

## **NRR-DRMAPEm Resource**

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**From:** Singal, Balwant  
**Sent:** Tuesday, May 28, 2019 10:44 AM  
**To:** Richardson, Michael  
**Subject:** Request for Additional Information (Supplemental) - License Amendment Request (LAR) to Revise Emergency Plan Response Organization Staffing and Augmentation (EPID L-2018-LLA-0248)  
**Attachments:** SUPPLEMENTAL REQUESTS FOR ADDITIONAL INFORMATION.docx

By letter dated September 12, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML18255A368), Pacific Gas and Electric Company (the licensee) requested approval for an emergency plan change for Diablo Canyon Nuclear Power Plant, Units 1 and 2 (DCPP). The proposed changes would revise the DCPP Emergency Plan to change the staffing and increase the staff augmentation times for certain emergency response organization positions.

The U.S. Nuclear Regulatory Commission (NRC) staff issued request for additional information (RAI) by email dated March 21, 2019 (ADAMS Accession No. ML19084A257) and the PG&E provided the response by letter dated May 2, 2019 (ADAMS Accession No. ML19122A494). Based on its review, the NRC staff has follow-up questions detailed in the attachment to this email necessary for the NRC staff to complete its review. The Draft of this request was discussed with the licensee on May 23, 2019 and it was agreed that the licensee will provide the response to this request within 30 days from the date the RAIs were discussed i.e. latest by June 24, 2019.

Please treat this email as transmittal of official RAIs. The email will be documented in ADAMS.

Thanks.

Balwant K. Singal  
Senior Project Manager (Diablo Canyon and Wolf Creek)  
Nuclear Regulatory Commission  
Division of Operating Reactor Licensing  
[Balwant.Singal@nrc.gov](mailto:Balwant.Singal@nrc.gov)  
Tel: (301) 415-3016  
Fax: (301) 415-1222

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SUPPLEMENTAL REQUESTS FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

REVISE EMERGENCY PLAN RESPONSE ORGANIZATION

STAFFING AND AUGMENTATION

DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NUMBERS 50-275 AND 50-323

By letter dated September 12, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML18255A368), Pacific Gas and Electric Company (PG&E, the licensee) requested approval for an emergency plan change for Diablo Canyon Nuclear Power Plant, Units 1 and 2 (DCPP). The proposed changes would revise the DCPP Emergency Plan to modify staffing levels and increase augmentation times for certain emergency response organization (ERO) positions.

By e-mail dated March 21, 2019 (ADAMS Accession No. ML19084A257), the U. S. Nuclear Regulatory Commission (NRC) staff submitted requests for additional information (RAIs) in support of its review. Based on a review of the PG&E response to the NRC's RAIs provided by letter dated May 2, 2019 (ADAMS Accession Number ML19122A494), supplemental information for the RAIs listed below is necessary to facilitate the technical review being conducted by the NRC staff. A timely and thorough response to this draft RAI is requested to meet the approval date requested by the licensee.

Please note that for consistency, the RAI numbering scheme of RAIs issued via email dated March 21, 2019 has been maintained. The supplemental RAIs has been numbered as sub-set of the original RAIs.

**RAI-6**

Key highlights from RAI-6 as requested by the NRC, included the following:

Section 3.2.5, "Plant System Engineering, Repair and Corrective Actions Function" of the Enclosure of the application dated September 12, 2018, states, in part;

The proposed change maintains responsibility for core damage assessment with the Work Control Shift Foreman and extends augmented response of the Reactor, Electrical, and Mechanical Engineers by 30 minutes.

The guidance provided in RIS 2016-10, License Amendment Requests for Change to Emergency Response Organization Staffing and Augmentation," dated August 5, 2016 (ADAMS Accession No. ML16124A002), provides the following:

To adequately justify an extension of these responders, the licensee should show that on-shift positions are capable of filling these roles during the 90-minute period after an emergency declaration. This will require a

review of site procedures to identify the technical support tasks requiring electrical and mechanical expertise that must be performed within the first 90 minutes of an emergency. The licensee should then show that there are on-shift positions with the necessary expertise to perform the identified technical support functions, and that such performance will not prevent the timely performance of their other assigned functions, as specified in the emergency plan...

