

DIABLO CANYON
INDEPENDENT SAFETY COMMITTEE
("DCISC")

(www.dcisc.org)

The meeting will be webcast in real time at:

http://www.slo-span.org/local_webcast/DCISC/stream_index.htm and through <http://www.dcisc.org>.

Committee Members: Robert J. Budnitz
Peter Lam
Per F. Peterson

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Wednesday & Thursday
February 8-9, 2017
Avila Lighthouse Suites

Point San Luis Conference Center
First & San Francisco Streets
Avila Beach, California

PUBLIC TOUR

Public Tour 02/08/2017 - 8:00 A.M.

PUBLIC TOUR OF DIABLO CANYON POWER PLANT
TO ASSEMBLE AT THE PG&E ENERGY EDUCATION CENTER
(Prior registration, security clearance, and appropriate attire required.)

The Members and Technical Consultants of the Independent Safety Committee,
accompanied by members of the public, will conduct a tour of certain areas
of the Diablo Canyon Power Plant ("DCPP").

In the alternative, if the tour must be cancelled for any reason, the Committee may convene an informal question and answer session at the PG&E Energy Education Center (formerly the PG&E Community Center), 6588 Ontario Road, San Luis Obispo.

PUBLIC MEETING AGENDA

Afternoon Session - 02/08/2017 - 1:30 P.M.

I CALL TO ORDER - ROLL CALL

II INTRODUCTIONS

ADVISEMENT

The Committee may consider at any time requests to change the order of a listed agenda item. Information distributed to the Committee at a public meeting becomes part of the public record of the DCISC. A copy of written material, pictures, etc. must be provided to the Committee's Legal Counsel for this purpose. Correspondence received and sent by the Committee is on file with the Office of the DCISC Legal Counsel and copies are available upon request. Devices for attendees who may be hearing impaired are available upon request. This meeting will be webcast in real time.

III PUBLIC COMMENTS AND COMMUNICATIONS

Anyone wishing to address the Committee on matters not appearing on the Agenda may do so only at this time. The public may comment on any matter listed on the Agenda immediately following the time the matter is considered by the Committee. *There will be a time limit for each speaker as designated by the presiding officer. No action will be taken by the Committee on matters brought up under this item but they may be referred to staff for further study, response or action.*

IV APPROVAL OF MINUTES

- A. Minutes of October 19-20, 2016, Meeting: Approve

V ACTION ITEMS

- A. Receive PG&E's Response to DCISC's 26th Annual Report on Safety of Diablo Canyon Operations; July 1, 2015 - June 30, 2016 Information
- B. Update on Financial Matters, Consultant Compensation & Committee Activities Discussion/Action
- C. Discussion of Open Items List Discussion/Action

VI COMMITTEE MEMBER REPORTS AND DISCUSSION

- A. Public Outreach, Site Visits and Other Committee Activities; Agenda Items, Scheduling and Confirmation of Future Fact-findings and Public Meetings
- B. Documents Provided to the Committee

VII STAFF - CONSULTANT REPORTS & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT-FINDING REPORTS TO PG&E

- A. Ferman Wardell:
Fact-finding Topics; Report on and Approval of the November 2-3, 2016 and January 18-19, 2017 Fact Finding Reports
- B. Richard D. McWhorter Jr.:
Fact-finding Topics; Report on and Approval of December 7-8, 2016 Fact Finding Report
- C. Robert Wellington:
Administrative, Regulatory and Legal Matters

VIII CLOSED SESSION - Personnel Matter – (Govt. Code §11126)

IX ADJOURN AFTERNOON MEETING

Evening Session - 02/08/2017 - 5:45 P.M.

X RECONVENE FOR EVENING MEETING

XI COMMITTEE MEMBER COMMENTS

XII PUBLIC COMMENTS AND COMMUNICATIONS

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XIII INFORMATION ITEMS BEFORE THE COMMITTEE

A. Informational Presentations Requested by the Committee of PG&E Representatives

- 1) Update on the DCPD Excellence Plan and Plant Investment Review Process
- 2) NRC Senior Resident Inspector Remarks

XIV ADJOURN EVENING MEETING

Morning Session - 02/09/2017 – 8:30 A.M.

XV RECONVENE FOR MORNING MEETING

XVI COMMITTEE MEMBER COMMENTS

XVII PUBLIC COMMENTS AND COMMUNICATIONS

Anyone wishing to address the Committee on matters not appearing on the Agenda may do so only at this time. The public may comment on any matter listed on the Agenda immediately following the time the matter is considered by the Committee. *There will be a time limit for each speaker as designated by the presiding officer. No action will be taken by the Committee on matters brought up under this item but they may be referred to staff for further study, response or action.*

XVIII INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

- 3) State of the Plant Update including Key Events, Highlights, and Station Activities since DCISC's October 2016 Public Meeting: Summary of Station Highlights and Performance, and an update on the NRC's Evaluation of PG&E's Seismic Hazard Analysis for the DCPD Site
- 4) Identification on May 16, 2016, of Inoperability of Valve RHR-2-8700B, Investigation into Causes and Significance, Corrective Actions And Related NRC Enforcement Actions
- 5) Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Notices of Violation, and Issues Raised by NRC Resident Inspectors
- 6) Plans and Preparations for the Twentieth Refueling Outage for Unit-1 (1R20)

XIX ADJOURN MORNING MEETING

Afternoon Session - 02/09/2017 - 1:00 P.M.

XX RECONVENE FOR AFTERNOON MEETING

XXI COMMITTEE MEMBER COMMENTS

XXII PUBLIC COMMENTS AND COMMUNICATIONS

Anyone wishing to address the Committee on matters not appearing on the Agenda may do so only at this time. The public may comment on any matter listed on the Agenda immediately following the time the matter is considered by the Committee. *There will be a time limit for each speaker as designated by the presiding officer. No action will be taken by the Committee on matters brought up under this item but they may be referred to staff for further study, response or action.*

XXIII INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

- 7) Results of the 2016 Operating Plan and Key Elements of the 2017 Operating Plan
- 8) Results of the November 2-4 2016, Evaluated Ingestion Pathway Emergency Exercise

XXIV CONCLUDING REMARKS &
DISCUSSION BY COMMITTEE MEMBERS
OF FUTURE DCISC ACTIVITIES

- A. Future Actions by the Committee
- B. Further Information to Obtain/Review
- C. Review of Scheduling of Future Site Visits, Study Sessions and Meetings

XXV ADJOURNMENT OF EIGHTY-SIXTH PUBLIC MEETING

The DCISC's policy is to schedule its public meetings in locations that are accessible to people with disabilities. The Avila Lighthouse Suites Point San Luis Conference Facility is a wheelchair accessible facility. A person who needs a disability-related accommodation or modification in order to participate in the meeting may make a request by contacting the DCISC office at (800) 439-4688 or by sending a written request to the DCISC office at 857 Cass Street, Ste. D., Monterey, CA 93940. Providing your request at least five business days before the meeting will help ensure availability of the requested accommodation.

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE: February 8, 2017

AGENDA ITEM: IV-A

AGENDA TITLE: Minutes of October 19-20, 2016
Public Meeting

CONSENT ☒ ACTION ☐ INFORMATION ☐

Staff Summary: Attached are the Minutes which have been prepared from the Committee's eighty-fifth public meeting held on October 19-20, 2016 in Avila Beach, CA.

(Each session of this public meeting was webcast live in real time and is available for subsequent viewing, archived to the meeting agenda, by visiting the links on the Committee's website www.dcisc.org or at www.slospan.org. Meetings are videotaped for later broadcast on Channel 21 in the San Luis Obispo, CA area, the government access television channel.)

RECOMMENDED COMMITTEE ACTION: Approve the Minutes by motion

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MINUTES
of the
DIABLO CANYON INDEPENDENT SAFETY COMMITTEE'S
OCTOBER 19-20, 2016 PUBLIC MEETING
[For approval at the February 8-9, 2017, Public Meeting]

Wednesday & Thursday
October 19-20, 2016
Avila Beach, California

Notice of Meeting

A legal notice of the public meeting and several display advertisements were published in local newspapers and mailed to the media and those persons on the Committee's service list. Information on the public tour and a copy of the meeting agenda were also posted on the Committee's website at www.dcisc.org.

Agenda

I CALL TO ORDER - ROLL CALL

The October 19, 2016, public meeting of the Diablo Canyon Independent Safety Committee (DCISC), the eighty-fifth public meeting of the Committee, was called to order by Committee Chair Dr. Peter Lam at 9:00 A.M. in the Point San Luis Conference Room at the Avila Lighthouse Suites in Avila Beach, California. Dr. Lam welcomed the members of the public in attendance. The public meetings of the Committee are viewed in real-time over streaming video at www.dcisc.org and www.slospan.org and are videotaped for later broadcast on the local public access television station. Dr. Lam introduced and briefly reviewed the appointment of each of the DCISC members and the professional backgrounds of Drs. Budnitz and Peterson. Dr. Peterson reviewed Dr. Lam's professional background.

Present: Committee Member Robert J. Budnitz
Committee Member Peter Lam
Committee Member Per F. Peterson
Absent: None

II INTRODUCTIONS

Dr. Lam introduced and briefly reviewed the professional backgrounds of the Committee's Technical Consultants, Mr. Richard D. McWhorter, Jr. and Mr. R. Ferman Wardell and DCISC Assistant Legal Counsel Robert W. Rathie.

Dr. Lam recognized and acknowledged the presence of DCPD Compliance and Risk Manager Mr. Brian McQuade who serves as the principal liaison for the Diablo Canyon Power Plant (DCPP) with the DCISC and who plays a key role on behalf of PG&E in working with the DCISC to coordinate activities and provide information.

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III PUBLIC COMMENTS AND COMMUNICATIONS

The Chair inquired whether there were any members of the public present who wished to address remarks to the Committee on items not appearing on the agenda for the public meeting and he reviewed the advice from the agenda concerning items or issues which are brought to the attention of the Members by the public during public meetings.

Ms. Rochelle Becker representing the Alliance for Nuclear Responsibility was recognized to address remarks to the Committee. Ms. Becker observed the DCISC was established in view of the potential for competition between safety and the expense of running DCPD and she remarked that, with the Joint Proposal to retire DCPD at the end of its current operating licenses in 2024 for Unit-1 (U-1) and 2025 for Unit-2 (U-2) now pending before the California Public Utilities Commission (CPUC), there has never been a time during which the Committee needed to watch very carefully and more closely PG&E's operation of DCPD. She stated this includes making sure qualified workers are retained and components are being replaced in a timely manner and not deferred until scheduled refueling outages. Ms. Becker closed her remarks by stating she was disappointed the CPUC which created the DCISC had chosen to schedule a public participation hearing in San Luis Obispo on the same date as the DCISC's public meeting. Dr. Budnitz replied that the Committee has discussed the issues raised by Ms. Becker with PG&E and will continue to review PG&E's plans as he too is concerned that there may be compromises to safety especially as the dates for closing DCPD approach. Dr. Budnitz observed there are a significant number of items that have importance to safety which are not necessarily covered by regulations or where the regulations may permit discretion or provide leeway and this will need to be closely watched in the future as it is possible that a compromise to safety may inadvertently occur and the DCISC has conducted and will continue to conduct fact-finding on this issue.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman reported that his apprehension with the Joint Proposal centered on a less intense period, prior to plant closure as capital is finite and there is sure to be competition within PG&E for allocations of limited capital resources and arguments will be made that there are more productive investment alternatives available to the company than investing in DCPD. He remarked the nine-year period of pre closure activities is unprecedented for a plant such as DCPD and PG&E likely has no idea on how to detect gradual slippage in performance which could affect safety. He stated he agreed with Ms. Becker's observation that the time for enhanced vigilance by the DCISC is commencing and he wished the Members the best in their efforts.

Dr. Abraham Weitzberg was recognized. Dr. Weitzberg stated he was speaking as an interested member of the public and observed the CPUC public participation hearings are scheduled for both afternoon and evening sessions and, accordingly, should not present a schedule conflict for anyone wishing to attend both the DCISC and CPUC's public meetings. Dr. Lam observed the DCISC schedules its public meeting more than one year in advance.

Dr. Budnitz remarked that with Dr. Peterson he recently attended a colloquium at U.C. Berkeley presented by Dr. William E. Kastenberg. Dr. Kastenberg previously served as the first

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appointed member of the DCISC and served as a member of the DCISC for more than ten years. Dr. Budnitz stated he was pleased Dr. Kastenberg remains an involved and active member of the nuclear safety community.

