U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Briefing Package

for

Chairman Allison M. Macfarlane

DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2

Site Visit

January 15, 2013

C1

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Agenda

January 15, 2013

6:45 am	Depart Courtyard Marriott to Diablo Canyon
7:30 am	Arrive at Diablo Canyon • Met by PG&E staff, escorted to access and dosimetry offices
7:50 am	Site Tour – outside protected area • Portable Generators • Long-Term Cooling Water Pump / Raw Water Storage Tank (FLEX equipment) • Independent Spent Fuel Storage Installation • Plant Overlook
8:35 pm	Process thru Security and enter Protected Area
8:45 am	Meet with Resident Inspectors in the resident office
9:15 am	Plant Tour – led by the licensee (meet in resident office) • Control room • Spent fuel pool • Emergency diesel generators
11:00 am	Working lunch/licensee presentation (Board Room) • Welcome • Station Overview • New FLEX Mitigation Strategies and Equipment • Seismic Hazard Reanalysis • Seismic 3D Mapping and License Renewal
12:05 pm	Meet with Ed Halpin
12:30 pm	Depart Diablo Canyon to San Luis Obispo (Possible location for meetings is Courtyard Marriot San Luis Obispo or Civic Building, TBD)
1:30 pm	Meet with David Sneed, San Luis Obispo Tribune
2:00 pm	Meet with San Luis Obispo Mothers For Peace • Jane Swanson • Linda Seeley

Executive Summary

Purpose of the visit

- To meet with the Diablo Canyon management, discuss plant performance, and tour the plant.
- To meet with interested stakeholders to discuss issues associated with the operation of Diablo Canyon Power Plant.

Issues to be Addressed

- Discuss next steps for 3D seismic mapping and when the licensee may ask the NRC to resume license renewal reviews for Diablo Canyon.
- Discuss the need for timely completion of the seismic hazards reanalysis.
- Discuss issues that are of concern with interested stakeholders.

Personnel to Meet:

Commission Personnel

- Courtney Greenwald, Director For Communications
- Nathan Sanfilippo, Policy Advisor For Reactors
- Mary Woollen, Director For External Engagement

Office of Public Affairs

- Eliot Brenner, Director, Office of Public Affairs

Office of Congressional Affairs

- Becky Schmidt, Director, Office of Congressional Affairs

Region IV Personnel:

- Elmo Collins, Regional Administrator, Region IV
- Tom Hipschman, Senior Resident Inspector
- Laura Micewski, Resident Inspector

Licensee:

- Ed Halpin, Senior Vice President & Chief Nuclear Officer
- Barry Allen, Site Vice President
- Jim Welsch, Station Director
- Jeff Summy, Senior Director Engineering & Technical Services

Stakeholders:

- San Luis Obispo Mothers for Peace
- Alliance for Nuclear Responsibility
- Local public officials
- Members of the media

Current Plant Performance:

- Diablo Canyon is in the Licensee Response column of the NRC Action Matrix, with all Green findings and performance indicators.

- Diablo Canyon has no substantive crosscutting issues. A theme in the human performance decision making component was identified during the Mid-cycle Performance Assessment, with four findings in this cross-cutting area. The licensee has completed a common cause assessment and is in the process of completing corrective actions for this trend.

Activities On Site:

- Meet and discuss seismic hazard reanalysis, post-Fukishima actions, 3D seismic mapping and license renewal.
- Tour facility with licensee and resident inspectors.

Messages to Communicate to Pacific Gas & Electric (Licensee)

- Emphasize that the Licensing Basis Verification Project is a significant initiative to identify and resolve numerous historical conflicts in the licensing basis documentation. These issues have consumed a significant amount of inspection resources and most of the station's license amendment requests in the last several years. The NRC has an important interest in this project being completed in a timely manner and effectively resolving the issues. We are expecting the licensee to rigorously identify and correct these latent issues.

- PG&E has work to revise the seismic current licensing basis documentation and complete the seismic hazards reanalysis requested by the March 12, 2012, 10 CFR 50.54(f) letter. The seismic hazard reanalysis must meet the stated deadlines, regardless of delays in conducting 3D seismic mapping.

- It is important that PG&E submit their planned license amendment request to adopt a risk-informed fire protection program (National Fire Protection Association 805 Standard) on June 28, 2013, on schedule and with a high quality submittal.

- Public outreach is very important in California. PG&E should continue to seek public outreach opportunities.

Messages to Communicate to Interested Stakeholders

- The staff completed its assessment of the recently discovered Shoreline Fault in Research Information Letter 12-01 (see Tab 6a for discussion). The staff also discussed its assessment of the Shoreline Fault at a November 28, 2012, public meeting at San Luis Obispo. The overall conclusion is that the plant continues to be safe.

- Public stakeholders have noted that participants in the Senior Seismic Hazard Analysis Committee process have expressed opinions that differed with the NRC's conclusions in Research Information Letter 12-01. The expression of different expert opinions is an intentional part of that process to allow those opinions to be considered in the final outcome. The outcome from the Senior Seismic Hazard Analysis Committee process is a revised overall seismic hazard statement considering the probability and peak ground acceleration from all sources. This is very different than the NRC's deterministic assessment of the potential impact of a single fault on plant safety.

- The staff has conducted multiple public meetings and a seismic workshop to help the public understand the existing seismic hazards and how they are used to assess plant safety, with a focus on the Shoreline Fault. The feedback that the staff received from the Alliance for Nuclear Responsibility on the November 28, 2012, meeting conflicts with the feedback that the staff received from other interested stakeholders. Specifically, members of the public, including representatives from the San Luis Obispo Mothers for Peace, expressed appreciation during the meeting for the staff's efforts to inform the public about the Shoreline Fault. The staff strives to improve its efforts in public outreach, and stakeholder comments are important to that improvement process.

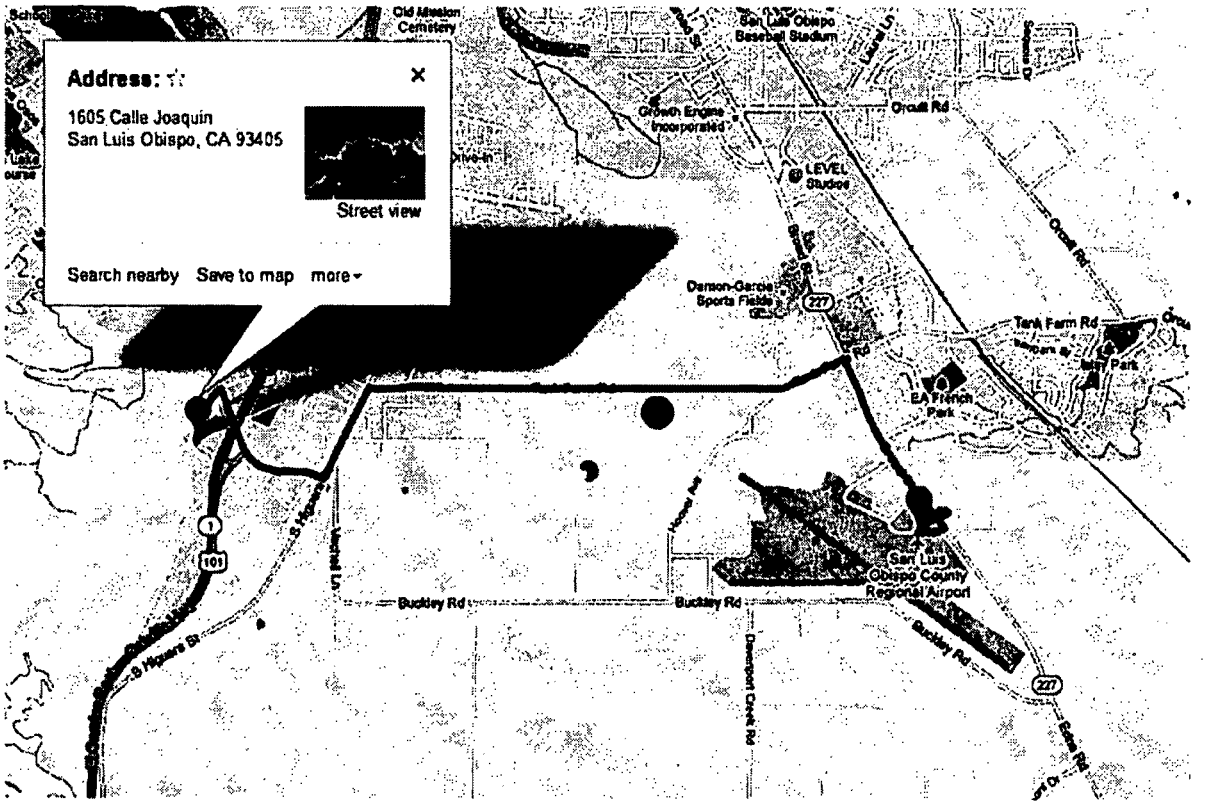
- The Alliance for Nuclear Responsibility sent a letter to the Chairman dated November 13, 2012, (see Tab 10a), discussing three deficiencies the Alliance sees with the NRC's treatment of issues related to the Shoreline Fault. It was determined that a response to this letter from the NRC was not appropriate. This issue is expected to be raised during the planned discussion with Alliance. These are complex issues that the staff has discussed in detail and is confident in those actions and conclusions. It is suggested that the Chairman listen to those concerns, possibly offer to respond to the letter in writing, but not attempt to address them during this meeting.

