



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 11, 2012

MEMORANDUM TO: FILE

FROM: Joseph M. Sebrosky, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "Joe M. Sebrosky", is written over the typed name and title.

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2, SAN  
ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3, PALO  
VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3, AND  
COLUMBIA GENERATING STATION - SUMMARY OF TELEPHONE  
CONFERENCE RE: NEAR TERM TASK FORCE  
RECOMMENDATION 2.1 SEISMIC REEVALUATIONS

This memorandum summarizes a telephone discussion on May 31, 2012, between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and Arizona Public Service (APS) (licensees). The purpose of the call was to discuss the process found in the March 12, 2012, request for information associated with Near Term Task Force Recommendation 2.1 Seismic Reevaluations. The March 12, 2012, request for information was sent to operating reactors pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.54(f) and can be found in Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340. A list of attendees is provided in Enclosure 1. The handouts that were provided by the licensees are provided in Enclosure 2.

The licensees discussed their plans for addressing the March 12, 2012, request for information associated with the expectation that plants in the Western United States (WUS) develop seismic source and ground motion models to characterize their regional and site-specific seismic hazards. Consistent with current practice for 10 CFR Part 52, new reactor licensing, the March 12, 2012, request for information states that the WUS plants should perform a Senior Seismic Hazard Analysis Committee (SSHAC) Level 3 study to develop a probabilistic seismic hazard analysis.

The licensees indicated that they have formed a Southwestern WUS (SWUS) group to coordinate activities in this area. The licensees indicated that there would be four to six separate SSHACs needed to develop the information to respond to the March 12, 2012, letter. The number range is based on three SSHACs (one for each site) being needed to develop the seismic source models. There is expected to be little overlap for these three SSHACs because the source models are driven by seismic features that are within approximately 40 miles of each site. There are expected to be one to three SSHACs needed to develop the ground motion models. It is anticipated that there will be some overlap for the ground motion model SSHACs so a SSHAC for each site may not be necessary.

The licensees stated that they intend to meet the March 11, 2015, completion date for providing a seismic hazard evaluation consistent with the schedule provided in the March 12, 2012, request for information; however, an alternate plan may be necessary because of limited personnel with seismic expertise. If it becomes apparent during the process that the licensees cannot meet this date, the licensees proposed to meet with the NRC to develop a mutually agreeable schedule. The licensees indicated that they would document the potential impediments to meeting the March 12, 2012, request for information schedule for a seismic hazard evaluation in a letter to the NRC. The letter will also document the licensee's proposal that if it becomes apparent that the schedule cannot be met, a meeting be arranged with the staff to determine a mutually agreeable schedule.

Enclosures:

1. List of Attendees
2. Licensees' Handouts

Docket Nos. 50-275, 50-323, 50-528, 50-529,  
50-530, 50-397, 50-361, and 50-362

LIST OF ATTENDEES  
MAY 31, 2012, TELECONFERENCE MEETING WITH  
TO DISCUSS SEISMIC REEVALUATIONS  
DOCKET NOS. 50-275, 50-323, 50-528, 50-529,  
50-530, 50-397, 50-361, AND 50-362

| <u>NAME</u>        | <u>ORGANIZATION</u>                                                |
|--------------------|--------------------------------------------------------------------|
| Larry Parker       | Pacific Gas and Electric (PG&E) and STARS<br>Regulatory Affairs    |
| Terry Grebel       | PG&E                                                               |
| Norm Abrahamson    | PG&E                                                               |
| Mike Powell        | Arizona Public Service                                             |
| Linda Conklin      | Southern California Edison (SCE)                                   |
| Caroline McAndrews | SCE                                                                |
| Kimberly Keithline | Nuclear Energy Institute                                           |
| Nilesh Chokshi     | U.S. Nuclear Regulatory Commission (NRC)<br>Office of New Reactors |
| John Ake           | NRC Office of Nuclear Regulatory Research<br>(RES)                 |
| Annie Kammerer     | NRC/RES                                                            |
| Mike Markley       | NRC Office of Nuclear Reactor Regulation (NRR)                     |
| Rob Taylor         | NRC/NRR                                                            |
| Randy Hall         | NRC/NRR                                                            |
| Chris Gratton      | NRC/NRR                                                            |
| Joe Sebrosky       | NRC/NRR                                                            |
| Balwant Singal     | NRC/NRR                                                            |

# **NTTF Rec 2.1 Seismic Re-evaluation**

90-Day Alternative Approach Associated with

Western United States (WUS)

Senior Seismic Hazard Analysis Committee (SSHAC)

# Meeting Overview

- NTTF Rec. 2.1 Requirements
- Senior Seismic Hazard Analysis Committee (SSHAC) Overview and Operating Experience
- Southwestern United States (SWUS) SSHAC Coordination – APS, PG&E and SCE
- Alternative Course of Action Proposal and Next Steps



# NTTF Rec. 2.1 Requirements

## ▪ Required Response:

- Within 3 years of the date of this information request [March 12, 2012], each WUS addressee is requested to submit a written response consistent with the requested information, seismic hazard evaluation, items 1 through 7 ....
- If an addressee cannot meet the requested response date, the addressee must provide a response within 90 days of the date of this information request and describe the alternative course of action that it proposes to take, including the basis of the acceptability of the proposed alternative course of action and estimated completion dates.