IV CONSENT AGENDA

The first item on the Consent Agenda was approval of the Minutes of the Committee's June 21-22, 2016, public meeting held in Avila Beach, California. A draft of the June 2016 Minutes was included in the public agenda packet for this public meeting. The Members and Consultants reviewed the Minutes and provided revision of certain references to be included in the final version and discussed follow up actions to be taken, provided clarification to the Assistant Legal Counsel concerning typographical errors and the accuracy of certain references in the Minutes and editorial comments and changes were received concerning the draft of the June 2016 Minutes. **During discussion of an item in the Minutes, Dr. Peterson requested that a visit to the hot shutdown panel be scheduled during the December 2016 fact-finding visit to DCP.** Following the review of fact finding reports later during the meeting it was confirmed that the hot shut down panel is located in the plant on the 100' elevation while the Cable Spreading Room is on the 128' elevation with the 115' elevation separating the two. The hot shut down panel and Cable Spreading Room are not within the same fire zone and each has separate access. The hot shutdown panel is accessed by a stairwell outside the Control Room but access is also provided by the back stairwell. **During review of the Minutes Dr. Budnitz was delegated by the Committee to contact and provide a review of comments from the June 2016 Minutes, including a recommendation as to what additional work may be needed, to be provided by DCISC Consultant Dr. Robert T. Sewell regarding the presentation Dr. Sewell made at the June 2016 DCISC public meeting on the tsunami hazard and risk at DCP.**

Minutes of the Committee's public meetings, in their final approved form, become part of its Annual Reports on Safety of Diablo Canyon Nuclear Power Plant Operations (Annual Report). The Committee deferred action on the June 2016 Minutes during its morning meeting on October 19, 2016, pending receipt and review of Dr. Sewell's substantive comments. Subsequently, upon commencement of the afternoon session on October 20, 2016, following Dr. Budnitz' review of Dr. Sewell's comments and direction that his non substantive edits be incorporated into the final version of the June 2016 Minutes, on a motion by Dr. Budnitz, seconded by Dr. Peterson, the Minutes of the Committee's June 2016 public meeting were approved subject to inclusion of the changes provided to the Committee's Assistant Legal Counsel. The June 2016 Minutes will be part of the Committee's 26th Annual Report.

V ACTION ITEMS

- A. DCISC's 26th Annual Report on Safety of Diablo Canyon Operations:
July 1, 2015 - June 30, 2016.

The Chairman reviewed the duty and obligation of the Committee to develop and to make available its Annual Report on the safety of DCP operations. The Annual Report is provided to PG&E for its response and with that response incorporated it is provided to the

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California Public Utilities Commission and to each of the Committee member's appointing entities, the Governor, the California Attorney General and the Chair of the CEC as well as to the California Polytechnic University (Cal Poly) R.E. Kennedy Library and to public libraries in the local area, and on the Committee's website at www.dcisc.org. The DCISC Annual Reports are made available in two bound volumes and as a compact disk. Dr. Lam stated preparation of the Annual Report was an intensive collaborative effort which is led by Committee Technical Consultant Mr. Ferman Wardell and the Chair stated Mr. Wardell deserves recognition and the thanks of the members of the Committee for his efforts.

At Dr. Lam's request, Mr. Wardell reviewed the process employed by the Committee to schedule, assign work, and develop three drafts and a final version including an Executive Summary for its Annual Report for 2015-2016. Mr. Wardell reported that in the 2015-2016 Annual Report the Committee made no recommendation but identified six areas of concern and particular interest. These include: (1) concerning the Joint Proposal which, if approved by the CPUC, would close DCPD by the end of the current operating licenses from the NRC for both units, that is 2024 for U-1 and 2025 for U-2, ("Joint Proposal"), the DCISC is concerned regarding retention of qualified, experienced personnel to operate DCPD at the appropriate level of safety and concerning adequate spending on programs and equipment to preserve an appropriate level of nuclear safety; (2) the DCISC is concerned and interested in further analysis of the potential effects of tsunamis generated from submarine landslides in the vicinity of DCPD; (3) the DCISC is interested in understanding the potential plans for cycling DCPD power levels to meet grid demands while preserving an appropriate level of nuclear safety; (4) the DCISC is interested in continuing to review PG&E's ongoing program to monitor seismic activity and to improve the understanding of the safety of the plant against large earthquakes (5) the DCISC is interested in continuing to review PG&E's ongoing program to monitor the safety of the Independent Spent Fuel Storage Installation (ISFSI); and (6) the DCISC is interested in monitoring PG&E's ongoing program of working with the local, state and federal agencies to assure adequate emergency preparedness in the event of a significant accident.

Mr. John Geesman of the Alliance for Nuclear Responsibility was recognized during the discussion on the 26th Annual Report. Mr. Geesman remarked the State of New Jersey established a body analogous to the DCISC to monitor the types of concerns expressed by the Committee in connection with the closure over a nine-year period and gradual retirement of the Oyster Creek Nuclear Generating Station. While Mr. Geesman observed New Jersey's efforts have been greatly exceeded by the work of the DCIS, both in terms of breadth and depth he stated his belief that the work of the New Jersey commission would provide an information point to review for the DCISC. He observed that Oyster Creek is qualitatively very different from DCPD as it is a General Electric design of an older vintage with a number of back-fits and is operated by Exelon, a company which unlike PG&E also operates other nuclear power plants, and it is operated as a merchant power plant (*i.e.*, a plant operated independently and which competes to sell power in a competitive energy market).

On a motion by Dr. Budnitz, seconded by Dr. Peterson, the Committee unanimously approved its Twenty-Sixth Annual Report on the Safety of Diablo Canyon Operations for the period July 1, 2015-June 30, 2016. The 26th Annual Report will be provided to PG&E for its review and response which will be incorporated in the final report.

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B. Update on Financial Matters and Committee Activities 2016-2017.

Mr. Rathie reported financial statements prepared by the Committee's accountant showing the assets, liabilities and capital on hand were provided for the Committee's review. He reported that, to date, the DCISC has received three quarterly grant payments for 2016 and, based on the accountant's report, it is expected the DCISC will end this calendar year within the total amount of expenditures permitted by the grant of funds received for its operations and any funds remaining unspent would then be returned to the PG&E for credit to its ratepayers who provide the funding for the operations of the DCISC. The Committee will have then returned funds to the ratepayers in each of the last five calendar years. Dr. Budnitz observed that during his term of service on the DCISC the Committee has never deferred an activity due to a concern about the adequacy of its funding.

Mr. Rathie directed the attention of the members and consultants to the list of key dates for 2016 and 2017 prepared by Mr. Wardell and provided with the agenda packet and he reported the next public meeting of the Committee is scheduled for February 8-9, 2017, in Avila Beach, California. Mr. Rathie provided a summary of the activity on the DCISC's website and reported for 2016 the site is averaging 828 unique visitors every month with the top five countries with visits to the site being the U.S., Poland, Russia, Japan and France. Mr. Rathie reported that visits to the Committee's website increased in June 2016 when the announcement of the Joint Proposal was made which he stated he believes this indicates that persons concerned with events involving DCPD are motivated to visit the site.

Mr. Rathie reported the new accounting firm, Martin Ketterling & Associates and its principal, Mr. Shane Werner, has taken over the accounting and bookkeeping functions from the DCISC's longtime accountant Ms. Diane Keay following Ms. Keay's planned retirement.

C. Discussion of Issues on Open Items List.

Dr. Lam requested Consultant Wardell lead a review of items on the Open Items List, which he described as a very important tool used by the Committee to track and also follow up on issues, concerns and information identified for subsequent action during fact-finding or public meetings. Dr. Budnitz observed the Open Items List is among the most important of the Committee's documents as in their review of the Open Items List the Members and Technical Consultants establish the scope of the DCISC's review for the future and therefore the Open Items List provides insight into the items and issues for review which the Committee believes are most important and immediate for review.

Ms. Sherry Lewis, representing the group San Luis Obispo Mothers for Peace, was recognized. Ms. Lewis inquired whether the Open Items List could be made available to the public prior to the public meetings of the Committee. The Members, Technical Consultants and Assistant Legal Counsel discussed the draft nature of the documents which are provided in the agenda packets which since the inception of operation by the Committee have been made available at the Reference and Maps Department of the California Polytechnic University (Cal Poly) Library. **They agreed that some of those materials, including the Minutes and the**

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Open Items Lists, will be in the future labeled as “drafts” with the dates inserted on every page but will continue to be made available to the public prior to the public meetings of the Committee at the Cal Poly Library and on the Committee’s website as well as at the public meeting.

Mr. John Geesman was recognized and he commented he supported the proposal to make the properly labeled documents available on the DCISC website.

Items discussed or concerning which action was taken included the following¹:

<u>Item</u>	<u>Re:</u>	<u>Action Taken</u>
RA-5	PRA Program Review	Schedule for 2Q17 FF- RJB
RA-6	Monitor Seismic Fragility Analysis	Schedule for 3Q17 FF-RJB
NS-5	Monitor NSOC Meetings	Coordinate w/FF schedule
TBD	Unit-2 (U-2) Stator Replacement/Upgrade	Add to Open Items List (per S. Lewis)
SE-49	Emergency Diesel Generators	Schedule for 1Q17FF
OM-5	Foreign Material Exclusion	Schedule for March 17 FF or prior to 1R20
SF-2	Spent Fuel Dry Storage & Pool Storage	PFP to forward D.Gilmore correspondence re canister temperature to PG&E and schedule Dec17 FF PFP/RDM (post loading campaign) to review EPRI Report
SC-3	Long Term Seismic Program	Schedule for 3Q17
SC-4	Monitor Risk-based Tsunami Analysis	Schedule for Dec16 FF PFP/RDM or 2Q17
LD-3	Non Licensed Training Programs	Separate from BDB-6
LR-1	Reactor Vessel Pressure Integrity	Hold in abeyance
CL-2	SWRCB Response - Closed Loop Cooling	Hold in abeyance
CL-4	Salt Deposition on External Equipment	Continue to Monitor and Move to another functional area
BDB-6	FLEX Status	Add NEI 1606 on Guidance and Training & DCPD Response
O-1	Observe Work Processes	Define a Periodic Schedule
2/16 PM-3	Use of Portable Electronic Devices	Continue to Monitor and Link to O-1

¹ Key to abbreviations used: PG&E Nuclear Safety Oversight Committee (NSOC), Probabilistic Risk Assessment (PRA), Public Meeting (PM), Quarter (Q), Fact-finding (FF), To Be Determined (TBD), Dr. Robert J. Budnitz (RJB), Dr. Per F. Peterson (PFP), and Mr. R. Ferman Wardell (RFW), Mr. Richard D. McWhorter (RDM).

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2/16 PM-9	<i>R/V Bartlett</i> Cruise Data	Close re Landslide Tsunami Risk but Retain re Types of Analysis that should be performed
2/16PM-11	Engineering Excellence Plan	Delete 8/16FF and Retain
2/16 PM-15	Tsunami Probabilities	Move to SC-4 and Close
2/16 PM-16	Tsunami Projects & <i>R/V Bartlett</i> data	Move to SC-4 and Close

During review of the Open Items List, Ms. Sherry Lewis was recognized. Ms. Lewis inquired whether item ER-5 concerning monitoring the equipment reliability process included review of the stator replacement and upgrade project for the U-2 main generator. Dr. Budnitz observed item ER-5 addresses programmatic review of the process not a review of individual equipment. **In response to Ms. Lewis inquiry, the Members directed an open item be added concerning the U-2 stator upgrade project (see above) with attribution to Ms. Lewis.**

Dr. Abraham Weitzberg was recognized. He remarked that as the U-2 stator is part of the power production operation of the plant its replacement would likely lie outside the DCISC's remit to monitor safety of operation of the power plant. The Members replied that as an incident with the stator could result in a plant trip and equipment, such as the stator, which is not a nuclear safety-related item involves issues of personnel safety it does have nuclear safety implications as a sudden loss of power productions capability could cause the plant to trip. Dr. Peterson remarked that the safety classification and distinction of systems, structures and components is a major review topic as failure of non safety-related systems, while of lower significance than failure of safety-related systems, can initiate sequences which can lead to accidents. **Dr. Peterson observed, and Drs. Budnitz and Lam agreed, that classification of systems, structures and components is a topic which should be considered for a presentation by PG&E at the next public meeting of the DCISC.**

Except as indicated above as "Retain" the Members confirmed that the balance of the items identified on the Open Items List as recommended for closures should be closed as suggested. Dr. Lam commented he was gratified to see many closures on the Open Items List as it is an indication of the Committee's success in tracking and completing tasks within its areas of responsibility. **Mr. Wardell observed that he would distribute a revised version of the Open Items List which includes the comments in bold text from the June 2016 Minutes.**

Following the review of the Open Items List Ms. Rochelle Becker of the Alliance for Nuclear Responsibility was recognized. Ms. Becker stated the Nuclear Regulatory Commission (NRC) recently issued a preliminary White finding to PG&E. Ms. Becker requested that the DCISC review this matter in a fact-finding visit with DCPD including why post maintenance testing did not detect that limit switches would and did go past the movement limits established by the vendor and what assurances exist that the limit switches are the only safety equipment installed contrary to vendor recommendations. **Drs. Peterson and Budnitz responded and confirmed the DCISC would follow up on the White finding and the issue raised by Ms. Becker at a future fact-finding and this review would include an assessment of extent of**

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condition as the most important lesson from many events is the extent of condition rather than a single occurrence.

A short break followed.