- Local public officials recommended that the California Coastal Commission disapprove the permit request for high-energy 3D offshore seismic mapping due to the potential environmental impact and a perceived lack of rigor in PG&E's proposed mitigating actions. The permit was denied. The NRC is not requiring the high-energy 3D seismic mapping, and it is up to PG&E to decide whether to reapply for the permit.

- The San Luis Obispo Mothers For Peace have stated their intent to try to get Diablo Canyon Power Plant shut down, which included fighting against licensing the independent spent storage installation in court and requesting a hearing on the license renewal application. **The Chairman may not discuss the hearing contentions, license renewal, or waste confidence with the licensee or stakeholders.** See Tab 6a for more information.

Site Location Map And Directions

From: San Luis Obispo County Regional Airport
To: Marriott Courtyard San Luis Obispo



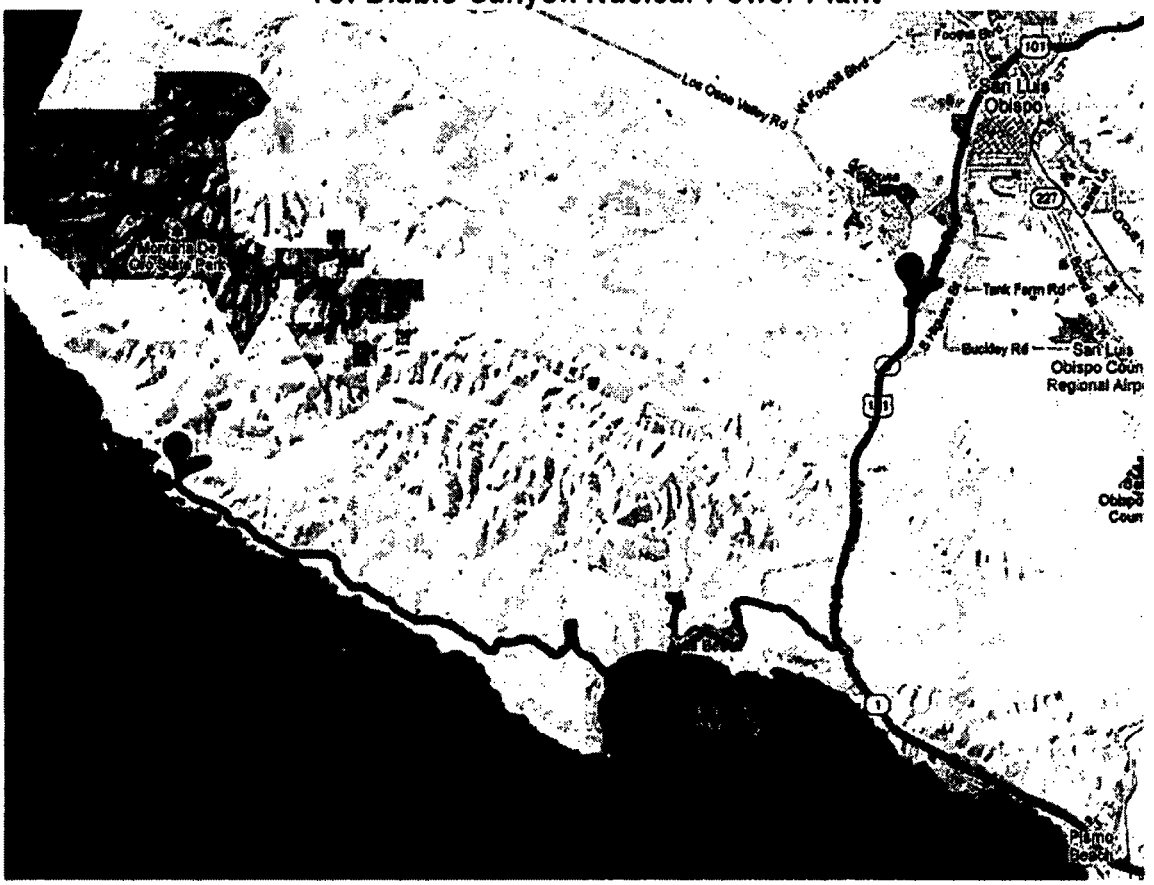
San Luis Obispo County Regional Airport
903 Airport Drive #5, San Luis Obispo, CA 93401

1.	Head **east** on **Airport Dr** toward **Broad St**	go 0.1 mi total 0.1 mi
2.	Turn **left** onto **CA 227 N/Broad St** About 2 mins	go 0.7 mi total 0.8 mi
3.	Turn **left** onto **Tank Farm Rd** About 3 mins	go 1.8 mi total 2.6 mi
4.	Turn **left** onto **S Higuera St** About 1 min	go 0.4 mi total 2.9 mi
5.	Take the 2nd **right** onto **Los Osos Valley Rd** About 2 mins	go 0.6 mi total 3.5 mi
6.	Turn **left** onto **Calle Joaquin** Destination will be on the right About 57 secs	go 0.2 mi total 3.7 mi

Courtyard San Luis Obispo
1605 Calle Joaquin, San Luis Obispo, CA 93405

TAB 2a

From: Marriott Courtyard San Luis Obispo
To: Diablo Canyon Nuclear Power Plant



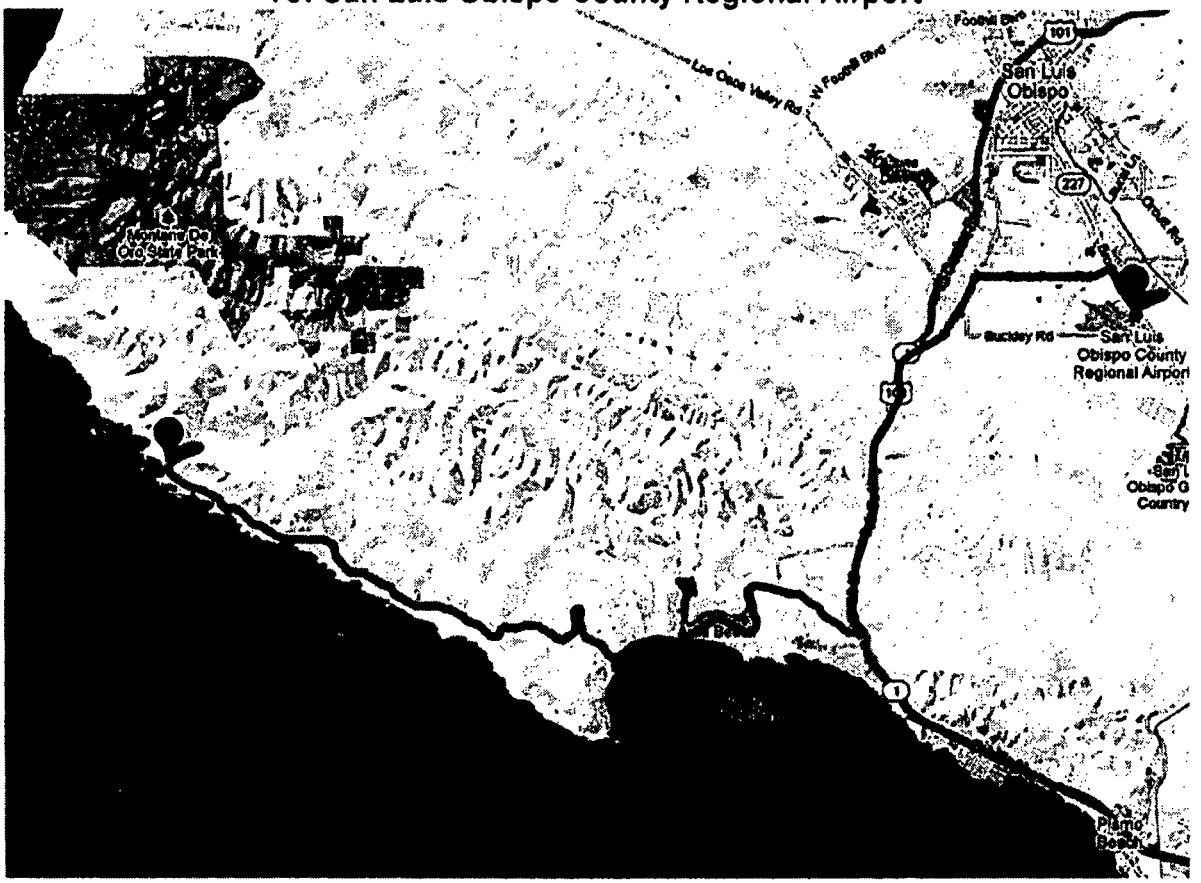
Courtyard San Luis Obispo
1605 Calle Joaquin, San Luis Obispo, CA 93405

1. Head north on Calle Joaquin	go 0.2 mi total 0.2 mi
2. Turn right onto Los Osos Valley Rd	go 384 ft total 0.3 mi
3. Take the 1st right toward US-101 S	go 105 ft total 0.3 mi
4. Turn left to merge onto US-101 S About 4 mins	go 4.6 mi total 4.9 mi
5. Take exit 195 for Avila Beach Drive	go 0.2 mi total 5.1 mi
6. Turn right onto Avila Beach Dr About 7 mins	go 4.1 mi total 9.3 mi
7. Turn right onto Diablo Canyon Rd/Lighthouse Rd/Pecho Rd Continue to follow Diablo Canyon Rd Restricted usage road Destination will be on the right About 18 mins	go 7.3 mi total 16.6 mi