The guidance provided in the revised Table B-1 of NUREG-0654<sup>1</sup> provides for three (3) 60-minute augmenting Engineering staff to provide augmentation (relief) for the on-shift engineering position at the declaration of an Alert or higher classification level.

[a] Please provide further justification as to the necessary electrical and mechanical engineering expertise possessed by the Shift Foreman/Shift Technical Advisor (STA) to perform technical support functions for the additional timing requested, consistent with the guidance in RIS 2016-10 and the revised Table B-1, which serve as an acceptable means of meeting planning standard Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 50.47(b)(2).

[b] Additionally, as the Shift Foreman/STA is identified as the position on-shift to perform dose assessment, please provide further justification how providing this additional technical support impacts the ability to perform timely and accurate dose assessment.

The PG&E response to RAI-6a states, in part:

The proposed change to the DCCP E-Plan maintains the augmentation of an Electrical Coordinator and a Mechanical Coordinator within 60 minutes of an Alert or higher classification as discussed in RAI-7a.

These positions are filled by Maintenance Foremen who typically hold current or previous qualifications as maintenance technicians.

Filling of these positions relieves the STA of Mechanical/Electrical responsibilities related to initial equipment failure investigation and troubleshooting.

If the initial investigation cannot provide a resolution to the issue within a time-frame commensurate with the operational significance of the issue, then formal troubleshooting will be initiated in accordance with MA 1.1026. Mechanical and electrical engineering responders will be available within 90 minutes of an Alert or higher classification to provide technical expertise and investigation techniques to support Operations and Maintenance in performing their roles.

In summary, the PG&E response to RAI-6a states that the mechanical and electrical engineer functions will be performed by maintenance coordinators and that formal troubleshooting capability would be delayed for an additional 30 minutes. Additionally, PG&E proposes that the maintenance coordinators will be performing the maintenance technician function.

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<sup>1</sup> NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1 (ADAMS Accession No. ML040420012).

#### Supplemental RAI 6.a.1

Please provide a justification that supports replacing the electrical and mechanical engineers with maintenance coordinators. In addition to the qualification of the maintenance foremen to perform this function, this justification should address the capabilities of the maintenance foremen to concurrently perform the engineering function, maintenance/Operations Support Center (OSC) supervision, and maintenance technician functions.

#### Supplemental RAI 6.a.2

Please provide a justification that supports extending the time for providing engineering support, which is intended to support emergency core cooling system (ECCS) restoration, from 60 to 90 minutes. This support typically includes such items as formal troubleshooting and supporting alternate methods of establishing ECCS.

The PG&E response to RAI-6b states, in part:

The proposed plan, as modified by the changes documented in the response to RAI-6a above, continues the responsibility for part of the Technical Support Function and the on-shift dose assessment task from 60 to 90 minutes. Specifically, in the technical support function the Work Control Shift Foreman (WCSFM)/STA will retain the responsibility for Event Assessment.

The WCSFM/STA is trained and qualified in the performance of core damage assessment and dose assessment. . . . Both core damage assessment procedures are available for use by the WCSFM/STA and the Reactor Engineer such that equivalent capability is provided for both the on shift and the augmented staff.

In summary, it appears that the tasks performed by the PG&E technical support engineers, including the Reactor Engineer, is limited to core damage assessment.

#### Supplemental RAI 6.b.1

Please explain what tasks, other than core damage assessment and dose assessment, are performed by the electrical and mechanical engineers.

#### Supplemental RAI 6.b.2

If the WCSFM/STA is expected to perform the electrical and mechanical engineer functions in addition to their current emergency response functions, please provide a justification that the WCSFM/STA is qualified and capable of performing the electrical and mechanical engineering functions in addition to the WCSFM/STA duties.