VI COMMITTEE MEMBER REPORTS AND DISCUSSION

A. Public Outreach, Site Visits and Other Committee Activities:

The Members confirmed public meetings of the DCISC are now scheduled for February 8-9 and June 7-8, and October 18-19, 2017, and they then scheduled public meetings for February 7-8, 2018.

Fact-finding visits were confirmed and scheduled as follows:

[2016] November 2-3 RJB/RFW; December 7-8, 2016 PFP/RDM;

[2017] January 18-19 RJB/RFW; March 8-9 PL/RDM (possibly changed to March 22-23 to accommodate observing NSOC exit meeting); April 18-19 PL/RFW; May 10-11 PFP/RFW; July 19-20 PFP/RFW; August 9-10 RJB/RDM; September 6-7 PL/RDM; November 14-15 RJB/RFW; December 13-14, 2017 PL/RDM; and

[2018] January 17-18, 2018 PL/RFW.

B. Documents Provided to the Committee:

Mr. Rathie directed the Committee's attention to the list of documents received from PG&E on a monthly basis since its last public meeting in June 2016. A copy of the list was included with the public agenda packet for this meeting.

VII STAFF-CONSULTANT REPORTS & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT FINDING REPORTS TO PG&E

The Chair requested Consultant Wardell to report on the July 20-21, 2016, fact-finding visit with Dr. Peterson to DCP. Mr. Wardell reviewed the topics discussed with PG&E during the visit including:

- Meeting of DCISC Member Peterson with DCP Senior Vice President, Generation and Chief Nuclear Officer (SVP/CNO) Ed Halpin - meeting to discuss the fact-finding meeting agenda and other items of interest.
- Meeting with NRC Senior Resident Inspector - Mr. Wardell reported Senior Resident Inspector Christopher Newport, is expected to report in mid-August to DCP and the DCISC

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representatives met with the Resident Inspector John Reynoso who was acting as the Senior Resident to discuss: the proposed cancellation of relicensing efforts for DCP; the recent NRC Problem Identification and Resolution inspection which found that programs to be sound; safety culture; and the issuance of the NRC's Tsunami Report for the U.S. East Coast and the release date for the NRC's letter responding to DCP's March 2015 submission on flooding.

➤ Salt Deposition Rates - this issue related to a concern initially identified due to transformer failure in 2008 when cleaning of salt off transformer bushings and insulators caused problems. Mr. Wardell reported the proposal for the use of cooling towers at the site would add more salt to the station's environment. In 2008 DCP implemented a three-year salt monitoring program for its outdoor equipment including equipment in the switchyards which found salt contamination levels to be light to heavy depending on location and wind. All corrective actions have been implemented concerning cleaning of bushings and there have been no transformer failures since 2008. **Mr. Wardell reported in accordance with discussion of the Open Items List, the salt deposition issue will remain open for future review by the DCISC.**

➤ Safety/Security Interface - the DCISC representatives reviewed the interface between procedural changes initiated by the Operations, Maintenance or Engineering organizations at the plant and the Security organization, with each organization having responsibility to review changes proposed by others to ensure no nuclear safety or personnel safety issues result. The DCISC team found the program satisfactory. The DCISC representatives also discussed with DCP the accidental discharge of a weapon at the San Onofre Nuclear Generating Station (SONGS) and the training, procedures and the specific design of weapons and holsters at DCP which make a similar event at DCP highly unlikely. The DCISC team also found that a single accidental discharge of a weapon was not likely to affect plant safety.

➤ Reactor Coolant Pump Seals - the four reactor coolant pumps (RCP) for each unit have shaft seals to contain leakage and a seal injection system is used to control leaks and to inject water into the seals and into the passive seals to the reactor coolant. An important function of this system is to keep the seals lubricated. Westinghouse has now produced and tested passive thermal shut down seals which have been installed on all eight RCPs at DCP. Upon loss of electric power, causing seal injection to cease with the resulting heat, this will cause the new seals to close tightly around the RCP shafts to prevent or greatly reduce any leakage and thereby help lower the risk of core damage frequency in probabilistic risk assessment (PRA) analysis.

➤ Emergency Diesel Generator (EDG) Health - three EDGs serve each unit and are each capable of operating independently with the capability to cross-connect to the other unit. Mr. Wardell reported U-2 EDG health status² was Yellow until September 2015 when it returned to

² On a scale of Green indicating a healthy system and White indicating that achievable action plans are in place to return the system to healthy status. A Yellow rating would indicate that system health is deficient and needs improvement and Red would indicate unsatisfactory system health.

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White and is now Green, while U-1 EDG health status was Green but the health status for both units was reduced administratively to White so as to give the modifications proposed for the EDGs for both units more management and budgeting visibility. These modifications are expected to be completed by the end of 2016.

➤ Fire Doors - Mr. Wardell reported that approximately 260 of the approximately 1,000 doors in the power block, the part of the plant wherein power is produced, are fire doors which are required to remain closed and serve to separate and protect areas of the plant from fire. In November 2014 there were 16 fire doors identified which required repair and funding for the work was being delayed to future years. The DCISC made accelerating repair of fire doors a subject of its 2013- 2014 Annual Report and six of the 16 doors have now been repaired or replaced. The fire doors that remain to be repaired or replaced are the subject of compensatory actions whereby a security guard is assigned to visit the area on a certain frequency to ensure there are no fire materials improperly stored and this situation is acceptable to the DCISC. Drs. Peterson and Budnitz remarked that during their many visits to DCPD they have been impressed by the exceptional attention paid by DCPD personnel in keeping the fire doors and all doors secured and checked.

➤ Design Quality – the design quality function is to review the accuracy of the design of modifications that are produced by Engineering for installation or implementation in the plant. During refueling outage 1R18 in 2012 erroneous designs were identified through the numbers of field change requests. DCPD performed a cause analysis and entered the issue in the Corrective Action Program but the Quality Verification organization found the issue was not adequately resolved and a second round of corrective actions was undertaken and design quality is now in Green health status. Mr. Wardell reported that a retrospective review of this issue determined that not all the field change requests were made as a result of design issues or because of errors in the design but in some cases the field changes were made to address changes proposed to accommodate construction in the field. **Mr. Wardell reported that during the last refueling outages modifications have been successful and this issue can be removed from the Open Items List.**

➤ FLEX Training - the DCISC team examined the FLEX training modules but did not have the opportunity to review FLEX training.

➤ Independent Spent Fuel Storage Installation (ISFSI) Fuel Loading - Mr. Wardell reported that in the past that spent fuel had not always been loaded in accordance with technical specifications. The technical specifications for loading spent fuel have now been changed to eliminate the requirement for specific heat loads for certain areas of the multipurpose canisters and technical specifications now require a maximum load of 28.7 kilowatts of heat from the fuel assemblies in any canister which allows the assemblies to be loaded in any order provided that this limit is not exceeded.

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➤ DCPD Safety and Wellness Expo and Barbeque Throwdown - the event involved friendly competition between various departments in cooking spareribs on a grill with booths set up in the area to provide information on safety and wellness issues. The DCISC and many DCPD employees found the booth with information and a demonstration of seismic safety to be of interest as the demonstration included a room set up inside a truck trailer which was configured to shake and simulate the effects of an earthquake. Mr. Wardell reported that workplace seismic safety at the plant has improved as a result of the Committee's continued focus on this area.

➤ Power Reduction Data - Mr. Wardell reported the DCISC team was interested in the impact and the effects of the plant cooling down and heating up following cycling of power production. He reported that although DCPD is not specifically designed for what is termed "load following" the plant is designed to reduce power production and to return to full power production when necessary or convenient. Mr. Wardell reported that a transition from 100% power operations to 50% power production does not result in much change in the temperature of the plant, as the drop in temperature is only approximately 12 degrees from 569 degrees, however, the flow rate does change. Mr. Wardell reported it is the temperature change that primarily affects the stress levels on the plant and DCPD tracks these thermal cycles in accordance with the limits established by the American Society of Mechanical Engineers (ASME) Codes. Mr. Wardell reported power changes require processing of significant amounts of water to remove and restore dissolved boron to the Reactor Coolant System (RCS) and this results in some additional radioactive discharge to the ocean. He reported the DCISC team determined the effect on thermal systems due to power level changes for reasons of operational safety or maintenance to be small. Dr. Peterson reported that one of the major modifications for reactors in power plants which engage frequently in load following is to use grey control rods to control power as the grey rods have much less worth and therefore insert over much longer distances than the control rods used at nuclear power plants that are run in base load generation mode. He observed that boron is distributed homogeneously through the nuclear core and therefore uniformly reduces the power.

Following Mr. Wardell and Dr. Peterson's comments on power reduction, Mr. John Geesman on behalf of the Alliance for Nuclear Responsibility was recognized. Mr. Geesman remarked the Alliance for Nuclear Responsibility has shared, in large part, in the recommendations of the California Energy Commission and the CPUC recommending PG&E conduct an accelerated transfer of spent fuel to dry cask storage and PG&E has cited thermal constraint in its technical specifications as justifying the present schedule for moving spent fuel to the ISFSI. Mr. Geesman remarked that from Mr. Wardell's report it appears this constraint, if not completely eliminated, is at least significantly altered as related to thermal requirements. Mr. Geesman reported that as part of the Joint Proposal PG&E has agreed to review the accelerated transfer of spent fuel as part of its site-specific decommissioning plan for DCPD to be filed in 2018 and an issue is currently before the CPUC that involves whether that acceleration should take place prior to decommissioning and the facts related by Mr. Wardell may very well alter PG&E's calculation as to what acceleration can be accommodated. Mr. Geesman stated he did not at this time want to dismiss the Alliance for Nuclear Responsibility's concerns with

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respect to fuel storage in the spent fuel pools which will be addressed in the future. Dr. Peterson remarked that the logic of loading higher power assemblies in the center of the cask, as previously required by technical specifications, was based upon radiation protection and reducing dose rates and these constraints have now been removed at DCPD and other plants. The total heat generation inside the canisters is acceptable with regard to the internal structure of the canisters and the canisters are licensed to provide at least five years of storage while sufficient heat decay occurs. **Dr. Lam stated he would follow up on Mr. Geesman's concern on accelerating the transfer of spent fuel to dry cask storage at the ISFSI at his scheduled fact-finding in March 2016.**

Mr. Geesman asked that Mr. Wardell's report include as much quantitative data as possible particularly with respect to chemical changes and concerning what Mr. Wardell referred to as qualitatively insignificant increases in radioactive waste discharged to the ocean as a result of power reduction and he stated that the relative changes in radioactive waste discharge are important as a public issue.

Dr. Abraham Weitzberg was recognized. Dr. Weitzberg reported that in a conversation he had with PG&E SVP/CNO Ed Halpin, Mr. Halpin stated that DCPD could not flexibly follow power as is done in France and Mr. Halpin had alluded to seismic issues being a reason for this. Dr. Weitzberg remarked that the DCISC's report stated DCPD has safely operated at partial power for limited periods of time in the past when necessary and he asked if it were possible to obtain historical records of the frequency and duration of those operations. Dr. Weitzberg stated he spoke to a colleague at the Byron Nuclear Generating Station in Illinois, a plant which regularly engages, to some degree, in load following operation and received information that this is done with control rods which Dr. Weitzberg assumes are the grey control rods cited by Dr. Peterson and Byron's operations do not have any impact due to extra removal of chemicals and he commented it would be helpful to the public if information on flexible power operation could be put together for the benefit of the public so the public could judge for itself the limitations on flexible power operation.

In response to Mr. Geesman's remarks, Mr. Wardell stated the total heat load for the multipurpose canisters remains the same after the change in the technical specifications as that change only affected the regions within the canisters where the fuel is located. Mr. Wardell stated that data exists on the quantitative amount of radioactive releases and the plant has such records. In response to Dr. Weitzberg's inquiry Mr. Wardell reported data on power changes during operational periods is reported to the DCISC by PG&E at each of the Committee's public meetings and an annual compilation is included in every DCISC Annual Report, in Volume II, Exhibit C, which contains the operating history of the plant for each report period including how many curtailments were conducted to what power level for what duration. The DCISC's Annual Reports are publicly available on the Committee's website and at the Cal Poly Library and local libraries in the San Luis Obispo area. Mr. Wardell remarked his report on the August 31-September 1, 2016, fact-finding visit to DCPD with Dr. Lam will include information on quantifying the normal radioactive discharges. Dr. Peterson commented there is no increase in

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release caused by additional volumes of water during power changes as the radioactive quantities contained are diluted correspondingly and the more significant issue regarding a release may involve Tritium which does not change as a function of the volume of water discharged. Low level radioactive waste is also generated in terms of filter media but the change is in volume rather than in the total amount of radioactive material released.

Ms. Sherry Lewis of MFP was recognized. Ms. Lewis stated that if there is a greater volume of water discharged to the ocean then the result is that there is more radioactivity being discharged and whether the increase is insignificant is an individual judgment. Dr. Budnitz commented the public would receive relevant data when Mr. Wardell gives his next report.

The Chair reported Consultant McWhorter's report would be presented after the lunch break and asked Assistant Legal Counsel Rathie to report on administrative, regulatory and legal matters.