Diablo Canyon Nuclear Power
Avila Beach, CA 93424

TAB 2a

From: Diablo Canyon Nuclear Power Plant
To: San Luis Obispo County Regional Airport



Diablo Canyon Nuclear Power
Avila Beach, CA 93424

1.	Head **southeast** on **Diablo Canyon Rd** Restricted usage road About 18 mins	go 7.3 mi total 7.3 mi
2.	Turn **left** onto **Avila Beach Dr** About 7 mins	go 4.2 mi total 11.5 mi
3.	**Avila Beach Dr** turns left and becomes **Monte Rd**	go 0.2 mi total 11.8 mi
4.	Take the ramp onto **US-101 N** About 3 mins	go 2.8 mi total 14.5 mi
5.	Take exit **198** toward **Higuera Street** About 1 min	go 0.3 mi total 14.8 mi
6.	Slight **left** onto **S Higuera St** About 3 mins	go 1.9 mi total 16.7 mi
7.	Turn **right** onto **Tank Farm Rd** About 3 mins	go 1.8 mi total 18.5 mi
8.	Turn **right** onto **CA-227 S/Broad St** About 1 min	go 0.7 mi total 19.2 mi
9.	Turn **right** onto **Airport Dr** Destination will be on the left	go 0.1 mi total 19.3 mi

San Luis Obispo County Regional Airport
903 Airport Drive #5, San Luis Obispo, CA 93401

Facility Data

Diablo Canyon Power Plant

Utility:	Pacific Gas and Electric Company
Location:	Avila Beach, CA
County:	San Luis Obispo County, California

	Unit 1	Unit 2
Operating License	DPR-80	DPR-82
Docket Nos.	50-275	50-323
Construction Permit Date	April 23, 1968	December 9, 1970
Full Power License Date	November 2, 1984	August 26, 1985
Commercial Operation Date	May 7, 1985	March 13, 1986
OL Expiration Date	November 2, 2024	August 20, 2025

Plant Characteristics

Reactor Type	PWR
Containment Type	Dry ambient
Power Level	3411 MWt / 1120 MWe
NSSS Vendor	Westinghouse
Constructor	Utility
Turbine Supplier	Westinghouse/Alstom
Condenser Cooling Method	Once through cooling from the Pacific Ocean
Ultimate Heat Sink	Pacific Ocean
Dry Cask Storage	Approved in 2007

NRC Staff

Region IV Branch Chief:	Neil O'Keefe
Resident Inspectors:	Tom Hipschman, SRI
	Laura Micewski, RI
Project Manager:	Joe Sebrosky
NRR Branch Chief:	Michael Markley

Diablo Canyon Unique Features

Licensee: Pacific Gas & Electric is a member of an industry consortium known as Strategic Teaming and Resource Sharing (STARS) that was formed to share resources and reduce costs for interacting with the NRC staff on common regulatory issues. The Strategic Teaming and Resource Sharing group consists of the licensees for six plants: Callaway, Diablo Canyon, Palo Verde, South Texas Project, Comanche Peak, and Wolf Creek.

Diablo Canyon has the following unique design features:

- The ultimate heat sink supply, auxiliary service water, has a cross-connect at the intake structure that allows the auxiliary service water system for either unit to supply both units.
- The units have two safety-related trains; however, the two electrical trains are divided between three diesel generators. The train loads are not symmetrical which results in different risk importance for each emergency diesel generator.
- (b)(7)(F)
- The containment sump screens were redesigned to significantly increase the surface area and provide for change in direction of flow through the screens to facilitate removal of debris.
- On a trip of the main generator, the electrical supply for the units will fast transfer to the startup transformers; however, if that fails, the diesel generators will supply the safety-related buses.

(b)(7)(F)

- The facility has three distinct probabilistic risk assessments (PRA): a site-specific PRA, a fire protection PRA, and a seismic PRA. Coincidently, the nominal core damage frequency value for each PRA is the same value, 3E-5.
- During November and December, the units are sometimes challenged by heavy kelp growth which breaks free during Pacific storms and is pushed onto the circulating water screens. The licensee is adept at monitoring and predicting conditions that cause this to challenge the plant, and have developed appropriate actions to respond.
- The coastal area is subject to little rainfall during the April through October time frame, which leads to a high fire hazard during the months of July through October. Rains tend to increase in late November and December.
- Diablo Canyon Power Plant is located in a seismically active area along the interface of the Pacific and North American Plates. Multiple faults are located within 50 miles of the plant. PG&E maintains a Long-Term Seismic Program to reevaluate the seismic design

bases against insights and knowledge gained with each seismic event. The plant was designed for ground motion from a Design Earthquake, equivalent to an "Operating Basis Earthquake," in which the plant can be expected to continue to operate. This value is ground motion acceleration at the containment base of 0.2g. The Double Design Earthquake, equivalent to a "Safe Shutdown Earthquake," is the design basis for most safety-related structures, and has ground motion acceleration of 0.4g. The plant is also evaluated for the maximum ground acceleration which can result from an earthquake originating in the Hosgri fault (0.75g). This evaluation ensures the plant can be safely shut down if the expected maximum ground motion were to occur. An automatic reactor trip is initiated for a nominal ground acceleration of 0.35 g. An earthquake force monitor provides an alarm in the control room at a minimum of 0.01g of ground acceleration.

Reactor Oversight Process (ROP) Information

On September 4, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff issued the Mid-cycle Assessment Letter for Diablo Canyon Power Plant. Plant performance is within the Licensee Response column (Column 1) of the NRC's Action Matrix, because all inspection findings had very low (i.e., Green) safety significance and all performance indicators indicated that performance was within the nominal, expected range (i.e., Green).

The NRC identified a new cross-cutting theme in the human performance decision making component. Specifically, four findings were identified that had primary causal factors involving the failure to use conservative assumptions in decision-making such that licensee decisions demonstrate that nuclear safety is an overriding priority [H.1(b)]. The NRC has determined that a substantive cross-cutting issue associated with H.1(b) did not exist because the NRC did not have a concern with the licensee's staff's scope of effort and progress in addressing the cross-cutting theme. The licensee placed this trend in the corrective action program and completed a common cause analysis to identify corrective action.

The colored performance indicators and inspection findings for this station can be viewed at the following URLs:

Diablo Canyon Unit 1: http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB1/diab1_chart.html

Diablo Canyon Unit 2: http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB2/diab2_chart.html

Current Issues

A. Current Licensing Issues

License Renewal

PG&E submitted an application to renew the operating licenses for Diablo Canyon Power Plant, Units 1 and 2, on November 23, 2009. On April 10, 2011, PG&E submitted correspondence to the NRC requesting deferral of issuance of its renewed operating license pending completion of 3D seismic studies. Therefore, the staff has minimized work and will wait for a request from PG&E to perform further review. The staff issued the Safety Evaluation Report in June 2011 and will supplement, as necessary, at a time closer to the license renewal decision. The draft environmental impact statement has not been issued. PG&E agreed to complete the 3D seismic mapping in response to a California bill requiring Diablo Canyon Power Plant and San Onofre to study their generation reliability as it relates to seismic events.

On November 14, 2012, the California Coastal Commission rejected PG&E's permit request to perform the high-energy offshore 3D seismic mapping. PG&E is currently re-evaluating whether to reapply for the permit or to consider their commitment to the state fulfilled. If the latter is the outcome of this review, PG&E may ask the NRC to proceed with its review of their license renewal application in the near future.

Potential Ex Parte Issues

- The Atomic Safety and Licensing Board Panel admitted a license renewal contention – that PG&E'S Severe Accident Mitigation Alternative analysis fails to consider information regarding the Shoreline Fault that is necessary for an understanding of seismic risks to the Diablo Canyon nuclear power plant. As a result, PG&E's Severe Accident Mitigation Alternative analysis does not satisfy the requirements of National Environmental Policy Act for consideration of alternatives or NRC implementing regulation 10 C.F.R. 51.53(c)(3)(ii)(L). **This should not be discussed between the Chairman and staff; the Chairman and PG&E; and the Chairman and Stakeholders.**

- **Any non-public information concerning waste confidence activities should not be discussed between the Chairman and PG&E; and the Chairman and Stakeholders.**

Diablo Canyon Seismic Issues

Shoreline Fault

On November 14, 2008, the licensee informed the NRC of a previously unknown fault located offshore. PG&E named the hypothesized fault the "Shoreline Fault." The licensee evaluated the seismic and tsunami effects and determined the site remained safe. On April 8, 2009, the NRC issued Research Information Letter (RIL) 09-001, "Preliminary Deterministic Analysis of Seismic Hazard at Diablo Canyon Nuclear Power Plant from Newly Identified Shoreline Fault," which provided an initial independent technical evaluation supporting the licensee's initial determination that the plant remained safe. In September 2010, the NRC hosted, with independent seismic experts, workshops for the public to gain knowledge of the seismic hazards and its applications for the safety and operation of commercial nuclear plants, including specific discussions on the Diablo Canyon Power Plant. The licensee issued its final analysis

report on the Shoreline Fault Zone on January 7, 2011.

Research Information Letter 2012-01 documented the staff's independent and confirmatory evaluation of the licensee's Shoreline Fault Report on October 12, 2012. The letter concluded that the maximum ground acceleration at the site was within the ground motion shown to be safe for the plant. The staff conducted a local public meeting to discuss the shoreline fault report on November 28, 2012. The cover letter for Research Information Letter 2012-01 placed the results into context with the actions to respond to the March 12, 2012, 10 CFR 50.54(f) letter and provided a basis to resolve the Shoreline fault in the current licensing basis. This has been a topic of high interest at the state government and local public.