## ▪ Attachment 1 to Seismic Enclosure 1, Step 1

- Addressees of plants located in the Western United States (Columbia, Diablo Canyon, Palo Verde, and San Onofre) should develop an updated, site-specific PSHA.
- Any new or updated seismic hazard assessment should consider all relevant data, models, and methods in the evaluation of seismic sources and ground motion models.
- Consistent with Regulatory Guide (RG) 1.208, "A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion," addressees should use a Senior Seismic Hazard Analysis Committee (SSHAC) study, as described in NUREG/CR-6372, "Recommendations for Probabilistic Seismic Hazard Analysis: Guidance on Uncertainty and Use of Experts."
- Consistent with current practice, as described in NUREG-2117, "Practical Implementation Guidelines for SSHAC Level 3 and 4 Hazard Studies," a SSHAC Level 3 study should be performed.

# Comments on NTTF Rec. 2.1 Requirements

- Seismic re-evaluation actions include completion of SSHACs and development of ground motion to SSE comparison results within 3 years
  - The CEUS Seismic Source Characterization SSHAC took ~4 years to complete
- Attachment 1 to Seismic Enclosure 1, Step 1 requires Licensee to “...consider all relevant models....”
  - WUS plants may need to consider numerical simulations, which were not previously included in WUS PSHAs but were part of the CEUS SSC results

# SSHAC Overview

The goal of the SSHAC Levels is to consider the views of the larger technical community and to capture the center, body, and range of technically defensible interpretations.

## Planning

- Develop project plan
- Select and contract with project participants
- Develop project database

## Workshops 1 - 3

- Review of hazard-significant issues and available data
- Alternative interpretations
- Feedback

## Finalize Models

- Develop preliminary model(s) and Hazard Input Document
- Perform preliminary hazard calculations and sensitivity analyses
- Finalize models in light of feedback
- Perform final hazard calculations and sensitivity analyses
- Develop final project report
- Perform participatory peer review of entire process



# Southwestern US SSHAC Coordination

## SWUS Licensees are coordinating activities

- Planning of SSHACs
- Obtaining Participant Contracts - 6 to 8 SSHACS are needed to support the WUS 50.54(f) Letter
  - Project Managers
  - Project Integrators
  - Participatory Peer Review Panel (PPRP) Lead
  - PPRP Team
  - Technical Integrator (TI) Lead
  - TI Team
  - Proponent experts
- Scheduling 4 to 6 SSHACs (SWUS only), fixing dates once contracts are established
- Executing the Plans

# Alternative Course of Action Proposal and Next Step

- WUS Licensees intend to meet the March 11, 2015 completion date
- An alternate plan may be necessary because of limited personnel with seismic expertise
  - The WUS plants will be performing 6-8 SSHAC at the same time
- If committed resources cannot be arranged to support the March 11, 2015 completion, WUS Licensees proposes to meet with the NRC to agree upon a new completion date
- If resource constraints develop during the ~2.5 year SSHAC Level 3 process, WUS Licensee propose to meet with the NRC and to develop a revised mutually agreeable schedule

## Next Step

- WUS Licensees submit an alternative course of action to the NRC by June 11, 2012 addressing the SSHAC resource limitations

The licensees stated that they intend to meet the March 11, 2015, completion date for providing a seismic hazard evaluation consistent with the schedule provided in the March 12, 2012, request for information; however, an alternate plan may be necessary because of limited personnel with seismic expertise. If it becomes apparent during the process that the licensees cannot meet this date, the licensees proposed to meet with the NRC to develop a mutually agreeable schedule. The licensees indicated that they would document the potential impediments to meeting the March 12, 2012, request for information schedule for a seismic hazard evaluation in a letter to the NRC. The letter will also document the licensee's proposal that if it becomes apparent that the schedule cannot be met, a meeting be arranged with the staff to determine a mutually agreeable schedule.

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RidsNrrPMSanOnofre Resource

RidsNrrPMColumbia Resource

RidsNrrPMPaloVerde Resource

RidsRgn4MailCenter Resource

CGratton, NRR/JLD

CMunson, NRR/JLD

RTaylor, NRR/JLD

NChokshi, NRO

Jake, RES

AKammerer, RES

**ADAMS Accession No. ML12157A272**

|        |             |             |            |             |             |
|--------|-------------|-------------|------------|-------------|-------------|
| OFFICE | NRR/LPL4/PM | NRR/LPL4/LA | NRR/JLD/PM | NRR/LPL4/BC | NRR/LPL4/PM |
| NAME   | JSebrosky   | JBurkhardt  | CGratton   | MMarkley    | JSebrosky   |
| DATE   | 6/7/12      | 6/6/12      | 6/7/12     | 6/11/12     | 6/11/12     |

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