Mr. Rathie reported the DCISC is on the service list to receive documents concerning the CPUC proceedings to consider the Joint Proposal and he has attended two teleconferences on the scoping issues for the proceedings which were organized by PG&E. A public participation hearing on the matter of the Joint Proposal is scheduled for October 20, 2016, to be conducted in two sessions in San Luis Obispo. Mr. Rathie reported that he attended a meeting with Dr. Peterson and the Governor's Director of the Office of Planning and Research Mr. Ken Alex in Oakland, California, on July 1, 2016, and Mr. Rathie is planning on attending a meeting now scheduled with Dr. Lam to meet with Chair Weisenmiller and representation of the California Energy Commission in Sacramento, California on November 10, 2016. Mr. Rathie reported that with Dr. Budnitz recent reappointment by California Attorney General Kamala Harris all members of the DCISC are currently serving within their appointed terms. He reported that Committee Consultant for review of the tsunami risk, Dr. Robert T. Sewell, has recently terminated his association with Structural Integrity, Inc. and therefore it will be necessary for the Committee to enter into a new agreement for Dr. Sewell's continued services to address the inquiry received from Dr. Garry Maurath, the CEC technical liaison to the CPUC's Independent Peer Review Panel (IPRP). Upon a motion by Dr. Budnitz, seconded by Dr. Peterson, the Committee delegated authority to the Chair and the office of its Legal Counsel the preparation and execution of an agreement with Dr. Sewell.

VIII ADJOURN MORNING MEETING

The Chair adjourned the morning meeting of the DCISC at 12:45 P.M.

IX RECONVENE FOR AFTERNOON MEETING

Dr. Lam reconvened the afternoon meeting of the DCISC at 1:30 P.M. and he acknowledged the presence at the meeting of Dr. Justin Cochran, Senior Nuclear Policy Advisor

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to the California Energy Commission, and asked if Dr. Cochran wished to address any remarks to the Committee.

Dr. Cochran thanked Dr. Lam and expressed the thanks of the California Energy Commission to the Committee and its staff for their excellent and important work. Dr. Cochran stated the California Energy Commission also wanted to recognize PG&E and its employees for the important and essential activities they engage in within the community. Dr. Cochran acknowledged the reappointment of Dr. Budnitz by the California Attorney General and thanked him for his continued contributions. Dr. Cochran closed his remarks by reminding the persons present that information on California's energy infrastructure is available on the California Energy Commission's website at www.energy.ca.gov.

X COMMITTEE MEMBER COMMENTS

Dr. Peterson reported that after having spoken with Mr. Jearl Strickland, PG&E Interim Vice President of Generation Technical Services, Mr. Strickland confirmed the materials used in the construction of the multipurpose spent fuel storage canisters (MPC) at DCPD has evolved from the initial use of 304 stainless steel, to A304L stainless steel, to A316L stainless steel. Mr. Strickland was recognized and he reported this evolution was due to the desire to use a lower carbon stainless steel in order to provide better properties for longer term intergranular corrosion resistance.

XI PUBLIC COMMENTS AND COMMUNICATIONS

Dr. Lam invited members of the public to address the Committee on matters not on the agenda for this meeting.

Dr. Alexander Cannara of Menlo Park, California, was recognized. Dr. Cannara inquired whether data compiled during the 2006 San Simeon earthquake, with a magnitude of 6.2 or 6.3, including the effects of that earthquake on DCPD were available. Dr. Budnitz confirmed that the data from the San Simeon earthquake was publicly available including data from instrumentation installed on DCPD structures and certain equipment within the plant, which suffered no damage during that event, and upon inquiry the DCISC could assist Dr. Cannara in obtaining the data. Dr. Budnitz observed the frequency (in hertz) was different at the plant site from the epicenter of the San Simeon earthquake because of the intervening distance and the effect of absorption and attenuation which produce changes the frequency spectrum.

Ms. Simone Malboeuf of Los Osos, California, was recognized. Ms. Malboeuf remarked that having PG&E fund and perform seismic studies is like putting a fox in charge of a hen house. She commented PG&E's 2015 seismic reports read like an infomercial and there is a distinction between the reality of safety and the illusion and the appearance of safety. She observed the study of past earthquakes does not include predicting future events and the August 2015 earthquake in the area of San Francisco Bay is suspected of striking along a little known

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section of the West Napa Fault and new faults have been discovered in Northern California, most recently in proximity to the San Andreas Fault. Ms. Malboeuf remarked that the recent explosion of PG&E's gas transmission lines in San Bruno, California, and the resulting fines levied against PG&E speaks volumes about PG&E's record as a company. Ms. Malboeuf observed officials in Oklahoma have recently admitted that an increase in seismic activity in that state has been caused by fracking and fracking is going on in California. She stated the 2011 Tohoku earthquake and tsunami in Japan surprised experts and as a result 300,000 persons remain homeless. Ms. Malboeuf reported a 2008 study by the Tepco Power Company warned that a higher seawall was necessary to protect the nuclear reactors at the site of the accident during the 2011 earthquake and tsunami to the Fukushima Nuclear Power Plant (Fukushima) but this warning and prediction were ignored. Ms. Malboeuf remarked that an eruption of Krakatoa in the year 525 had devastating effects including lowering of the earth's temperature and resulted in long term drought, famine, disease and mass migration and scientists have warned about the need to pay attention to the ability of natural forces to change history and these events are unpredictable. She stated her opinion that nuclear power plants are part of an outdated technology paradigm from which the owners of the plants derive profit at the public expense and renewable energy resources offer a better alternative and DCPD should be closed as soon as possible before it is too late.

Dr. Budnitz responded and thanked Ms. Malboeuf for her remarks. He observed that in the operation of wells for the production of petroleum water is also produced, sometimes in significant quantities, and the typical industry practice, including in California has been to reinject the water and the Oklahoma earthquake experience has been determined to be the result of water injection as when the petroleum producers stop reinjecting the water the increased frequency of earthquakes stops. He pointed out that the practice he described was different from fracking which uses high pressure water injection to generate disturbances in the subsurface regions to enable the production of gas.

Ms. Jane Swanson, a representative of Mothers for Peace, was recognized. Ms. Swanson reported the NRC has identified U-1 at DCPD as among the most embrittled reactor vessels in the U.S. and she encouraged the DCISC to keep the issue of reactor vessel embrittlement on its agenda. Ms. Swanson stated the U-1 vessel was scheduled for inspection but that PG&E has received permission from the NRC to delay this inspection which will now not take place until 2025. Ms. Swanson stated it was her impression that this delay was unjustified based on the NRC's identification of the U-1 vessel as embrittled and, as a result, PG&E will save money by its willingness to take more risk with the safety of the plant and everyone around the plant.

Dr. Peterson responded that reactor vessel embrittlement has been reviewed periodically by the DCISC and it is important to understand the function and presence of metallic samples of the reactor vessel's material, termed "coupons," which are placed within the reactor vessel during its operation in certain areas where these coupons receive significantly greater effects of neutron flux than does the vessel. Coupons are tested periodically and those test results provide an understanding of the condition of the vessel after the equivalent of 60 years of operational

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service. Dr. Peterson observed that the implications of vessel embrittlement are limited to rather special accident transient scenarios, as at normal service temperature the reactor vessel is ductile, meaning it is in some respects flexible, but if cooled to a temperature significantly lower than normal operating temperatures the vessel can become brittle. This situation can occur upon injection of emergency cooling water with the vessel at high pressure which has the potential to locally cool the vessel while it is still under a state of stress, and is termed “pressurized thermal shock.” If this should occur in the vessel it could fail with catastrophic results. Provided, however, that it is verified that the vessel has sufficient ductility in terms of its risk profile from various types of accidents, the risk profile associated with embrittlement of the vessel is relatively small and does not contribute significantly to the overall set of risks posed by the plant. He reported the data available indicates that this is the case relative to DCP. Dr. Budnitz reported the coupons are regularly tested in accordance with the American Society of Mechanical Engineers (ASME) Code. If upon testing any coupon shows behavior in terms of changes to its metallurgical structure, a more detailed examination would be required. Dr. Budnitz observed the issue referred to by Ms. Swanson concerning a deferral of an inspection requirement likely related to only a portion of the vessel being accessible for inspection rather than the entire reactor vessel.

Dr. Lam stated that in his view dismissal of the risk of pressurized thermal shock based on probability alone needs to be further confirmed as this accident sequence constitutes one event that could potentially disable all three barriers against a radioactive release, those barriers being the fuel cladding, the reactor vessel, and the containment structure, with horrendous potential consequences. Dr. Budnitz reported the pressurized thermal shock phenomenon was identified in the 1980's by events which occurred at the Rancho Seco Plant in Sacramento, California, and shortly thereafter by events at the Brunswick Nuclear Plant in North Carolina. As a result the NRC developed regulations set forth at 10 CFR Part 50.61 requiring every plant to perform studies on each reactor vessel in order to preclude the possibility of pressurized thermal shock occurring and therefore, under 10 CFR Part 50.61, no probability assessment was involved. Dr. Budnitz reported pressurized thermal shock affects only pressurized water reactors as boiling water reactors are not subject to the phenomenon. Following the implementation of 10 CFR Part 50.61 all U.S. reactor vessels were found to be in a condition so as to preclude the occurrence of pressurized thermal shock but as neutron irradiation and therefore embrittlement proceeds each year it is important to continue to assess the condition of a vessel.

Around the year 2000 the NRC initiated a research program to understand under what circumstances pressurized thermal shock, while not precluded, was subject to very low probability. This research resulted in the development of NRC regulation 10 CFR Part 50.61a. Plants meeting 10 CFR Part 50.61 could retain their licenses, however, if a plant could not meet 10 CFR Part 50.61 the alternate regulation under 10 CFR Part 50.61a was available to allow continued operation with a very low probability of pressurized thermal shock under a probabilistic rather than a preclusion regulatory regime. PG&E's analysis of DCP has determined that both units would continue to meet 10 CFR Part 50.61 until the end of the current licenses in 2024 and 2025 respectively. The DCP site-specific studies did indicate that

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sometime in the future a point might be reached where 10 CFR Part 50.61 was no longer met and the plant might need to move to 10 CFR Part 50.61a and DCPD continues to test the reactor vessels to ensure that 10 CFR Part 50.61 is met, but as there are now plans to close the plant in nine years this point may never be reached and the metallurgical properties of the DCPD vessels continue at present to preclude the occurrence of pressurized thermal shock. Dr. Budnitz reported this has to do with the nil ductility temperature characteristic of the metals which make up the reactor vessel.

Mr. John Geesman on behalf of the Alliance for Nuclear Responsibility was recognized. Mr. Geesman reported it was his recollection that a DCPD unit was ranked third or fourth on the NRC's list of most embrittled reactor vessels but he observed after hearing Dr. Budnitz' explanation regarding the preclusion standard under 10 CFR Part 50.61 this ranking doesn't really have much meaning. However, he observed it does for those persons concerned about an embrittled reactor located on a seismically active site, and he questioned whether seismic considerations would be part of consideration under an analysis performed for regulatory compliance under 10 CFR Part 50.61a. Dr. Budnitz responded and confirmed that seismic loads are part of the consideration under both 10 CFR Part 50.61 and 10 CFR Part 50.61a but the seismic component is not crucially important in this context as the frequency of the distribution of seismic energy from an earthquake, were it to occur at the same time as a pressurized thermal shock event, produces different loads than the frequency distribution of thermal shock loads and that this has been examined by the NRC.

In response to a comment by Ms. Sherry Lewis of Mothers for Peace, Dr. Budnitz explained that nil ductility temperature is the temperature at which a ductile to brittle transition takes place and, in the event of cold water injection, the cold steel environment should not be colder than the nil ductility temperature to ensure the vessel remains ductile.

XII STAFF-CONSULTANT REPORTS & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT FINDING REPORTS TO PG&E

The Chair requested Consultant McWhorter to report on the August 10-11, 2016, fact-finding visit to DCPD with Dr. Budnitz. Mr. McWhorter reviewed the topics discussed with PG&E during that visit including:

➤ Observe the Plant Health Committee Meeting - Mr. McWhorter reported the Plant Health Committee (PHC) reviewed expense allocation for small improvement projects which can by the PHC processes be completed more expeditiously than through the capital projects budgetary process. The PHC also reviewed the status of systems then currently rated in Red or Yellow status on the system health index. This included the 230kV System, rated as in Red system health due to an open operability assessment resulting from the NRC Component Design Basis Inspection earlier in 2016 and a not fully completed apparent cause evaluation related to a switching component. Mr. McWhorter reported the PHC appeared to be appropriately focused on the path forward to resolve both issues and the corrective actions necessary to restore the

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system health to an acceptable level. The DCISC team concluded the PHC continues to be effective and to be managed effectively and to be focused on health and plant safety.