Fukushima

On June 7, 2012, PG&E provided its 90 day response to the seismic aspects of recommendation 2.1 of the March 12, 2012, request for information issued pursuant to 10 CFR 50.54(f). PG&E stated that an alternate plan may be necessary for meeting the March 12, 2015, date for completing the seismic hazard reanalysis. The reason given for the possibility of an alternate plan is the number of personnel available with the level of seismic expertise necessary to participate in the Senior Seismic Hazard Analysis Committee process for western United States plants is limited.

PG&E is coordinating with other western United States nuclear plant licensees concerning the performance of the required Senior Seismic Hazards Analysis Committee Level 3 activities, and has completed the first two workshops.

Diablo Canyon is unique in having three seismic design basis events in their licensing basis, instead of two. In the March 12, 2012, 10 CFR 50.54(f) letter, the staff directed PG&E to compare the results of the new study of seismic hazard to the Double Design Earthquake (the equivalent of the Safe Shutdown Earthquake), rather than the larger Hosgri Earthquake.

3D High-Energy Offshore Seismic Mapping

A California state law required Diablo Canyon and San Onofre to study their generation reliability as it relates to seismic events. PG&E agreed to perform state-of-the-art 3D seismic mapping techniques to explore the fault zones around Diablo Canyon to identify potential seismic vulnerability not evident from previous technologies. The California Public Utility Commission approved a rate request to pay for the testing. The study included forming a State Independent Peer Review Panel to review the results of the information that will be collected. The Independent Peer Review Panel includes earthquake scientists from the California Public Utility Commission, the California Energy Commission, the California Seismic Safety Commission, the California Coastal Commission, and the California Geologic Survey. While the low-energy 2D and 3D seismic mapping have been completed along with high-energy 3D seismic onshore mapping, PG&E must obtain 12 permits from State and Federal agencies to be able to conduct the high-energy offshore studies. There was significant public opposition to this testing, and the permitting process and the seismic studies were covered extensively in the news.

The California Coastal Commission rejected a permit in November 2012, due to potential environmental impact and limited new information that would be made available. PG&E is now considering whether to reapply for the permit or else conclude that their obligation has been met. Because of other sources of seismic information (e.g., 2D and 3D low-energy offshore survey information, 3D high-energy onshore survey information, Bathymetric information, paleoshoreline assessments, seismic event database reevaluation, gravity survey data, magnetic survey data, and regional slip rate analyses) the Senior Seismic Hazard Analysis Committee (Technical Integration and Peer Review teams) may decide that the 3D high-energy offshore seismic information is not needed in order to respond to the NRC's March 12, 2012, request for information.

Seismic Hazard Reanalysis

On March 12, 2012, the NRC Staff issued a request for information pursuant to 10 CFR 50.54(f) in which the Staff detailed a two-phased approach related to reevaluating seismic hazards at all power reactor licensees in response to recommendations of the Near-Term Task Force review of the accident at Fukushima Dai-ichi nuclear facility. The first phase is to perform a reevaluation of the seismic hazards at the Diablo Canyon Power Plant site using updated seismic information and present-day regulatory guidance and methodologies, and then compare the results to the current seismic design basis. For Diablo Canyon and the other western United States plants (i.e., San Onofre, Columbia, and Palo Verde), the first phase includes an assessment of new seismic information and development of a ground motion response spectrum using a Senior Seismic Hazard Analysis Committee Level 3 process.

The second phase is based on the results of the first phase and consists of the NRC staff determining whether additional regulatory actions are necessary (e.g., update the design basis and structures, systems, and components important to safety) to provide additional protection against the updated hazards. The first phase of the process is expected to be completed by March 12, 2015, in accordance with the milestone provided in the March 12, 2012, request for information.

The Staff expects PG&E to update its seismic probabilistic risk assessment with the results of the Senior Seismic Hazard Analysis Committee Level 3 process in the 2017 time frame. The staff will monitor the Senior Seismic Hazard Analysis Committee Level 3 process at various stages to assess whether immediate actions are needed to provide reasonable assurance of safety.

It is important to note that the 3D seismic offshore study is not required by the NRC and is being performed as directed by a California State law. In conversations with various State agencies involved in the permitting process of the 3D seismic offshore study, NRC staff has stressed that it is not a specific requirement of the March 12, 2012, request for information and that the NRC staff relies on the Senior Seismic Hazard Analysis Committee process to determine the need for such studies. The NRC seismologists do not believe that the licensee should delay their response to the March 12, 2012, request for information because of delays in obtaining permits and completing the 3D high energy offshore studies.

Independent Spent Fuel Storage Installation and Implementation Plans/Schedule

PG&E completed loading of the first eight casks during the summer of 2009. Each of the Diablo Canyon Power Plant fuel casks can accommodate 32 spent fuel assemblies, and the two spent fuel storage pads can each accommodate up to 20 casks. PG&E holds a separate

license under 10 CFR Part 72 for the independent spent fuel storage installation, which authorizes storage of up to 140 spent fuel casks (enough for the original 40-year license). The environmental permit for the independent spent fuel storage installation was challenged multiple times on the basis that the NRC had not considered the environmental impact of terrorist attacks. The staff subsequently completed a revised environmental impact statement.

Digital Instrumentation and Control Upgrade

On October 26, 2011, PG&E submitted a license amendment request to support a digital upgrade of the Eagle 21 system, which provides trip status and parameter inputs to the reactor trip system and engineered safety features actuation system. This Diablo Canyon Power Plant modification is only a partial actuation system upgrade and incorporates two new digital platforms. In comparison, the Oconee modification replaced all actuation functions. Diablo Canyon is the pilot plant for use of the recently revised Interim Staff Guidance (ISG) No. 6 regarding the digital instrumentation and control (I&C) licensing process. The NRC Staff expects that this initial use of ISG-6 will provide valuable experience for the review of future digital instrumentation and control upgrades, and will assist the NRC staff in developing subsequent revisions to the ISG. Since the issuance of the license amendment request the staff has held several public meetings to discuss the review and, because of the unique nature of the review, expects a series of public meetings to be held throughout the review.

National Fire Protection Association (NFPA) 805 Transition Project

PG&E intends to adopt the risk-informed, performance-based alternative described in National Fire Protection Association 805 Standard, as permitted by paragraph 50.48(c) of Title 10 of the *Code of Federal Regulations.* To support this transition PG&E is targeting June 28, 2013, for submitting a license amendment application.

Offsite Power

Inspections have identified that both of the two offsite power systems have issues such that they may not meet General Design Criterion 17, "Electric Power Systems." The 230kV system has ahd load growth on the grid such that there may not be adequate voltage to support safety related loads during a design basis accident on days with high grid load and low voltage. Also, the 500kV system was licensed to be available within 30 seconds of a plant trip was found to take close to an hour to implement. Both of these conditions are not consistent with General Design Criterion 17. The licensee is working with their corporate level to develop modifications, but have encountered delays in getting approval. They also submitted a license amendment request in 2009 to request approval for 1 hour delayed access for the 500kV system, but the NRC does not have clear criteria, nor are the resources to develop them currently available. A public meeting has been scheduled for January 24, 2013, for PG&E to describe modifications to the 500 kV power supply that would render the need for the license amendment request unnecessary.

Control Room Habitability

The resident inspectors have identified several findings and issues that show that the control room habitability system has design errors, flawed calculations, and incorrect testing. Testing required by Generic Letter 2003-01 showed in-leakage above allowed values, but was incorrectly reported as having no in-leakage in 2005. New testing in the fall of 2011 showed excessive in-leakage due to a design flaw that prevented proper single-train operation.

Compensatory measures require running one fan from opposite train to limit in-leakage. The licensee completed initial modifications in October 2012, to reduce in-leakage, but further changes to the control circuits were made to achieve acceptable test results. Related dose calculations had to be re-performed because the licensee had used a non-NRC approved method. A recently completed Technical Interface Agreement memo documented a staff position that the licensee improperly implemented technical specification requirements by exiting a 90-day shutdown action statement when they implemented compensatory measures in December 2011 in response to the NRC findings.

Recent Plant Events

- April 25, 2012, Unit 2 was shut down because ocean debris (i.e., salp – a small jellyfish like creature) fouled the circulating water screens at the intake building.

- October 11, 2012, Unit 2 tripped when the main transformer output lines experienced an arc to ground across dirty insulators during a rain storm.

B. OTHER TOPICS OF INTEREST

Organizational Issues

In 2012 PG&E selected Mr. Ed Halpin as the new Chief Nuclear Officer and Mr. Barry Allen as the new Site Vice President.

Escalated Enforcement, Non-green Findings, and Non-Green performance Indicators

There was one escalated enforcement case associated with incomplete and inaccurate reporting in response to Generic Letter 2003-01 for control room in-leakage (Severity Level III, no civil penalty). There have been no greater than Green findings or performance indicators within the last year. In addition, no escalated enforcement or non-Green findings are pending. (See Control Room Habitability above.)

Open Investigations

There are no open investigations at Diablo Canyon Power Plant.

Open Allegations

There are three open allegations at Diablo Canyon. They include issues in the following areas:

- (b)(5)

Harassment and Intimidation Issues

None.

