report dates on the table in Attachment 2 of the OIP were inadvertently shown as occurring one month earlier than required. These report dates have been corrected in this update. Additional changes in target completion dates will be noted in future 6-month status reports.

Validation - Walk-throughs or Demonstration(s):

- Phases 2 and 3 connection points will be validated using applicable configuration management procedural requirements during development of modification packages. Procedural requirements and instructions will be aligned with modifications and staffing analysis. During and after planned training activities,

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desktop simulation and plant walk-throughs will be performed for FLEX equipment connections and tie-ins to validate the mitigation strategies.

The revised milestone target completion dates do not impact the order implementation date.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	Oct 2012	Complete	
Submit Overall Integrated Plan	Feb 2013	Complete	
Submit 6 Month Updates:			
Update 1	Jul 2013	Complete	Aug 2013 ¹
Update 2	Jan 2014	Not Started	Feb 2014
Update 3	Jul 2014	Not Started	Aug 2014
Update 4	Jan 2015	Not Started	Feb 2015
Update 5	Jul 2015	Not Started	Aug 2015
Update 6	Feb 2016	Not Started	
Update 7	Aug 2016	Not Started	
Implementation Preparation:			
Develop Strategies	Feb 2013	Started	Dec 2013
Walk-throughs or Demonstrations ²	Aug 2014	Not Started	
Perform Staffing Analysis	May 2014	Not Started	
Modifications:			
Modifications Evaluation	Feb 2013	Complete	
Units 1, 2, and 3 Design Engineered	May 2014	Started	
Unit 1 Implementation Outage	Fall 2014	Not Started	
Unit 2 Implementation Outage	Fall 2015	Not Started	
Unit 3 Implementation Outage	Spring 2015	Not Started	
Onsite Storage:			
Develop Storage Plan	Jul 2013	Complete	
Seismic Basemat and Tie-downs Installed	-	Not Started	Fall 2014
Storage Facility Complete	-	Not Started	Fall 2015
FLEX Equipment:			
Procure On-Site Equipment	Dec 2015	Started	
Regional Response Center (RRC) Operational	Nov 2014	Not Started	Aug 2014
Install Offsite Delivery Station (if Necessary)	Aug 2014	Not Started	
Procedures:			
PWROG issues NSSS-specific guidelines	May 2013	Complete	
Develop FSGs ³	Nov 2013 ⁴	Started	

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Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Create Maintenance Procedures	Sep 2014	Started	
Training:			
Develop Training Plan	Mar 2014	Not Started	
Implement Training	Sep 2014	Not Started	
Full Implementation:			
Unit 1 FLEX Implementation	Nov 2014	Not Started	
Unit 2 FLEX Implementation	Nov 2015	Not Started	
Unit 3 FLEX Implementation	May 2015	Not Started	
Full Site FLEX Implementation	Dec 2015	Not Started	
Submit Completion Report	Apr 2016	Not Started	

¹ The first 6-month update is complete with this submittal. The milestone schedule dates in Attachment 2 required updating as described in Section 3.

² Desktop simulation and plant walk-throughs

³ Includes Basis Document and Procedures

⁴ Shutdown mode FSGs are pending resolution of a generic concern relating to the approach and limitation of the FLEX capabilities in Modes 5 & 6 (See Section 6, OI4 of this enclosure).

4 Changes to Compliance Method

There are no changes to the compliance method as documented in the Overall Integrated Plan.

5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

APS expects to comply with the order implementation date and no relief or relaxation is requested at this time.

6 Open Items from Overall Integrated Plan and Draft Safety Evaluation

The following tables provide a summary of the open items documented in the Overall Integrated Plan or the Draft Safety Evaluation (SE) and the status of each item.

Overall Integrated Plan Open Item	Status
OI1- A storage location for FLEX equipment needs to be selected.	Complete Location has been selected for FLEX equipment storage facility. The storage facility will be located true west of the new

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Overall Integrated Plan Open Item	Status
	Protected Area (PA) warehouse (outside of the PA but inside the Security Owner Controlled Area) and true east of the helicopter pad (See Section 9 Figure).
OI2- PVNGS FSG is currently a draft document and will need to be finalized. Existing site EOPs will need to be updated to direct use of the PVNGS Extended Loss of All Site AC Guideline during an ELAP. Additionally, a program and procedural control process is under development and will be implemented to meet the requirement of NEI 12-06 (Reference 4).	Started There are no updates. All activities are moving toward completion as scheduled and noted, as applicable, on the Milestone Schedule Status Table in Section 3 of this enclosure.
OI3- Structure, content, and details of the regional response center (RRC) playbook, and location of the offsite staging area will be determined.	Started Contract agreement is issued and a playbook template with PVNGS-specific information will be used. The Phoenix RRC will be the primary offsite equipment staging location.
OI4- Additional strategies to maintain containment conditions during Modes 5 and 6 ELAP will be evaluated.	Started The approach and limitation of the FLEX capabilities in Modes 5 & 6 has been identified as a generic concern (Reference 3). The Nuclear Energy Institute (NEI) will be coordinating with the NRC on the schedule for resolution.

Draft Safety Evaluation Open Item¹	Status
None	-

¹ A Safety Evaluation has not been received from the NRC.

7 Potential Draft Safety Evaluation Impacts

There are no potential impacts to the Draft Safety Evaluation identified at this time.

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8 References

The following references support the updates to the PVNGS Overall Integrated Plan described in this enclosure:

1. NRC Order Number EA-12-049, *Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events*, dated March 12, 2012.
2. APS Letter 102-06670, *APS Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)*, dated February 28, 2013.
3. APS Letter 102-06733, *Response to Request for Additional Information for the PVNGS Overall Integrated Plan in Response to the March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)*, dated July 18, 2013.
4. NEI 12-06, *Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*, Revision 0, dated August 2012

9 Figure

Location Selected for the FLEX Equipment Storage Facility