➤ Plant Protection System Upgrades - a multiyear project last reviewed by the DCISC in 2013. DCPD was proceeding on completion of all initial submittals of licensing information necessary to obtain approval of the NRC for a license amendment. The project would replace aging components with digital components of two differing varieties to maintain redundancy and improve overall safety. Implementation was scheduled for 2020 for U-1 and 2019 for U-2. Mr. McWhorter reported the status of the project is unknown at present with the plans proposed to close the plant in nine years. **This project and others of this nature are subject to review and the process for that review is now under consideration and development to review major capital projects in light of the currently proposed remaining period of operations under the Joint Proposal. The DCISC team found the project on schedule but the entire process of major capital project review is a topic the DCISC should pursue and review in the future.**

➤ Review of Operations Human Performance and Operations Excellence Plan - the Operations Excellence Plan was prompted by concern in several organizations including Quality Assurance (QA), the Performance Improvement Group, and the Nuclear Safety Oversight Committee (NSOC) regarding possible negative trends in status control and tagging by Operations staff. DCPD is reviewing its programs for dealing with human performance events in an attempt to achieve a deeper level of understanding as to what actually caused a specific error. Changes have been made to the tagging process for clearing equipment during work in the plant to address gaps in performance. Each individual working on a system is now required to sign on and sign off a tag at the start and conclusion of every shift and a “tags-plus” program has been implemented to require additional tags and physical locks on devices and equipment the actuation of which could endanger personnel. Individuals have been allowed to continue the use individual red tags as an additional layer of protection and this action was in response to concern expressed by employees. The DCISC representative found the Operations Excellence Plan to be appropriately focused and the corrective actions identified implemented in a timely manner.

➤ Review of Operator Aging and Retention - the DCISC team reviewed the number of “no-solo” designations for operators. This designation precludes the operator so designated from working alone within the plant due to issue related to medical condition. The number of no-solo designations is down from 2002 when 14 operators had this designation to the current period, including the last three years, when four or five operators were so designated which Mr. McWhorter stated represents approximately 10% of Operations department licensed staff and was likely an appropriate level. PG&E has developed a retention plan for employees including specific incentives to retain licensed operators which include additional financial bonuses as incentives. Mr. McWhorter reported PG&E has also approved hiring more licensed operators in anticipation of possibly losing some operators during the last few years of DCPD’s operation. **The DCISC team found the operator retention project to be effectively managed but the Committee should follow this issue closely with reference to licensed operators and well as the station in general.**

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- Dr. Budnitz' Meeting with DCPD Site Vice President Jim Welsch.
- Crane Program Health - this program includes primarily the fuel handling equipment and the general purpose cranes at the station, both unit-specific and unit-common cranes. The fuel handling crane equipment has received considerable attention over the last few years due to problems experienced during refueling outages. The gripper assembly on the manipulator crane will be replaced on U-1 by the spring of 2017 and for U-2 the gripper assembly was replaced at the end of U-2's last outage. Upgrades are being considered for the fuel transfer system and the spent fuel pool cranes. A State inspection identified issues with overloading of the Radiation Waste Building crane and corrosion on the Intake Building crane which will need to be corrected before those cranes can be re certified. Mr. McWhorter reported that in general the health of the station's cranes appears to be good.
- Containment Spray System Update - a routine review found the Containment Spray Systems for both units rated in Green health status. An open prompt operability assessment concerning the timing of the spray additive tank and its emptying in different accident scenarios determined that the tank can empty faster than the Refueling Water Storage Tank and, if that were to occur, there could be a source of gas intrusion into the system under certain accident conditions. Corrective actions and procedural changes are in place to address this issue.
- Meeting with NRC Acting Senior Resident Inspector - to discuss the NRC's perspective on the Joint Proposal and the NRC's experience with other nuclear power plants designated for closure. The DCISC team also discussed the Problem Identification and Resolution Inspection and the timetable for the issuance of the NRC review of the station's evaluation of the risk from external flooding.
- Probabilistic Risk Assessment (PRA) Program - Mr. McWhorter reported the internal flooding PRA is now complete and shows the results of the recent implementation of the new low-leak reactor coolant pump seals, with a corresponding reduction in core damage frequency for both units which brings the internal flooding total plant core damage frequency contribution to approximately 5% of the overall station contribution. The DCISC reviewed the seismic PRA program which is a major update to the overall existing seismic PRA which improves the accuracy and use of the PRA model. The plant expects to have external peer review of the new seismic PRA completed in the next few months and the target date to complete the new seismic PRA is now April 2017. Use of the PRA for other external events was also reviewed as was the fire PRA which has been a major part of the plant's submittal to the NRC move to the National Fire Protection Association (NFPA) Regulation 805 standard regulatory regime. With NRC approval, the PRA model will soon be updated to include the modification made as part of the NFPA 805 program. Mr. McWhorter reported the low power and shut down PRA program is basically on hold at present with two other nuclear power plants working on this PRA under a new American Nuclear Society (ANS)/ASME pilot program. The DCISC representatives also reviewed application of the PRA to an evaluation of NRC Generic Issue 191 concerning sump

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debris accumulation in pressurized water reactors and the effect on sump performance which now hinges upon completion of laboratory testing. The discussion also included use of PRA for recently revised technical specifications and changes to the technical specifications based on risk insights as well as the future use of PRA to reduce surveillance frequency.

➤ Updated Seismic Probabilistic Risk Assessment - Mr. McWhorter stated this review was prompted by a question at the February 2016 public meeting regarding saturation of seismic activity for ground motion. He reported the seismic PRA is being updated and most of the analysis is complete including that which focuses on the seismic fragilities of individual structures and components as well as on the offsite power system, specifically the 230 volt lines coming in to the site. The current effort also focuses on how seismic energy from a large earthquake would enter the site from below, propagate into the structures and produce seismic motion at the base of each piece of equipment. In order to assess the effects, an accurate ground motion response spectra must be developed for each of the major structures at DCP. This analysis has been completed and is awaiting endorsement by the NRC. Once that endorsement is received, efforts will be focused upon the foundation input response spectrum for each building, to be followed by the in-structure response spectrum. The work done over the period of the past years is now subject to review by an outside group of seismic PRA experts. DCP expects to produce the final seismic PRA results in November 2016, followed by the outside peer review, and then to submit the seismic PRA to the NRC later in 2017. The fact-finding team inquired about the topic of magnitude saturation of short period ground motion raised previously by Mr. Geesman. Mr. McWhorter reported PG&E did not have anyone present at the fact-finding to address this issue directly but subsequently provided an email which is incorporated into the fact finding report. This email provides information on the basis for the conclusion that the use of magnitude saturation is appropriate based upon saturation data using a three-part approach with near-field data, global data, and various analytical methods that have been benchmarked and accepted to bring all the data to bear to substantiate the assumption that magnitude saturation does occur for short period earthquake motion given the geology of the DCP site. The DCISC team concluded that PG&E is appropriately accounting for the uncertainties that are included in the analyses and that the analyses capture state-of-the-art knowledge and use of magnitude saturation is appropriate when characterizing the ground motion at the site. **Overall, Mr. McWhorter stated the DCISC team concluded the seismic PRA process is proceeding satisfactorily and the Committee should continue to follow the activity in the future and that the use of magnitude saturation for short period ground motion is appropriate.**

➤ Tsunami Hazard Analysis Update - in February 2016 PG&E provided a detailed presentation on its analysis of the tsunami hazard and in June 2016 DCISC Consultant Dr. Robert T. Sewell gave an independent evaluation and his opinion on PG&E's tsunami analysis. During the fact-finding Dr. Budnitz pointed out that PG&E's work did not include a probabilistic analysis as recommended by Dr. Sewell but that Dr. Budnitz believes that an alternative might be a bounding analysis which could be performed if PG&E did not believe a probabilistic analysis was appropriate. A bounding analysis would involve making certain assumptions about a worst case tsunami and calculating a bounding core damage frequency based on known information on

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equipment, structures and buildings at the plant site. Mr. McWhorter stated PG&E is of the opinion that there are many ways to approach this problem and PG&E believes the analyses that have been done provide enough added uncertainty to account for all the differences and models and therefore PG&E's current model is adequate. PG&E acknowledges there is uncertainty on the issue of submarine mass failure induced by an earthquake offshore but asserts the assumptions made in the PG&E analysis are appropriately conservative and PG&E has a high level of confidence that all possible effects from both near and far offshore submarine landslides on the DCPD site have been considered and assessed. PG&E believes that even assuming a tsunami exceeds the 85' elevation of the plant site, the likelihood of core damage from such an event is small, particularly with the additional protection afforded by FLEX equipment. The PG&E representatives stated they do not believe enough information exists but agreed to consider engaging in additional analysis which could include a bounding analysis suggested by Dr. Budnitz. **The fact-finding team recommends that the DCISC follow up on that assessment and the team included in its report what Mr. McWhorter described as a generically worded recommendation that PG&E proceed with doing additional study of submarine landslide induced tsunami hazards at DCPD and its environs.**

The Chair then asked for public comment on Mr. McWhorter's report on the August 10-11, 2016 fact-finding visit.

Mr. John Geesman on behalf of the Alliance for Nuclear Responsibility was recognized. Mr. Geesman stated he was disappointed that the fact-finding did not include a meeting with the individuals involved with the issue of the appropriateness of the use of magnitude saturation for short period ground motion in the seismic PRA but that he looked forward to reviewing the email included with the Fact Finding Report. Mr. Geesman stated he understood Mr. McWhorter's report to endorse PG&E's conclusion and methodology that, despite the low volume of data regarding near-field earthquakes, the assumption regarding the effect of magnitude saturation on ground motion at the plant site is sufficient and therefore this leads to the conclusion that an earthquake above a magnitude 6.5 would not materially contribute to ground motion at the plant site and he requested confirmation in context of approval of the Fact Finding Report that each of the DCISC Members concur with that conclusion and were prepared to tell the public they didn't need to be concerned about earthquakes over a magnitude 6.5.

Dr. Budnitz responded and remarked there is a lot of uncertainty in the technical analyses and PG&E assigned an uncertainty to its analysis so that the work incorporates the low and the high ends of that uncertainty and this is carried forward in the remainder of the analysis. PG&E then had experts involved to review that its analysis appropriately accounted for the large uncertainties. Dr. Budnitz stated that in approving the Fact Finding Report the DCISC would be accepting the analysis done by PG&E as appropriately capturing the current state of knowledge, a state of knowledge that has very broad uncertainties. Dr. Budnitz commented that narrowing these uncertainties will require monitoring data from more earthquakes. As to earthquakes in excess of 6.5 magnitude, Dr. Budnitz stated the ground motion input to the plant site has a spectrum of sizes and these appropriately capture the full range of the technical communities'

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judgment on the uncertainties. Dr. Budnitz, in response to Mr. Geesman's inquiry as to the material change in probabilistic risk to the plant from a magnitude 7.0 or greater earthquake, stated that according to the PG&E analysis such an event would not produce motion at the plant site materially greater than a lesser earthquake. This is because of the nature of the way the energy produced by an earthquake moves through the soil, with resulting attenuation and frequency shifts and Dr. Budnitz stated, in response to Mr. Geesman statements, that although he (Dr. Budnitz) is not a seismologist he agreed with PG&E's analysis, together with the seismic community as a whole, as the technical analysis captured the broad range of the uncertainties. Dr. Lam observed, and Dr. Budnitz agreed, that the August 2016 Fact Finding Report should not be read as a consensus endorsement by the entire DCISC but as the best technical judgment of Dr. Budnitz and Mr. McWhorter. Dr. Budnitz commented there are seismological models that assess the effects of earthquakes around the world and these models have been benchmarked, tested and validated against observed data by the South California Earthquake Center. In response to Mr. Geesman's question as to how many observed data points exist within one kilometer of DCP, the Shoreline Fault being located less than one kilometer from the plant, Dr. Budnitz stated he believed there were 15 such data point recordings within one kilometer, 63 recordings within five kilometers, and 308 recordings within ten kilometers. Dr. Budnitz observed that 15 recordings are sufficient to support the PG&E analysis with uncertainties assigned on the basis of this low number of recordings.

Dr. Gene Nelson was recognized. Dr. Nelson stated he has a Ph.D. in radiation biophysics and has taught at Cal Poly and Cuesta Community College and he currently serves as the Central Coast's government liaison for the group Californians for Green Nuclear Power which advocates for the continued safe operation of DCP. Dr. Nelson remarked there is a human trait to exaggerate the risk of low probability events and nuclear power is by far the safest form of energy generation when measured by deaths per terawatt hour generated. Dr. Nelson observed because DCP is located on the plate boundary between the Pacific Plate and the North American Plate, the underlying strata are very broken up with numerous historical faults which tend to sharply attenuate the effects from earthquakes and he is annoyed when what he characterized as fear-mongers exaggerate the risk of earthquakes. He remarked that Dr. Sewell's 2003 Study of the tsunami hazard and risk at DCP was never accepted by the NRC because Dr. Sewell's analysis was found to be beyond the state-of-the art which, Dr. Nelson stated, meant that Dr. Sewell's analysis was speculative. He closed his remarks by expressing his hope that the DCISC would focus on an evidence based as opposed to an emotion based approach to nuclear power in California.