Congressional Interest

There has been interest from several California congressional offices on the agency's March 12, 2012, request for information letter on seismic and flooding reevaluations, the NRC staff's Research Information Letter (RIL) on the Shoreline Fault Zone confirmatory analysis. In addition, there was elevated interest in the proposed offshore 3D high-energy seismic surveys from Senator Dianne Feinstein (D-CA), Senator Barbara Boxer (D-CA), and Representative Lois Capps (D-CA).

An article on cyber security published by Bloomberg in late July prompted calls from staff to the Senate Environment and Public Works Committee (which is chaired by Senator Barbara Boxer (D-CA)) and Senator Dianne Feinstein (D-CA) because it stated that hackers had broken into the computer network at Diablo Canyon. OCA responded to both the Committee and Sen. Feinstein's office that a plant employee mistakenly opened a link on a nuclear material database (NMMSS) that launched a spear phishing attack on a company business computer, which is not connected to any safety- or security-related system. The Information Technology team found malware in the computer, but it had not spread, and there was no impact on plant operations.

The Bloomberg article served as a basis for a 2.206 petition to shutdown all nuclear power plants in the United States until they can demonstrate they are protected against cyber security threats. This petition is currently under review.

2.206 Petitions

No 2.206 petitions specific to Diablo exist, however, the cyber security petition mentioned above is based on the Bloomberg article related to Diablo Canyon.

Significant Reportable Events

None.

Selected News Articles

Diablo Canyon receives frequent media attention. Recently, most media attention has been in two main areas: license renewal and impact of the recent waste confidence decision, and the offshore seismic surveys. Example articles are provided below.

Oceanside-Camp Pendleton Patch reports, "California voters would be asked to ban nuclear power plants under a ballot measure being sought by a Santa Cruz man who tried—and failed—to qualify a similar effort for the November ballot. Ben Davis Jr. on Monday gave notice of an initiative petition for what he calls the California Nuclear Waste Act—which would effectively shut down Diablo Canyon and San Onofre nuclear plants if placed on the ballot and approved by voters."

Laguna Niguel-Dana Point Patch reports, "Four Buddhist monks have set up shop on the knoll overlooking the San Clemente Pier, and Monday they were in the midst of the third day of their six-day fast to protest the restart of the San Onofre Nuclear Power Plant."

The San Luis Obispo Tribune reports, "The Nuclear Regulatory Commission on Wednesday defended a recent study finding that Diablo Canyon nuclear power plant could withstand an earthquake along the newly discovered Shoreline Fault. Representatives of the agency held two open house meetings in San Luis Obispo to take public comment on the study and answer questions. Earthquake experts with the commission and PG&E were available to answer questions about the Shoreline and other faults around Diablo Canyon."

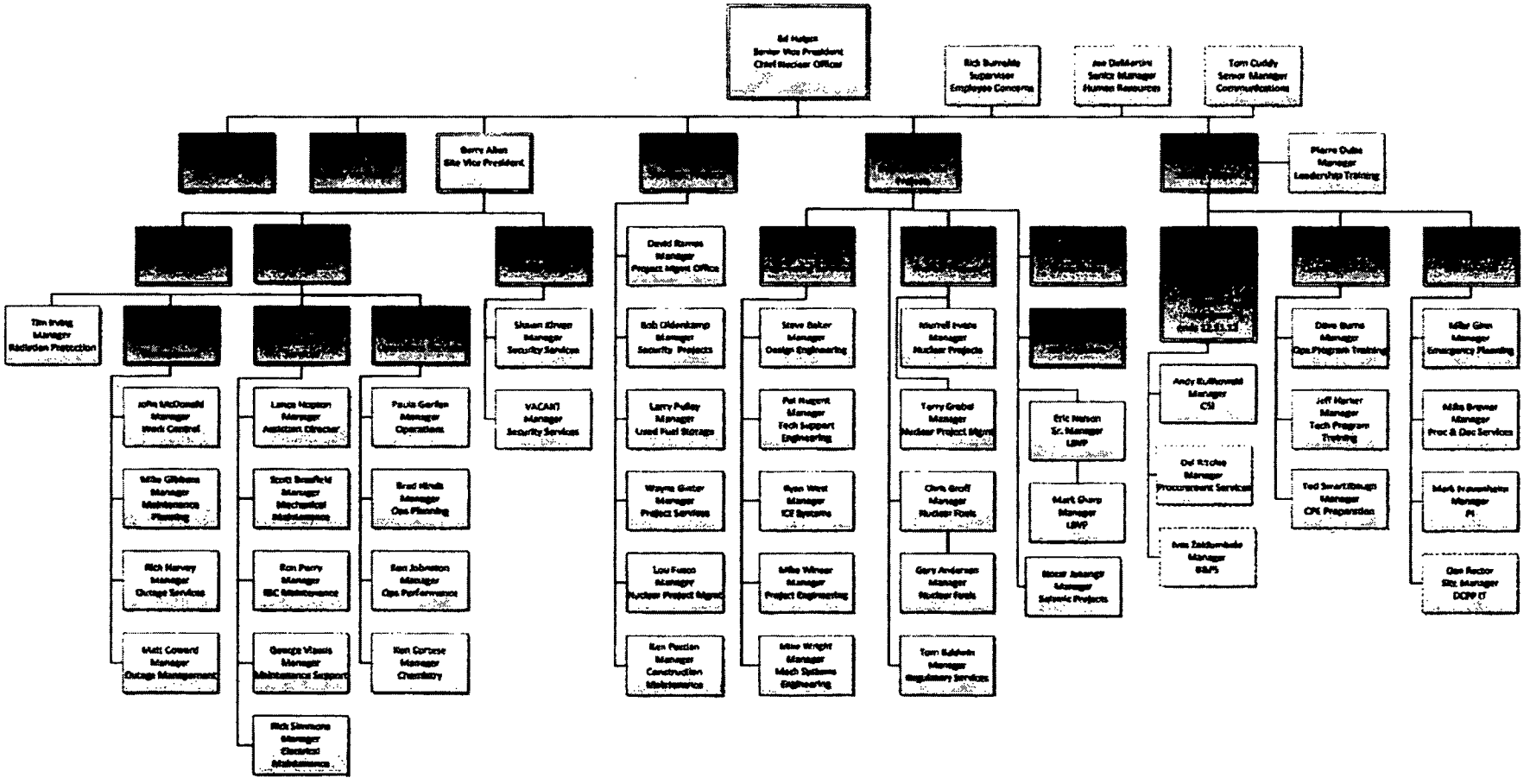
Santa Barbara Independent reports, "When $64-million questions get violently "un-asked," I don't go looking for explanations. I look for suspects. Instead, I stumbled onto a conspiracy of self-inflicted stupidity. Given that the question involves the seismic safety of the Diablo Canyon nuclear power plant just 85 miles up the coast in Avila Beach, the answer is of more than academic interest. Should the unthinkable actually occur—an earthquake-induced fire at the plant's intensely radioactive spent-fuel pool—down-winders in Santa Barbara will no longer have the luxury of worrying about climate change, ocean acidification, or intrusive panhandlers.

TAB 7a

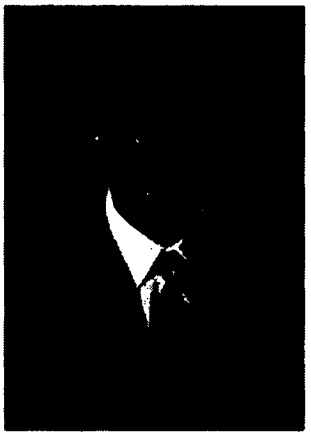
Facility Organization

Senior Leadership Team

Revision Date: 11.1.12



Biographical Data of Principal Managers



Edward (Ed) D. Halpin

Senior Vice President and Chief Nuclear Officer

Ed Halpin is the Senior Vice President and Chief Nuclear Officer at Diablo Canyon Power Plant (DCPP) for Pacific Gas and Electric Company. He is responsible for the safe, reliable, and efficient operations of DCPP, the license renewal of our units, the decommissioning of Humboldt Bay Power Plant, and will serve as the lead contact with the Nuclear Regulatory Commission and the Institute of Nuclear Power Operations.

Halpin comes to DCPP from South Texas Project (STP) Nuclear Operating Company where he served as President, Chief Executive Officer, and Chief Nuclear Officer responsible for the overall strategic direction of STP and the operation of the STP's Units 1 & 2. In his more than 24 years with the company, Halpin advanced through positions of increasing responsibility and leadership, including site vice president, vice president of oversight, vice president and assistant to the CEO, plant general manager, operations manager, maintenance manager, systems engineering manager and design manager. He also played a key role in developing and sustaining the company's strong collaborative culture, which was critical to STP's transition to excellence.

Halpin served as an officer in the U.S. Navy's Nuclear Power Submarine Service. He graduated with honors from the U.S. Naval Academy earning a Bachelor of Science in Ocean Engineering and holds a master's degree in Strategic Communication and Leadership from Seton Hall University and another master's degree in Human Development from Fielding Graduate University. Additionally, Halpin has a Senior Reactor Operator Certification and is a graduate of the Institute of Nuclear Power Operations' Senior Nuclear Plant Management course and the Senior Nuclear Executives Seminar.

In June 2011, Halpin was selected as one of 12 industry leaders from across the nation to serve on the Fukushima Steering Committee. The Committee is comprised of industry executives and representatives from the Nuclear Energy Institute; the Institute of Nuclear Power Operations; and the Electric Power Research Institute.