### **RAI-7**

- a. Please provide justification for combining maintenance personnel with their respective maintenance coordinators. This justification should explain how the maintenance coordinators can perform both the maintenance technician role and the maintenance

supervisor role for maintenance and troubleshooting activities as effectively as a maintenance technician and a maintenance supervisor.

The PG&E response to RAI-7a states, in part:

PG&E has reevaluated the proposed changes to Figure 5-3 for the Maintenance positions and agrees that separate identification of Maintenance Coordinator and Maintenance personnel positions is appropriate. Additionally, PG&E will maintain the 60-minute response requirement for the Mechanical and Electrical Maintenance Coordinators as reflected in the proposed Table 5-1 of the DCPD E-Plan.

- b. Please explain what controls are in place to ensure that the maintenance coordinators possess the requisite qualifications and proficiencies to perform the ERO functions of maintenance technicians and maintenance coordinators.

The PG&E response to RAI-7b states:

The Maintenance Coordinator prequalification, as documented in OM10.104, "Emergency Response Organization Management" identifies the maintenance discipline Foreman as a desired prerequisite. PG&E commits to revising this procedure to make this prerequisite mandatory for the Maintenance Coordinator position.

Based on a review of the PG&E responses to RAI-6a, RAI-7a, and RAI-7b, it appears that although the maintenance foreman will be qualified to perform oversight of maintenance technicians, the maintenance foreman will be tasked with performing technician tasks that they are may not currently qualified and proficient to perform. It appears that the proposed DCPD Emergency Plan is using 2 maintenance foremen to replace 2 maintenance technicians, 2 engineers, and 1 lead OSC foreman for the 30-minute period from 60 minutes to 90 minutes following the declaration of an Alert or greater emergency classification level. Additionally, at 90 minutes the maintenance foremen will continue to perform both the maintenance technician and maintenance foreman functions.

In summary, PG&E proposes to functionally replace maintenance technicians with maintenance foreman. Considering that maintenance technician tasks typically require local equipment assessment and the only personnel available to perform these tasks would be the maintenance foremen, it was not clear to the NRC staff who would be available to supervise OSC activities as directed by the emergency director.

#### Supplemental RAI 7.a/b.1

Please provide a justification that the maintenance coordinators are qualified and proficient to independently perform maintenance technician tasks. Note: the original RAI 7.a specifically asked how a maintenance foreman could do both the supervisor and technician tasks. The RAI response appears to only addresses making sure the maintenance coordinators are qualified as maintenance foremen.

#### Supplemental RAI 7.a/b.2

Please provide a justification for not having maintenance technicians provide for minimum staff augmentation unless called in to an Alert or greater emergency classification level.

Note: Revised NUREG-0654/FEMA-REP-1 Table B-1: "Emergency Response Organization Staffing and Augmentation Plan," includes a mechanical and an electrical technician at 60 minutes (which will be performed by the maintenance foremen) and an electrical and mechanical supervisor at 90 minutes. Although NUREG-0654 provides for additional personnel to perform the maintenance and electrical supervision functions, PG&E does not provide any additional to support this function. Additionally, the current DCPD Emergency Plan show 1 on-shift person in operations performing the mechanical maintenance function with 2 additional on-shift personnel performing the electrical and I&C maintenance functions.

Supplemental RAI 7.a/b.3

Please explain how the maintenance foreman will be able to supervise OSC activities when they may be performing maintenance technician activities in the field.

Supplemental RAI 7.a/b.4

Please provide a justification that supports the proposed minimum staffing for the Plant System Engineering, Repair, and Corrective Actions functional area. Note: considering that an on-shift staffing analysis does not assess the tasks performed by the emergency response augmenting organization, this justification should include that the proposed staffing has been demonstrated during emergency preparedness drills or exercises.