Ms. Sherry Lewis of MFP was recognized. Ms. Lewis stated that she understood from Mr. McWhorter's report and Dr. Budnitz' comments that there exists large areas of uncertainty and that based on capturing this uncertainty a certain level of confidence is created. Dr. Budnitz replied that there exists a low end as well as a high end to the current state of knowledge which provides an estimation of the parameters for ground motion, with the high end being more dangerous in some qualitative way, then if overall safety is satisfactory to the technical community as a whole, given the high end, there is a level of satisfaction and a judgment

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possible. Mr. McWhorter remarked that although there is not as much data within one kilometer of the plant site as in other locales, as uncertainty is added to the analysis along with global data, this allows the expert community to review the issue. Ms. Lewis observed that there were only data from two major earthquakes in the vicinity of San Luis Obispo and Dr. Budnitz stated that the transference of that data is a major piece of determining the uncertainties.

Dr. Alexander Cannara was recognized. Dr. Cannara stated the 5.8 magnitude earthquake in the vicinity of the North Anna Nuclear Generating Station in Virginia had its epicenter only eleven miles from the plant and there was no damage to the station as a result of the earthquake. He further observed that in 2011, during the Tohoku 9.0 magnitude earthquake in Japan all 40 nuclear reactors that were operating at the time of the earthquake shut down successfully and an earthquake of that magnitude is not really possible at DCPD given the geology of California. He stated that speaking as an engineer and a statistician the shapes of DCPD's structures are known to be the most robust, stable and strongest. Dr. Cannara commented the Onagawa Nuclear Power Plant in Japan was closer to the 9.0 magnitude Tohoku earthquake than any other nuclear plant and experienced a larger tsunami than any other nuclear plant and survived to such a degree that it was able to house hundreds of refugees who were made refugees not by nuclear power but by the Japanese government's land use policies. Dr. Cannara observed that when science does not understand how something works probabilistic analysis is used. Dr. Budnitz responded and stated that probabilistic analysis is used when science does understand and probabilistic descriptions are the correct and appropriate descriptions of events, such as earthquakes, which have a probabilistic spectrum of frequencies. Dr. Cannara closed his remarks with the observation that there needs to be more common sense applied and there is no need to exploit fear.

Dr. Budnitz closed the discussion of this topic and reported that in the 1980's when PG&E performed the initial seismic PRA for DCPD as part of a study termed the Long Term Seismic Program, that work was considered to be the "gold standard" PRA of its time and the approach PG&E used for its seismic PRA analysis was emulated around the world. That work is now dated but Dr. Budnitz stated that he suspects the new PRA is not going to be much different from that performed originally. He stated that PG&E's prior PRA work did not conclude that core damage at DCPD from an earthquake was impossible rather, to the contrary, the PRA quantified possible core damage to around 10^{-5} per year with a spectrum of uncertainty and the NRC judged this to be an acceptable level. The new work PG&E is undertaking will be reviewed by the community of experts and it will determine whether that number has changed but Dr. Budnitz remarked this change isn't going to be a significant change and it will continue to be the best understanding of the likelihood of core damage from a seismic event at DCPD and he closed his remarks by stating the question of whether the likelihood of core damage is acceptable is also a question within each citizen's judgment.

Based on the Members' direction to further review the recommendation contained in the August 10-11, 2016, Fact Finding Report, approval of the report was initially deferred until later in the public meeting. Following the discussion on the tsunami hazard risk analysis (see below),

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upon a motion by Dr. Peterson, seconded by Dr. Budnitz the August 10-11, 2016, Fact Finding Report, with the recommendation that PG&E should perform additional study of the submarine landslide induced tsunami hazard, was approved and its transmittal to PG&E authorized.

A short break followed the discussion of the August 10-11, 2016, fact-finding visit.

XIII INFORMATION ITEMS BEFORE THE COMMITTEE

Current Status of PG&E's Review of the Tsunami Hazard and Risk at DCPD and its Environs Including a) plans for future study of landslide-induced tsunami risk, and b) feasibility of performing additional probabilistic-based analysis of tsunami risk.

The Chair reported that PG&E has informed the Committee that it is not prepared at this time to make a presentation on its review of the tsunami risk and analysis.

XIV INFORMATIONAL DISCUSSION BY THE COMMITTEE

The Chair recognized the presence at the meeting of Mr. Cary Harbor, PG&E Director of Generation Compliance, Risk and Business Planning and Mr. Jearl Strickland, PG&E Interim Vice President of Generation Technical Services.

DCISC Comments on Tsunami Hazard and Risk at DCPD and its Environs.

The Chair remarked the Committee would be reviewing plans for future study of the risk of landslide-induced tsunamis at DCPD and the feasibility of performing additional risk-based analysis and Dr. Budnitz observed that Mr. Strickland and Dr. Brendan Dooher of PG&E's Geosciences Department were present and available to respond to questions.

Dr. Peterson reported the DCISC has reviewed information on tsunamis that could be generated from local submarine landslide events and these events are known to have happened periodically along and offshore of the coastal areas of California and that the hazards and risks associated with these events remain uncertain and, in Dr. Peterson's judgment, more study is needed which is the recommendation made in the August 10-11, 2016 Fact Finding Report reviewed earlier during this meeting by the Committee.

At the last public meeting of the DCISC in June 2016 Committee Consultant Dr. Robert Sewell also made some recommendations for further study. Dr. Peterson remarked that he believes the data and seismic imaging of offshore sediment collected during the cruise of the *R/V Bartlett* in the 1970's is amongst the most important pieces of information available. This data show over the last 2,500,000 years at least 44 submarine landslide events have occurred and it would be worthwhile to further study these events from the perspectives of estimating volumes of sediment involved and to compare in terms of the proxies used in the most current modeling, frequency of occurrence, and the potential resulting wave run up. Dr. Peterson noted that events

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which have occurred offshore from Monterey to Santa Barbara appear to be unconnected but to have very similar depths and a hypothesis has been developed that these instabilities may involve sea level changes and Dr. Peterson noted that although sea level has been stable for about 10,000 years mankind appears to have the technical capability to end that period of stability and understanding the correlation of the risk of sea level rise on undersea landslides would be helpful. Dr. Peterson closed his remarks by stating that while it is important to understand the risk of tsunamis on safety-related equipment at the plant site, including the Auxiliary Saltwater System (ASW), it is also vital in terms of the impact on the local communities which provide ingress and egress to the plant and where people live and work.

Dr. Budnitz began his remarks by stating while he is not an expert in tsunami analysis the community of experts does not understand as much as they would like about the sources of tsunamis which could be produced at DCPD by undersea landslides and there is uncertainty about the location and the spectrum of sizes of tsunamis that might be produced. Dr. Budnitz observed that due to environmental regulations the methods of data collection used on the *R/V Bartlett's* cruise could not be used today. Dr. Budnitz stated he has three recommendations and would discuss each in turn.

Dr. Budnitz first recommendation is that PG&E's team should work as hard as they can to understand as much as they can about the sources of landslide-induced tsunamis offshore in the area of DCPD including locations, the spectrum of sizes of tsunamis which could be produced, the size of the possible areas where a slump could occur, and the relative likelihood of occurrence or some sort of relative probability of occurrence. He stated he was not recommending a full probabilistic tsunami hazard analysis in accordance with the process established by the Senior Seismic Hazard Analysis Committee (SSHAC).

Dr. Budnitz stated his second recommendation was that PG&E should try to understand what the different models of propagation from the source to the shore provide. Dr. Budnitz stated in his discussion with Dr. Dooher, Dr. Dooher indicated that it was Dr. Dooher's opinion, based on the evidence, that the differences between the models were not great and Dr. Budnitz remarked that Dr. Sewell in his comments in June 2016 also spoke to the importance of assessing model variability and to determine why various models might differ. Dr. Budnitz observed legitimate differences are possible between such models and understanding the differences is a very important piece of understanding but if the model variability used for propagation isn't great then it is appropriate to use PG&E's model, developed by Dr. Stephan Grilli, as a surrogate, together with capturing some variability, for the whole field of models.

Dr. Budnitz stated his third recommendation goes to a point raised by PG&E that it might not be possible to do a probabilistic-based analysis. Dr. Budnitz suggested that it could be possible to develop postulated tsunamis of differing heights and then to assess, based on the height of the wave, what plant equipment might be damaged and, given that damage the probability that core damage could occur. Dr. Budnitz stated that in context of PRA this is termed the conditional core damage probability (CCDP) and CCDP is represented by a frequency not a number. He remarked that if the product of the multiplication of the number

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produced by a rough estimate of CCDP for tsunamis of varying heights times the rough annual frequency is a low number then this produces a relative assurance of safety that the plant is safe from that event. Dr. Budnitz stated in his opinion there is likely not enough data to justify engaging in a SSHAC Level 3 analysis. Dr. Budnitz further observed that with the presence of FLEX equipment at the plant the CCDP is lower today than it was five years ago as FLEX equipment is designed to protect against the extended loss of power and the extended loss of the heat sink. Dr. Budnitz recommended that PG&E review his first and third recommendations with the PRA Group at the plant and work on the issue of model variability. He stated that his recommendations supplement the statements made previously by Dr. Peterson. Dr. Budnitz remarked that he believed an analysis based on his third recommendation might prove to be the most fruitful approach for PG&E, the DCISC, the NRC, and the public to come to an understanding of whether, in fact, the submarine landslide induced tsunami issue does or does not present a safety issue worthy of substantial additional work.

Vice President Strickland was recognized. Mr. Strickland described the tsunami analysis undertaken and completed by PG&E to date as representing a very conservative, deterministic, approach to the potential hazard to the plant. PG&E is presently awaiting the initial response and independent analysis by the NRC, expected by the end of 2016. He reported that following the August 10-11, 2016, DCISC fact-finding PG&E began to assess what additional work might be performed. He reported that the matter was reviewed in terms of a reverse engineering approach which assumes a tsunami with a run up exceeding the 85-foot elevation of the plant and then puts that into the model to determine the locations for a submarine landslide capable of producing a tsunami wave of that size and then to determine whether there is adequate mass within a proximity to that location to serve as a source to drive a tsunami wave of that magnitude toward the plant.

In assessing the problem from a CCDP perspective Mr. Strickland observed the first question is to determine at what level of tsunami wave height the ASW System becomes impacted. This can be assessed by determining the height of a wave that would exceed the design of the ASW System snorkels, or to simply assume that the wave causes the loss of the ASW System, and then assess the CCDP in that event, with the information on the deployment of FLEX equipment, and that this is an analysis that can be done at the present time with no additional data. He stated the real question, however, to get to the beyond design basis issue and to bound the issue, is to determine the size of the submarine landslide required to produce an event which would have the resulting wave exceed the 85-foot elevation of the plant and then to take the confirmatory step to determine, based on the configuration of the continental shelf or the underwater area closer to the plant, whether there is sufficient mass to generate such an event. Mr. Strickland stated Dr. Dooher and his team were now in the process of studying this issue and the potential locations offshore, including those identified and used in the models, which have been discussed and other locations and more research is needed to address this problem and to determine if more analysis beyond what is currently required by the NRC is necessary. Mr. Strickland stated PG&E and DCPD are taking the input of the DCISC seriously and continue to

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review the matter and should be in a position to provide a report to the Committee on their progress at its next public meeting in February 2017.

Dr. Abraham Weitzberg was recognized. Dr. Weitzberg noted the tsunami hazard has risks not only for DCPD but for its environs. He reported that as a result of the accident to Fukushima two people drowned in the plant's turbine building while 20,000 died as a result of the tsunami and earthquake. He stated that while he has worked in the nuclear power field for many years he does not have a feel for core damage probabilities or frequencies and he described those concepts as rather esoteric. Dr. Weitzberg wondered whether it would be possible to assess the impact on human health as a result of a tsunami, aside from physical damage to roads and access to the plant site, as their return frequency is not known. He stated that focusing on damage to the plant may have some health effects but in the intervening years we are accepting much more highly probable death and damage to the neighboring communities and an effort should be made to translate this to human consequences.

Dr. Gene Nelson was recognized. Dr. Nelson stated he appreciated the data discussed by Dr. Peterson on the *R/V Bartlett* survey and Dr. Nelson said he performed a quick calculation which indicated the average recurrence interval for a submarine landslide would be 56,818 years and he described this result as indicative of a low probability event. He observed that the National Oceanic and Atmospheric Administration (NOAA) has data on tsunamis produced from areas near South America which show the differences in wave heights at certain points and this could be used to quickly develop a propagation model and that this issue is not similar to the problems encountered in dealing with sub surface strata in assessing the effect of seismic events.

Dr. Alexander Cannara was recognized. Dr. Cannara stated that tsunami height is determined by the volume of water and the shape of the sea floor as the wave approaches the coastline and to estimate wave height based on submarine induced landslides is difficult, but there is data available and in particular data from the 1964 Alaska earthquake which was an extreme continental subduction fault event which affected the Western North American coastline.

Response to Question Posed by the California Energy Commission Technical Representative to the CPUC Independent Peer Review Panel (IPRP).

The Chair requested Assistant Legal Counsel Rathie to report to the Committee on this topic. Mr. Rathie reported the Committee has not yet had the opportunity to work with Dr. Sewell and, as he reported previously, Dr. Sewell has recently terminated his prior association with Structural Integrity, Inc. and therefore a new agreement is required to permit Dr. Sewell to address and resolve Dr. Maurath's question.