James M. Welsch
Station Director

Responsibility:

Responsible for all aspects of Diablo Canyon Departments of Operations, Maintenance, Nuclear Work Management, Chemistry, Radiation Protection and Fire Protection.

Experience:

1984 - Present Pacific Gas & Electric - Diablo Canyon Power Plant

- Station Director (2011 – Present)
- Director – Operations Services (2008 – 2010)
- Manager - Operations (2006 – 2008)
- Operations Shift Manager (2004 – 2006)
- Operations Shift Foreman (2002 – 2004)
- Operations Shift Technical Advisor (2000 – 2002)
- Operations Foreman (1997 – 2000)
- Operations Training Supervisor (1992 – 1997)
- Operations Training Senior Instructor (1986 – 1992)
- Simulator Specialist (1984 – 1986)

1979 - 1984 Public Service Company of Indiana

- Control Room Supervisor (1983)
- Simulator Specialist/Operations Training Instructor (1980 – 1983)
- Reactor Operator (1979 – 1980)

Education/Training:

2010 INPO Senior Nuclear Plant Management Course

2004 INPO Shift Manager Professional Development Seminar

2000 NRC Senior Reactor Operator License, Diablo Canyon Power Plant

1992 B.S. Nuclear Technology, New York Regents College

1985 NRC Senior Reactor Operator Instructor Certification, Diablo Canyon Power Plant

Biographical Data of NRC Staff Members

Elmo E. Collins

Regional Administrator, Region IV

Elmo E. Collins was assigned as the Regional Administrator for the Region IV Office in September 2007. NRC Region IV is one of four regional offices. NRC Region IV is responsible for the inspection and safety assessment of 14 nuclear power plant sites (21 reactors). Region IV covers 22 states, including Alaska and Hawaii, overseeing the inspection and licensing of medical, academic, and industrial users of radioactive materials. Sixteen of those states are Agreement States which implement the NRC's materials inspection and licensing programs. Region IV also performs licensing and evaluation of nuclear power plant control room operators. Mr. Collins, originally from Oklahoma, graduated from the U. S. Naval Academy at Annapolis, MD in 1976.

Mr. Collins has broad and extensive experience in the nuclear industry. He served for 6 years in the U. S. Navy as a nuclear trained submarine officer, serving on the USS Thomas A. Edison (SSBN 610). Mr. Collins completed his qualification to serve as engineering officer on nuclear powered submarines in May 1980. After leaving the Navy, Mr. Collins worked in the commercial nuclear industry as a startup engineer with General Electric from 1983 to 1987, receiving certification as a Senior Reactor Operator.

Mr. Collins joined NRC Region I in 1987 as a resident inspector at Oyster Creek, where he later became the Senior Resident Inspector. In 1991, Mr. Collins transferred to NRC Region IV as a Senior Project Engineer. In Region IV, he subsequently held positions as Inspection Team Leader, Senior Reactor Analyst, Reactor Projects Branch Chief, and Nuclear Materials Branch Chief. Mr. Collins was appointed to Senior Executive Service in May 2000 as the Deputy Director for the Division of Reactor Projects. In February 2003, Mr. Collins was assigned the position of Director, Division of Nuclear Materials Safety in Region IV. In July 2004, Mr. Collins was re-assigned to NRC Headquarters Office of Nuclear Materials Safety and Safeguards (NMSS) in Rockville, Md. as the Deputy Division Director for the licensing and inspection of the high-level radioactive waste repository at Yucca Mountain. In October 2006, Mr. Collins was assigned to the Office of Nuclear Reactor Regulation (NRR) as the Director, Division of Inspection and Region Support.

During his career, Mr. Collins has been involved in inspection and oversight of nuclear power plants, licensing and oversight of users of radioactive materials, and licensing of the high-level radioactive waste repository. In NRR, Mr. Collins was responsible for the operating reactor inspection and assessment, operator licensing, and operating experience programs. Mr. Collins has participated with the International Atomic Energy Agency Teams evaluating the performance of nuclear regulatory programs and assessment of nuclear plant operational safety performance in other countries.

Tom Hipschman

Senior Resident Inspector,
Diablo Canyon

Tom Hipschman joined the U.S. Nuclear Regulatory Commission in 1997. He has been the Senior Resident Inspector at Diablo Canyon since November 2012.

Mr. Hipschman graduated from the United States Naval Academy with a Bachelor's degree in Applied Science in 1982. He also earned a Master's degree in Management and Technology at the Wharton School and the School of Engineering and Applied Science from the University of Pennsylvania in 2000. Prior to his assignment at Diablo Canyon, Mr. Hipschman has been a Chairman and Commission Technical Assistant, Senior Resident Inspector at Indian Point, Resident Inspector at Oyster Creek, and a Regional Inspector.

Mr. Hipschman has also been a Facility Representative at the Y-12 Complex in Oak Ridge, Tennessee, a Shift Operation Manager at the Waste Tank Operations in Hanford, Washington, and an Operations Supervisor and Quality Assurance Auditor at the Salem Nuclear Generating Station. He was also on active duty in the US Navy, assigned to two nuclear powered submarines, and served on the staff of the US Space Command.

Laura Micewski

Resident Inspector,
Diablo Canyon

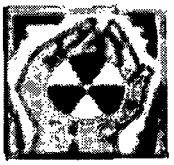
Laura Micewski joined the U.S. Nuclear Regulatory Commission in 2009. She has been the Resident Inspector at Diablo Canyon since May 2011.

Mrs. Micewski graduated from the United States Naval Academy with a Bachelor's degree in Chemistry in 1995. She then completed a Master's degree in Mechanical Engineering at the United States Naval Postgraduate School in 2006. Prior to joining the agency, she served as a surface warfare officer (nuclear) and engineering duty officer in the United States Navy.

Since joining the NRC, Mrs. Micewski has served on numerous inspection teams in Region IV, performing inspections at San Onofre Nuclear Generating Station, Comanche Peak nuclear power plant, and Fort Calhoun Station.

TAB 10a

Alliance for Nuclear Responsibility Letter



PO Box 1328
San Luis Obispo, CA 93406
(858) 337-2703
(805) 704-1810
www.a4nr.org

ALLIANCE FOR NUCLEAR RESPONSIBILITY

November 13, 2012

Dr. Allison Macfarlane, Chair
United States Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Re: Research Information Letter 12-01 – Confirmatory Analysis of Seismic Hazard at the Diablo Canyon Power Plant from the Shoreline Fault Zone ("RIL 12-01")

Dear Dr. Macfarlane:

The Alliance for Nuclear Responsibility ("A4NR") wishes to alert you to three inexcusable deficiencies in the above-captioned report and to register our objection to the misleading press release ("ADDITIONAL NRC ANALYSIS CONFIRMS EARTHQUAKE SAFETY AT DIABLO CANYON NUCLEAR POWER PLANT" – No. 12-112, October 12, 2012) that accompanied it. That these efforts have allowed an ongoing violation of the Diablo Canyon license to remain uncorrected—a violation first reported by NRC regional staff more than a year ago—is inexplicable.

Deficiency 1. It has now been more than 15 months since the NRC regional staff's extraordinary written rebuke to PG&E for its truncated evaluation of new seismic information concerning the 2008 discovery of the Shoreline Fault, located some 600 meters from the reactors at Diablo Canyon. The August 1, 2011 memorandum from Region IV minced no words:

> • *Although the LTSP margin analysis demonstrated that the new Shoreline Fault Zone information was bounded by the Hosgri Event, the licensee didn't evaluate the new seismic information against the other two design basis earthquakes, the Design Earthquake and the Double Design Earthquake.*
>
> • *... the plant safety analyses concluded that seismic qualification for certain structures, systems and components was more limiting for the Design Earthquake and Double Design earthquakes than for the Hosgri Event.*

> • *New seismic information developed by the licensee is required to be evaluated against all three of the seismic design basis earthquakes and the assumptions used in the supporting safety analysis ... Comparison to the LTSP by itself is not sufficient to meet this requirement.*[1]

RIL 12-01 disingenuously attempts to focus attention on the larger vibratory ground motion assumed for the Hosgri design basis earthquake ("HE"), but ignores the significantly tougher damping assumptions required for the Design Earthquake ("DE") test and the Double Design Earthquake ("DDE") test. The magnitude of these differences is identified in the table included in Section 3.7.1.3 of Diablo Canyon's Final Safety Analysis Report Update:

Type of Structure	% of Critical Damping		
	DE	DDE	HE
Containment structures and all internal concrete structures	2.0	5.0	7.0
Other conventionally reinforced concrete structures above ground, such as shear walls or rigid frames	5.0	5.0	7.0
Welded structural steel assemblies	1.0	1.0	4.0
Bolted or riveted steel assemblies	2.0	2.0	7.0
Mechanical components (PG&E purchased)	2.0	2.0	4.0
Vital piping systems (except reactor coolant loop)	0.5	0.5	3.0
Reactor coolant loop	1.0	1.0	4.0
Replacement Steam Generators	2.0	4.0	4.0
Integrated Head Assembly	4.0	6.85	6.85
CRDMs (Unit 2)	3.0	4.0	4.0
Foundation rocking (containment structure only)	5.0	5.0	NA

Omission of any discussion in RIL 12-01 of the tri-partite test requirements of the Diablo Canyon license arouses considerable suspicion. In light of the earlier staff criticism of PG&E's Shoreline Fault Zone assessment, this editorial sleight-of-hand verges on regulatory misconduct. What cannot be concealed is that PG&E has yet to produce the analysis of the Shoreline Fault required by the Diablo Canyon license.