XV INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

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The Chair requested Mr. Harbor to introduce the first of the informational presentations for this public meeting. Mr. Harbor introduced DCPD Emergency Preparedness Manager Michael Ginn and reported Mr. Ginn has more than 30 years' experience in the nuclear industry and of that 25 years is within the specific area of emergency planning.

Update on Emergency Preparedness Programs and Preparations for the November 2016 Evaluated Exercise.

Mr. Ginn reported he would be providing an update on DCPD's Emergency Preparedness Program and the readiness measures being undertaken in preparation for the November 2-4, 2016, evaluated emergency exercise which will be attended by observers from the DCISC. Mr. Ginn stated that each year focus areas related to public and employee safety are identified within the Five-Year DCPD Business Plan for the four DCPD emergency response teams and reserve personnel. This includes the development of challenging drills and exercises. For 2016 the Emergency Response Organization (ERO) is focused on benchmarking, self-assessment, and independent peer review activities as well as on preparations for the NRC-evaluated November 2016 exercise which is also to be evaluated by the Federal Emergency Management Agency (FEMA).

Mr. Ginn displayed photos of PG&E's emergency response facilities in San Luis Obispo and reported these facilities are collocated with the County of San Luis Obispo, as well as with state and federal responders, to provide for face-to-face interaction. He observed that preparation and training for drills includes numerous activities which takes hundreds of hours to prepare, implement, conduct, and critique and these activities are given a high priority by the station. Mr. Ginn reported that a FEMA-evaluated medical drill was conducted earlier this year which included evaluation of ambulance response as well as integration with the DCPD Fire Department's response.

Mr. Ginn called the DCISC's attention to the power point slides with the performance indicators tracked relative to the Emergency Preparedness Program including drill and exercise performance and stated that hundreds of DCPD employees have emergency response roles and he reported DCPD has achieved performance within the top quartile within the nuclear power industry relative to the rolling average for participation by its personnel. In response to Mr. Wardell's inquiry as to whether a common cause existed for not reaching 100% participation Mr. Ginn replied that performance on the rolling average is also evaluated with regard to performance in classifying events, notifying offsite agencies, making protective action recommendations and performing radiological dose assessment and no single thread has been identified for performance levels which fail to achieve 100% in any category. In response to Consultant McWhorter's question concerning the potential effect of the Joint Proposal on staffing of the four emergency response teams Mr. Ginn replied that DCPD is reviewing this issue and closely monitors and evaluates key ERO turnovers and regularly provides information to senior plant leadership. ERO vacancies are closely monitored to ensure available candidates are trained and qualified through participation on a reserve ERO team and ERO vacancies are

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entered into the Corrective Action Program. Mr. Ginn reported ERO metrics are now in White and Green programmatic health status and he reported the plant has discussed the possibility of reducing to three, rather than the current four, ERO teams in order to continue to build up a reserve of qualified personnel and Mr. Ginn remarked the more personnel involved in ERO activities, the harder it is to keep teams trained and qualified. Mr. Harbor reported that a significant number of employees have now signed up for the PG&E retention incentive program and the plant should have a relatively stable staff for some period of time but PG&E is continuing to assess personnel issues and to evaluate staffing needs, particularly at the conclusion of the first retention agreement and this evaluation could result in hiring ahead of attrition for key positions within the ERO and Operations departments.

Mr. Ginn reported the NRC also evaluates readiness and performance of the equipment and facilities of the alert and notification siren system (ANS) which is reported to the NRC every quarter. He stated since the ANS System was upgraded DCPD has achieved 100% on this metric for ten consecutive years. He reported the annual siren test is also used as a community outreach and educational tool in the local community.

Mr. Ginn reported on the focus areas for the ERO training and drills which include benchmarking with other nuclear facilities and independent peer review and self-assessment. This involves DCPD personnel visiting other nuclear facilities and personnel from those sites visiting DCPD to review ERO-related documentation, drills, exercises, training programs, equipment and facilities. The November 2016 evaluated exercise will also include participants from state and federal agencies including a team from the Federal Radiological Monitoring Assessment Center. He reported DCPD has been working for more than one year in preparation for this three-day exercise. The first day of the exercise will include an emergency event scenario with postulated consequences for both on site and off site areas and a demonstration of all the plant's emergency response facilities with all personnel fully activated. Mr. Ginn estimated that more than 500 persons would be involved in participating and evaluating the November 2016 evaluated exercise. The second and third days of the exercise will involve assessment of the ingestion pathway, protective action decision making, recovery processes for state and federal agencies, and demonstrations by recovery and field teams. The exercise also includes the involvement of multiple counties including the Counties of San Luis Obispo, Santa Barbara and Monterey. In response to an unidentified comment Mr. Ginn reviewed the various emergency planning zones which are required to surround nuclear facilities to protect the health and safety of the public including the 50-mile food sampling ingestion protection zone for agricultural processes.

Mr. Ginn concluded his presentation by reporting that senior plant leadership is fully engaged in review of the readiness of the station for the November 2016 evaluated exercise and the integration of the onsite and offsite controller inspections and evaluations, including the FEMA evaluator briefing of a team of more than 25 FEMA evaluators from NRC Region 4. He closed his remarks by reporting that tomorrow is the annual event known as the Great Shake-Out Drill used to prepare the public and responders for earthquakes.

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The Chair thanked Mr. Ginn for his presentation.

Mr. Harbor then introduced DCPD Manager of Regulatory Services Mr. Hossein Hamzehee to review current plant performance. Mr. Harbor reported Mr. Hamzehee has more than 30 years' experience in the nuclear field most of which was with the NRC.

Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Notices of Violation, and Issues Raised by NRC Resident Inspectors.

Mr. Hamzehee stated in his presentation he would be covering the last four months, that is, the period July - October 2016, which he described as a heavy inspection period requiring approximately 3,500 hours of inspector time by the DCPD resident inspectors and NRC Region 4 inspectors. During this time all NRC performance indicators meet NRC "Green" performance expectations and DCPD received three violations of very low safety significance since the last DCISC public meeting and submitted one licensee event report (LER) to the NRC during that period.

Mr. Hamzehee reviewed a slide with a chart which summarized the NRC Performance Indicators that all nuclear stations report to every quarter. The NRC audits and assesses the accuracy of these reports. Mr. Hamzehee stated that DCPD continues to meet all NRC performance indicator thresholds. The NRC Performance Indicators, which are also available to members of the public on the NRC's website, include:

- Unplanned Scrams per 7000 Critical Hrs
- Unplanned Power Changes per 7000 Critical Hrs
- Unplanned Scrams with Complications
- Safety System Functional Failures
- Mitigating Systems Performance Index, Emergency AC Power System
- Mitigating Systems Performance Index, High Pressure Injection System
- Mitigating Systems Performance Index, Heat Removal System
- Mitigating Systems Performance Index, Residual Heat Removal System
- Mitigating Systems Performance Index, Cooling Water Systems
- Reactor Coolant System Activity
- Reactor Coolant System Leakage
- Drill/Exercise Performance
- ERO Drill Participation
- Alert & Notification System
- Occupational Exposure Control Effectiveness
- Radiological Effluent Occurrence

Mr. Hamzehee reported LER 2016-001-00 was issued by PG&E for U-2 during its last refueling outage as a result of a reactor trip, breakers having been manually opened during shut

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down due to a control rod movable gripper fuse failure. Because the digital rod position indication system indicated a difference in rod position with actual demand, procedure required the reactor breakers to be opened. A root cause evaluation found the control rod moveable gripper fuse was burnt out. Procedures were enhanced so that in the future before getting to that step the fuses will be checked and replaced if necessary.

Mr. Hamzehee provided a summary of the key definitions used in the NRC inspection process and reported licensee safety significance is characterized as either Green (very low), White (low to moderate), Yellow (substantial), or Red (high) safety significance and described:

- Finding: as a performance deficiency of more-than-minor significance affecting a quality-related equipment or process. A finding may result in a violation. .
- Non-cited Violation (NCV): as a method for positioning a severity level IV violation or a violation associated with a finding characterized as Green (very low safety significance with no impact to public health and safety but which does involve performance).
- Notice of Violation (NOV): as a formal, written citation in accordance with 10 CFR 2.201 that sets forth one or more violations of a legally binding regulatory requirement. NOVs require a written response by the plant within 30 days.

Mr. Hamzehee reported there have been three NCVs and a preliminary White finding since last DCISC public meeting. All three NCVs were determined to be “Green” with very low safety significance with no impact to public health & safety

- Non-Cited Violation (NCV) (Green) – The Problem Identification and Resolution Inspection identified a Green NCV based on two examples of inadequate maintenance procedures. (Cross-Cutting (C-C) Aspect H.5 Work Management.)
- NCV (Green) – NRC Resident Inspectors issued a Green NCV for a fuel assembly placed in an incorrect location in the U-2 Spent Fuel Pool. This was inconsistent with the plan but the grid space was analyzed by the Reactor Engineering and found to be within the acceptable range. (C-C Aspect H.12 Avoid Complacency.)
- NCV (Green) – Failure to follow a non consequential commitment within the DCPD Security Plan during the September force-on-force drill. This is safeguarded information and cannot be discussed in public. (C-C Aspect H.11 Challenge the Unknown.)
- Preliminary Finding (White) – For a failure to provide adequate instructions for limiting the travel of external interlock limit switches on safety-related motor-operated valves. (No C-C Aspect.) Low to moderate safety significance for which the NRC has not yet finalized its determination. The DCISC will receive further information on this issue during this public meeting.

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Mr. Hamzehee reviewed the NRC inspection reports issued during the July-October 2016 period as follows:

Security Inspection Report (2016-405 07/15/16)
2nd Quarter Integrated Inspection Report (2016-002, 08/02/16)
Problem Identification and Resolution Inspection Report (2016-009, 08/26/16)
Mid-Cycle Assessment Letter (2016-005, 08/31/16)
NRC Inspection Report – Preliminary White Finding (2016-010, 10/03/16)

Following Mr. Hamzehee's presentation, Ms. Sherry Lewis of MFP was recognized. In response to Ms. Lewis questions Mr. Hamzehee reported the NCV for inadequate maintenance procedures involved a test in 2015 of Emergency Diesel Generator 1-1 which did not start successfully due to inadequate guidelines in maintenance procedures on how to align the fuel injection pumps and a second occurrence related to inadequate maintenance occurred during 2014 and involved a broken special cap screw on an inlet on an emergency diesel generator for which procedure did not provide sufficient guidance. The NCV for a mispositioned fuel assembly involved a fuel assembly having been removed from the reactor vessel during refueling and being placed in an unplanned location in the spent fuel pool. All grids in the pool are analyzed by the Reactor Engineering organization prior removal of the fuel to understand the residual heat produced by the assemblies. The assemblies are then placed in their preplanned locations, however, one assembly was placed in an incorrect location and, although that location had previously been analyzed as acceptable, it was not the location planned for the assembly.

Dr. Budnitz remarked that the June 2016 DCISC public meeting coincided with the NRC's annual meeting in the local San Luis Obispo area and he requested that the office of the Committee's Legal Counsel inform the NRC's Senior Resident Inspector of the dates of June 7-8, 2017, for the June 2017 public meeting of the DCISC so that the NRC might consider the dates of the DCISC's public meeting if and when the NRC sets the date for its June 2017 public meeting in the local community so that persons interested may be able to attend both meetings. Mr. Rathie remarked that he has been informed that the CPUC Independent Peer Review Panel (IPRP) may also be planning to schedule a meeting in San Luis Obispo in June 2017 and the IPRP liaison has been provided with the dates for the DCISC June 2017 public meeting.

Dr. Gene Nelson was recognized. Dr. Nelson observed that the CPUC will be conducting a public outreach meeting on the Joint Proposal tomorrow at the San Luis Obispo Botanical Garden's Auditorium and there is some conflict between that meeting and the DCISC's scheduled public meeting which is an issue of frustration for the group he represents, Californians for Green Nuclear Power

XVI ADJOURN AFTERNOON MEETING

The Chair adjourned the afternoon meeting of the Committee at 5:00P.M.

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XVII RECONVENE FOR MORNING MEETING

The October 20, 2016, morning public meeting of the Diablo Canyon Independent Safety Committee was called to order by its Chair, Dr. Lam at 9:00 A.M. Dr. Lam welcomed those persons present in the audience and watching the proceedings on live streaming video. Dr. Lam requested any of the members who wished to make remarks to do so at this time.

XVIII COMMITTEE MEMBER COMMENTS

Dr. Budnitz reported that in response to Ms. Swanson's inquiries on the previous day, the correct citations to the NRC regulations regarding pressurized thermal shock are to 10 CFR Part 50.61 and to the most recent regulation at 10 CFR Part 50.61a.

XIX PUBLIC COMMENTS AND COMMUNICATION

The Chair reviewed the invitation to address the Committee on matters not on the agenda for this public meeting and invited any comments from members of the public who wished to address the Committee to do so now. There was no response to his invitation.