Deficiency 2. Apparently convinced that indications on the surface of the sea floor are determinative of what occurs at seismogenic depth, RIL 12-01 buries its most significant analytic shortcut on page 35:

> *The NRC did not consider a scenario in which an earthquake on the Shoreline fault continues to rupture onto the Hosgri fault. Large earthquakes from simultaneous rupture on the two faults (i.e., those greater than M7) would produce large surface displacement, which are not evident in the geologic record. The NRC concludes that the lack of significant horizontal displacement across the Shoreline fault rules out the possibility of joint rupture.*

[1] Kriss M. Kennedy, NRC Director /RA/, Division of Reactor Projects, Region IV, "Task Interface Agreement (TIA) – Concurrence on Diablo Canyon Seismic Qualification Current Licensing and Design Basis (TIA 2011-010), August 1, 2011, accessible at http://pbadupws.nrc.gov/docs/ML1121/ML112130655.pdf

Rather than patronize you, a professional geologist, with A4NR's lay opinions about the current significance multi-fault rupture plays in understanding large earthquakes, let me simply reference Slide 22 from the presentation made at PG&E's SSHAC workshop last week by Dr. Jeanne Hardebeck[3], widely credited with having discovered the Shoreline Fault and repeatedly cited in RIL 12-01:
"Doesn't seem prudent to rule out a Shoreline-Hosgri joint rupture; Mmax≈7.2."

Deficiency 3. RIL 12-01 goes to some length in describing how the NRC staff assembled five scenarios for its deterministic seismic hazard assessment. The three middle scenarios were characterized as "found within the PG&E logic tree." Another (Scenario 1) established a lower, "aseismic" bound with a magnitude of M5.9. A fifth (Scenario 5) extended the Shoreline Fault southeast along a magnetic lineament "hypothesized as ... representing the maximum permissible length" and established an upper bound with a magnitude of M6.9. Declaring simply that Scenario 5 "is not supported as well as other scenarios by the data", RIL 12-01 abruptly dismisses Scenario 5 as "speculative" and opts instead for a "a more realistic, though still conservative" M6.7 derived from Scenarios 3 and 4. A4NR finds this discussion highly conclusory and considers it peculiar that a range of M values was not fully analyzed. Given the larger concerns identified in Deficiency 1 and Deficiency 2 above, the aroma of reverse engineering is impossible to dispel.

A4NR has other concerns with RIL 12-01, particularly the degree to which the ground motion analysis is largely untethered from site-related data, but we are more troubled by the implied purpose of the report itself. What started with detection by regional NRC staff of PG&E's significant failure to analyze new seismic information (i.e., discovery of the Shoreline Fault Zone) in the manner required by the Diablo Canyon license, somehow transformed into a corner-cutting, eyes-averting minimization of risk – coronated with a celebratory press release. What message must this send to enforcement staff?

This unseemly cheerleading is unworthy of a regulatory agency aspiring to the confidence of Californians who depend upon the NRC for objective, thorough analysis. You may not have been in your position long enough to bear any direct responsibility for this disgrace, but surely you have some duty to correct it.

Sincerely,
/s/

Rochelle Becker
Executive Director

cc: U.S. Senator Dianne Feinstein
U.S. Senator Barbara Boxer
Congresswoman Lois Capps
California Energy Commission Chair Robert B. Weisenmiller

[3] Dr. Hardebeck is a USGS geophysicist and the recipient of the Presidential Early Career Award for Scientists and Engineers (2009), the James B. Macelwane Medal of the American Geophysical Union (2007), and the Charles F. Richter Early Career Award of the Seismological Society of America (2006).

Meeting with PG&E (Diablo Canyon)

Guests

- Tony Early, CEO, PG&E

AMM Staff Lead

Nathan

Purpose of Meeting

- Meet/greet
- Discuss issues at Diablo Canyon

Background

PG&E's high energy off-shore seismic studies

The monitoring programs and federal permitting processes are well underway. They have a proposal pending final review and approval before the California Coastal Commission, which will provide the coastal development permit and the federal consistency certification. Should the CCC approve the project on November 14th, they will begin mobilization in order to conduct the studies during the first two weeks of December.

Analysis

- (b)(5)

Suggested Questions/Comments

- (b)(5)

C2

Pace, Patti

Two attachments, consisting of 3 pages, are withheld in their entirety under exemption (b)(5).

From: Vrahoretis, Susan
Sent: Friday, January 11, 2013 3:56 PM
To: Woollen, Mary; Sanfilippo, Nathan
Cc: Greenwald, Courtney; Pace, Patti; Niedzielski-Eichner, Phillip
Subject: RE: Briefing book for Chairman 1-14-13 Diablo and SONGS visit.docx
Attachments: (b)(5) Rochelle Becker letter to Chairman.11.13.12.pdf; Earthquake Research Continues at Diablo Canyon « U_S_ NRC Blog.mht (b)(5) (b)(5)

Importance: High

(b)(5)

Thanks,

Susan

Susan H. Vrahoretis
Legal Counsel
Office of Chairman Allison M. Macfarlane
United States Nuclear Regulatory Commission
Office: O17D07
E-mail: Susan.Vrahoretis@nrc.gov | Office: (301) 415-1834 |

From: Woollen, Mary
Sent: Friday, January 11, 2013 11:05 AM
To: Vrahoretis, Susan; Sanfilippo, Nathan

C3

Cc: Greenwald, Courtney; Pace, Patti
Subject: RE: Briefing book for Chairman 1-14-13 Diablo and SONGS visit.docx

Susan,

Your input is very much appreciated and thankful that at you are taking this on at the 11th hour. We will do our best to make sure these details for ensuing trips are attended to much earlier.

Mary

From: Vrahoretis, Susan
Sent: Friday, January 11, 2013 10:25 AM
To: Sanfilippo, Nathan
Cc: Greenwald, Courtney; Woollen, Mary; Pace, Patti
Subject: RE: Briefing book for Chairman 1-14-13 Diablo and SONGS visit.docx

Hi, Nathan,

(b)(5)

Thanks,

Susan

Susan H. Vrahoretis
Legal Counsel
Office of Chairman Allison M. Macfarlane
United States Nuclear Regulatory Commission
Office: O17D07
E-mail: Susan.Vrahoretis@nrc.gov | Office: (301) 415-1834 |

From: Sanfilippo, Nathan
Sent: Friday, January 11, 2013 8:25 AM
To: Vrahoretis, Susan
Subject: FW: Briefing book for Chairman 1-14-13 Diablo and SONGS visit.docx
Importance: High

Attached!

From: Pace, Patti
Sent: Thursday, January 10, 2013 2:49 PM
To: Sanfilippo, Nathan

Cc: Woollen, Mary; Niedzielski-Eichner, Phillip; Greenwald, Courtney
Subject: Briefing book for Chairman 1-14-13 Diablo and SONGS visit.docx

Hello –

(b)(5)

Thanks,

Patti Pace
Administrative Assistant
Office of Chairman Allison M. Macfarlane
U.S. Nuclear Regulatory Commission
301-415-1750 (office)
301-415-3504 (fax)

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Nov 13, 2012 09:45

PAPER NUMBER:	LTR-12-0669	**LOGGING DATE:**	11/13/2012
ACTION OFFICE:	EDO		

To: Leeds, NRR
Ref. G20120827
cys: OEDO
RIV
Merzke, OEDO

AUTHOR:	Rochelle Becker
AFFILIATION:	CA
ADDRESSEE:	CHRM Allison Macfarlane
SUBJECT:	Concerns Research Information Letter 12-01 - Confirmatory Analysis of Seismic Hazard at the Diablo Canyon Power Plant from the Shoreline Fault Zone (RIL 12-01)
ACTION:	Appropriate
DISTRIBUTION:	RF
LETTER DATE:	11/13/2012
ACKNOWLEDGED	No
SPECIAL HANDLING:	Immediate public release via SECY/EDO/DPC.
NOTES:	
FILE LOCATION:	ADMAS

DATE DUE: **DATE SIGNED:**

ALLIANCE FOR NUCLEAR RESPONSIBILITY

PO Box 1328
San Luis Obispo, CA 93406
(858) 337-2703
(805) 704-1810
www.a4nr.org

November 13, 2012

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United States Nuclear Regulatory Commission
11555 Rockville Pike
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Sincerely,
/s/

Rochelle Becker
Executive Director

cc: U.S. Senator Dianne Feinstein
U.S. Senator Barbara Boxer
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California Energy Commission Chair Robert B. Weisenmiller

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Joosten, Sandy

From: Rochelle Becker [rochellea4nr@gmail.com]
Sent: Tuesday, November 13, 2012 12:42 AM
To: CHAIRMAN Resource
Subject: EVALUATION OF SHORELINE FAULT
Attachments: 111312 Macfarlane02-1 FINAL FINAL.pdf

Dear Chairman Macfarlane,

Attached is a follow-up letter expressing the deep concern of the Alliance for Nuclear Responsibility regarding the recent NRC staff Report on the Shoreline fault. We hope you will give this your prompt attention.

In Peace

Rochelle Becker, Executive Director
Alliance for Nuclear Responsibility
PO 1328
San Luis Obispo, CA 93406
www.a4nr.org

U.S.NRC
United States Nuclear Regulatory Commission

Earthquake Research Continues at Diablo Canyon

When you're dealing with a topic as complex as California earthquakes (such as Sunday's 5.3 quake near King City), it seem as if every answer only generates more questions. That's the case with a recent NRC analysis of the area near the Diablo Canyon nuclear power plant, on the Pacific coast near San Luis Obispo.

Diablo Canyon's owner, Pacific Gas & Electric, was working with the U.S. Geological Survey in 2008 when they discovered th "Shoreline Fault," located just a few hundred yards offshore from the plant. This work stemmed from PG&E's Long-Term Seismic Program; the company committed to the NRC in 1991 that it would continue the program to study seismic issues ar perform periodic seismic reviews of the plant.

In 2011, PG&E submitted a detailed analysis of the Shoreline Fault to the NRC. Both PG&E's analysis and the NRC's just-published independent review reached the same conclusion – Shoreline's shaking potential falls within what the Diablo Canyon reactors are already designed to withstand.

Even with that answer, both the state of California and the NRC have asked PG&E to do more work, although for different reasons.

California Assembly Bill 1632 in 2006 directed the California Energy Commission to assess the vulnerability of the state's nuclear power plants to seismic hazards. As part of the assessment, PG&E proposed a multi-million dollar study that uses powerful air cannons for 3-D mapping of the offshore area near the plant.

Eighteen air guns would be towed behind a boat and used to emit 250-decibel blasts into the water over a 530-square nautical-mile area. The plan has drawn fire from biologis environmentalists and fishermen who fear marine life from whales to sea otters and fish will be harmed. PG&E has pointed out that similar seismic surveys have been conducte elsewhere without adversely affecting marine life. PG&E has now decided to delay its seismic testing program until mid-November so it can make some changes to its work pla

Separately from the state-mandated 3-D mapping, following the Fukushima nuclear accident in Japan the NRC sent a request for every U.S. nuclear power plant to re-analyze their earthquake hazards. So, in addition to meeting the requirements of the state, PG&E must also re-analyze the earthquake hazards for the NRC.

PG&E is now working with a team of independent experts to determine what should be included in its re-analysis for the NRC. The NRC doesn't yet know if that group will also recommend the high-energy offshore surveys, which cannot be done without state approval.

If the offshore surveys are done, the NRC expects PG&E will include that information in its earthquake re-analysis. If not, the NRC expects PG&E will nonetheless assemble enough updated information to complete its re-analysis by early 2015. The results of all this work will ensure Diablo Canyon remains ready to safely shut down after an earthquake.

Scott Burnell
Public Affairs Officer

Operating Reactors nuclear

← In Response to Your Letters: Proposed Restart of SONGS Unit 2

NRC Continues to Take Action on Flooding Issue

8 Responses to *Earthquake Research Continues at Diablo Canyon*

CaptD October 28, 2012 at 5:19 pm
Notice that all these "Studies" do nothing to actually upgrade coastal reactors to the very real threat of a major 7+ Magnitude Earthquake...

The Japanese did the very same thing and now they have a Trillion Dollar Eco-Disaster in Fukushima.

If one happened tomorrow in CA, our Leaders would do the very same thing as the Japanese did on 3/11/11.....

Think it will never happen, how about this:
October 27, 2012 GOLDEN, Colorado — A magnitude-7.7 earthquake has struck off the coast of western Canada and a tsunami warning has been issued. There are no immediate reports of damage...

Wake UP NRC and stop living in Nuclear Denial*

* http://is.gd/XPjMd0

The illogical belief that Nature cannot destroy any land based nuclear reactor, any place anytime 24/7/365!

Reply

Anonymous October 23, 2012 at 1:50 pm
The National Fisheries info on impact is in two places – to make it easier, here's the links
The public comments have been posted online and are available at:
> http://www.nmfs.noaa.gov/pr/pdfs/permits/pge_comments.pdf
>
> And here is the link to the IHA, draft environmental assessment and other
> materials
>
> http://www.nmfs.noaa.gov/pr/permits/incidental.htm#pge2012

Reply

CaptD October 22, 2012 at 8:58 pm
Food for Thought for the NRC:
7 experts convicted for not warning of quake risk
http://m.apnews.com/ap/db_289563/contentdetail.htm?contentguid=EOT42yAC
snip:
L'AQUILA, Italy (AP) – In a verdict that sent shock waves through the scientific community, an Italian court convicted seven experts of manslaughter on Monday for failing to adequately warn residents of the risk before an earthquake struck central Italy in 2009, killing more than 300 people.

The defendants, all prominent scientists or geological and disaster experts, were sentenced to six years in prison.

Earthquake experts worldwide decried the trial as ridiculous, contending there was no way of knowing that a flurry of tremors would lead to a deadly quake.

Reply

James Greenidge October 22, 2012 at 4:59 pm
Yes, it's a repeat, but in deference and appreciation of all those responsible in this study and analysis; let fact and prudent engineering rule your decision over fear, philosophical biases and wild nightmares.

James Greenidge
Queens NY

Reply

moquiti October 24, 2012 at 6:52 am
Facts are relative dependent on the frame of reference. Engineering prudence is a moving target, updated continuously based upon failures of assumption. Our culture feeds a sense of societal and individual fear in order to maintain its ability to manipulate behavior and ensure control. Bias can be a beautiful and cherished thing. Nightmares are lessons yet unlearned. Peace.

Reply

Anonymous October 22, 2012 at 3:49 pm
State law didn't require 3-D imaging, PG&E wanted it, and the state allowed the utility to spend $64 million, or more to conduct tests. You may wanna check the National Marine Fisheries to find the impact on fish and marine mammal, which are expected to be intense, and probably kill. The local commercial and sport fishing will lose several seasons too.

Reply

SpecE30 October 24, 2012 at 9:05 pm
That's not exactly correct. PG&E doesn't want to do this (politically, it's an expensive catch 22). What IS true is that the California Energy Commission, California Coastal Commission, and the California Public Utilities Commission all REQUIRED this testing. That was before they realized that so many marine lives would be lost. NOW, however, backing up is difficult to do. State Senator Blakeslee and San Luis Obispo County Supervisor Gibson demand it.

PG&E has all the data they need NOW. They don't NEED high energy 3-D testing. The recent NRC letter confirms that the Shoreline fault is WITHIN the envelope of the Hosgri analysis. See http://pbadupws.nrc.gov/docs/ML1228/ML12286A313.pdf.

My OPINION is that if the public demands that the high energy 3-D testing be stopped, these folks can find a way to accept the considerable data already gathered from the studies already completed: land based 2-D, land based 3-D, and low energy ocean 3-D, etc.

cssrc.us/web/15/

http://www.slocounty.ca.gov/bos.htm
http://www.energy.ca.gov/
http://www.cpuc.ca.gov/
http://www.coastal.ca.gov/

Reply

Anonymous October 25, 2012 at 2:54 pm
Thanks for the context & links!

Pace, Patti

One attachment, consisting of 2 pages, is withheld in its entirety under exemption (b)(5).

From: Woollen, Mary
Sent: Thursday, November 07, 2013 9:13 AM
To: Niedzielski-Eichner, Phillip
Subject: Fw: Nov 12th appointment
Attachments: (b)(5)

Mary Woollen
(b)(6)
Sent by Blackberry

From: Vrahoretis, Susan
To: Woollen, Mary; Niedzielski-Eichner, Phillip
Sent: Wed Nov 06 19:09:28 2013
Subject: RE: Nov 12th appointment

Hi Mary,

(b)(5)

Please let me know if there's anything else I can do to help with this.

Thanks,

C4

Susan

Susan H. Vrahoretis
Legal Counsel
Office of Chairman Allison M. Macfarlane
United States Nuclear Regulatory Commission
Office: O17D07
E-mail: Susan.Vrahoretis@nrc.gov | Office: (301) 415-1820 |

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From: Woollen, Mary
Sent: Wednesday, November 06, 2013 6:14 PM
To: Vrahoretis, Susan; Niedzielski-Eichner, Phillip
Subject: Fw: Nov 12th appointment

Hi Susan,

Per your counsel I sent the email below to Rochelle Becker. Please see her reply and advise accordingly and I will respond to her.

Thank you very much,

Mary

Mary Woollen
(b)(6)
Sent by Blackberry

From: Rochelle Becker <rochellea4nr@gmail.com>
To: Woollen, Mary; Gibbs, Catina
Sent: Wed Nov 06 18:10:20 2013
Subject: Nov 12th appointment

Hello Mary,

I find your message and your legal counsel's advice puzzling. The Alliance for Nuclear Responsibility is not a party to any litigation at the NRC regarding Diablo Canyon, on seismic issues or otherwise. With this understanding, is the NRC really suggesting that the Chairman is legally prohibited from discussing anything concerning the plant's seismic setting? We seem to remember setting up a meeting with San Luis Obispo Supervisor Bruce Gibson last summer and we are certain the subject was seismic.

We would also like to discuss Diablo Canyon's refusal, since 2008, to follow the repeated direction of the California Energy Commission to expedite the transfer of spent fuel to dry casks "while maintaining compliance with NRC cask and pool spent fuel storage requirements." Is there a similar "subject of litigation" problem with this topic?

I sincerely hope your prior message was in error, but clarification as soon as possible would be most appreciated.

Rochelle

Rochelle Becker, Executive Director
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In Peace

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