XX INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

Dr. Lam requested Mr. Harbor to introduce the first presentation and presenter to the Committee.

Mr. Harbor introduced Director of Strategic Initiatives Mr. Tom Jones to provide an overview of the Joint Proposal.

Joint Proposal for the Retirement of DCPD at the Expiration of the Current Operating Licenses: Summary of Proposal, Approval Process/Status, Plans for Retaining Adequate and Qualified Staffing, Plans for Ensuring Plant Equipment Continues to be Adequately Maintained to Ensure Safe and Reliable Operation, Plans for Review of Major Capital Projects, and DCPD Plans for Participating in the Nuclear Energy Institute Program "Delivering the Nuclear Promise."

Mr. Jones stated he would provide the DCISC with background on how PG&E arrived at its decision concerning the Joint Proposal, how the Joint Proposal would affect the overall energy supply mix, how PG&E intends to make up for the loss of DCPD generation, and would discuss components to the Joint Proposal that affect employees including retention and plans on continuing to safely operate DCPD for nine more years. Dr. Budnitz observed the DCISC's remit is to review operational safety of the plant and the principal interest of the Committee lies in the area of maintaining and assuring the priority of sufficient investment to continue to maintain the safe operation of DCPD rather than in PG&E's plans for its future energy supply mix. Dr. Budnitz also stated that in context of its communications regarding the Joint Proposal it was important that PG&E avoid in its statements and informational materials any confusion about the nature of DCPD as a greenhouse gas-free (GHG-free) energy resource.

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Mr. Jones reviewed PG&E's generation resources which currently make up its power portfolio with DCPD producing 2,240 megawatts on an annual basis which represents 23% of the power PG&E delivered to its customers in 2015. Between the hours of six p.m. and nine p.m. DCPD produced power represented 25% of power PG&E delivered to its customers. He reported PG&E's carbon-free power portfolio is well above 50% although the current drought conditions in California have significantly reduced its hydro generation. Mr. Jones used animation to show the changes in the power delivery system and technologies that have taken place over the last 30 years and stated that PG&E is moving toward price-point signals and different types of transactions along the grid to make up for the reduced role of distributor generation. He reported that with the California Legislature's passage of Senate Bill 350 investor owned utilities must be 50% renewable by 2030 accompanied by a doubling of energy efficiency. In response to Dr. Budnitz' question, Mr. Jones clarified doubling energy efficiency in this context refers to electrical energy efficiency. Dr. Budnitz advised PG&E to make every effort to clearly communicate with the public in delivering its message on energy efficiency, integration of renewables, and energy sources. Mr. Jones confirmed Dr. Lam's observation that, based on the data provided by Mr. Jones, the Joint Proposal would result in PG&E exceeding California's ambitious goal. In response to Dr. Peterson's inquiry Mr. Jones confirmed that community choice aggregation (CCA) power providers will have their own goals but there will be some overlap between the utility, energy efficiency programs and the procurement programs. Mr. Jones reported that there is interest in participating in the CPUC's proceedings to consider the Joint Proposal from energy efficiency groups and CCAs across California.

Mr. Jones reported private solar systems are fundamentally changing PG&E's load and load profile and DCPD power will be replaced initially through three different tranches, or groupings of differing renewable portfolios and through procuring energy efficiency throughout PG&E's service territory, with renewables brought in when overall demand is reduced including through the participation by CCAs. Mr. Jones observed there is a declining need for DCPD in the period which would be afforded by license renewal but not so much declining need in the period of operation under its current licenses from the NRC. **Dr. Budnitz requested and Mr. Jones agreed to have the power point slides used by Mr. Jones in presentation placed on the DCISC's website for public informational purposes.**

Dr. Peterson remarked that, as DCPD relies on offsite power for safety of operations, it will be important to assess whether the Joint Proposal might have an impact or result in a change to reliability of electric supply. Mr. Jones responded that while he did not expect there would be any such effects he would need time to provide an answer to the Committee. Mr. Jones stated that at this time there are no CCAs in the Central Coast area although the Counties of Ventura, Santa Barbara, and San Luis Obispo have authorized funds to explore the feasibility of a regional CCA. In response to Consultant Wardell's question on how much the success of the Joint Proposal will be dependent on purchasing out of state power and whether that power must also be GHG-free, Mr. Jones responded PG&E was obligated to deliver on the renewable portfolio standard per regulation but, in response to Consultant Wardell's inquiry, he stated he was not certain whether this could include purchasing power produced by the Palo Verde Nuclear Generating Station in Arizona although he stated the intent of the Joint Proposal is not to offset DCPD with other nuclear facilities. Mr. Jones responded to Consultant

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Wardell's second question by stating PG&E and the CPUC are moving toward bold energy storage goals, including battery storage, use of vendors, and energy efficiencies which will reduce demand. He remarked that PG&E anticipates changes over time in technologies and is waiting to see what the marketplace may offer.

Mr. Jones discussed the efforts to address the impact of the Joint Proposal and the possible closure of DCPD on the local communities in terms of property tax, PG&E's role in those communities, the continuing need for emergency planning, and PG&E's efforts to retain employees. He reported the Joint Proposal contains \$50 million proposed for local government to offset the effects of the loss of revenue from the closure of DCPD. He stated PG&E is the largest private employer and largest taxpayer in the region, having paid approximately \$27 million in tax in 2014-2015. Mr. Jones observed portions of that tax revenue go to very small local agencies which rely on it for a significant portion of their budgets and PG&E recognizes the need to provide a strong transition period for the different agencies. Mr. Jones reported the Joint Proposal extends PG&E's emergency plan through the duration of the plant's Part 50 License from the NRC and this includes continued financial support for and coordination with the San Luis Obispo County Office of Emergency Services (OES). He remarked that some of the assets which are in place to respond to an emergency at the plant will remain useful in other contexts such as to warn of a tsunami or a wild land fire. These proposals will be included as part of the site-specific decommissioning plan which is scheduled to be submitted to the CPUC in 2019 with community and local government input. Mr. Jones confirmed in response to Dr. Lam's inquiry that DCPD will not change its emergency planning efforts during the operational period for DCPD but once the plant is no longer producing power the risk tends to scale down rather quickly and the proposal will keep the community emergency response plan and level of service in place for the duration of the Part 50 license which will be much longer than the time spent fuel remains in the spent fuel pools.

Mr. Jones reported PG&E is beginning to assemble its decommissioning organization to keep its employees engaged in the process so as to be able to go into active decommissioning in 2025 with a trained workforce. PG&E currently has a decommissioning trust fund of approximately \$2.4 billion and will be seeking an increase in its next CPUC rate case to address the need for out of state shipments, removal of the breakwater, and security costs and has committed to submitting a site-specific decommissioning study by the first quarter of 2018. **Dr. Peterson observed there have been multiple approaches taken to decommissioning in terms of rate and timing and the DCISC will need to review and discuss with its appointing entities whether and to what extent it will engage in a review of PG&E's decommissioning plans for DCPD.**

Mr. Jones reported PG&E has offered a retention program to employees which proposes to pay approximately \$350 million under the Joint Proposal over nine years. The employees accepting the retention package will receive a 25% increase over base pay for a four-year and then a three-year tranche and he reported 86% of DCPD employees have accepted the first tranche of the retention program. PG&E benchmarked this retention effort against those employed by other utilities and structured the offer to avoid large unintended tax consequences and to allow employees to do financial planning. The retention package is prorated for new

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employees and a full company severance package is provided at the end of the license period as well as employee retraining and the potential for placement of the employees elsewhere within PG&E. For the first four-year offering 11% of those not accepting the offer are within one year of retirement. Since announcing the Joint Proposal PG&E has made a number of job offers and 100% of those have been accepted. In response to Consultant McWhorter's question, Mr. Jones reported the proration is prorated based on time remaining within the tranche and the increase remains 25% over base pay for that prorated period. Dr. Budnitz observed that he could see no reason why any new employee would turn down participating in PG&E's retention program. Mr. Jones reported that the 3% of employees who are not within one year of retirement but who did not accept the retention plan are employees who are retirement eligible within two years. Dr. Peterson stated it was encouraging to see the high participation rate but it will be over the second tranche for the three-year period that PG&E should expect to see more questions about retention. Mr. Jones agreed and stated that the results of the retention program offering exceeded the expected results based on PG&E's benchmarking efforts and he emphasized that after operation ceases at DCPD there will be opportunities for employees who are early in their careers to take advantage of opportunities elsewhere within PG&E as it is an integrated utility. In response to Dr. Budnitz' question, Mr. Jones confirmed that within the 14% who have not accepted the retention plan the distribution of those persons across differing disciplines is uniform. Mr. Jones then displayed a graph showing the distribution of retention enrollment by age and by tenure and he observed that as the age reaches 55, the retirement eligibility age, and above the graph identifies those persons who have chosen not to accept the retention offer. Mr. Jones reported PG&E like other industries had a lower than anticipated attrition rate during the economic slowdown which began in 2008.

Mr. Jones closed his presentation with a review of the Joint Proposal, docket number A1608006, which was submitted to the CPUC for consideration on June 21, 2016, and he reported that public participating hearings are scheduled in San Luis Obispo today, October 20, 2016, and that the CPUC is expected to issue a scoping memo and schedule for the proceeding following the public participation hearing.

Mr. Harbor then provided an overview of the Excellence Plan which he described as document developed with input from staff and consultants to assist DCPD in benchmarking and focusing on safe, reliable, operation of DCPD. He described the three major elements of the Excellence Plan as focused on DCPD employees and the organization, on business planning and plant operations, and on decommissioning strategies. Mr. Harbor reported the focus on DCPD employees and organizations includes workforce planning and a recognition that at the end of the first tranche of the retention program some employees may choose or, as Dr. Budnitz observed, be forced by life circumstances to leave employment at DCPD. Mr. Harbor stated there is an element of alignment in this stage to identify what choices the employee may make within DCPD or within or outside of PG&E. Mr. Harbor stated PG&E is focused on maintaining strong plant operations and currently has a portfolio of DCPD projects which goes out to 2020 and there is a review process to assess those projects that may not be chosen to move forward given the Joint Proposal and an executive oversight board and multi-disciplined teams are being formed to oversee that process. PG&E expects to evaluate those projects by the fourth quarter of 2016 for work in 2016 and 2017 and will have appropriate bridging strategies for any projects which are cancelled. Supply train strategies and vendor contracts are also being reviewed to ensure support is provided for the duration of the plant's operational life.

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Mr. Harbor reported the decommissioning phase is broken into preplanning, decommissioning planning, and execution and plant shut down phases and he described the planning process as akin, although much more monumental, to that of planning for a refueling outage. He described the Excellence Plan as a living document which will be adjusted as time and circumstances require. Dr. Peterson observed there are two major decommissioning strategies, the first being where there is rapid disassembly and removal of the plant and the second where the plant is moth balled and left in safe storage for many years before actual decommissioning is completed. He stated that PG&E's strategy for DCPD will be of great interest to the DCISC. Mr. Harbor remarked that by the end of 2017 the decommissioning strategy to be employed at DCPD should be well laid out. Dr. Budnitz stated he was troubled by the fact that many highly skilled experts employed at DCPD can find jobs within PG&E but there are some vital specialists whose skills are necessary only at DCPD, such as those nuclear engineers with reactor physics skills who work in the area of radioactivity of the nuclear cores. Dr. Budnitz observed it is likely going to be very difficult to retain those persons, whose skills are in great demand elsewhere, although some will be needed during and after decommissioning. Mr. Harbor agreed but he observed that at the conclusion of the second tranche there is a significant incentive package to encourage employees to stay through the end of operations. Dr. Budnitz further observed that there is also a "two body" issue, that is, for highly skilled persons in a relationship it is necessary to find two jobs in a relocation situation and this can compound the problem of retaining such persons. **Dr. Peterson remarked that there are also issues related to the timing of spent fuel transfer from wet to dry storage and when the spent fuel pools are decommissioned the plant will lose the capability to open multipurpose canisters for inspection and this led Dr. Peterson to the conclusion that the DCISC should actively review the decommissioning plans for DCPD because of the potential impact on staffing and future options with respect to managing spent fuel and an item should be added to the Open Items List for the purpose of reviewing decommissioning activities.**

Dr. Budnitz remarked that as plant closure draws near it is unlikely that PG&E will decide to make significant major investment in DCPD and these decisions would be different if the plant was intending to continue operations. He stated that the public deserves to be assured that such decisions will not result in a safety compromise and that this situation is very likely to come up and PG&E needs to be thinking and planning for the fact that inevitably a compromise might escape attention despite close scrutiny and that safety will not be as robust during the final years of operation as it otherwise would have been. Mr. Harbor replied that PG&E has a solid record of making decisions related to DCPD with the safety element paramount in ensuring DCPD's ability to run reliably and he gave the example of the main generator project as an item currently under review as a safety issue. Dr. Budnitz replied that while he accepts Mr. Harbor's assurances he remains concerned whether decisions that will make sense as the plant prepares to cease operations can produce as much safety during that period as would otherwise be the case if the plant were to run for a longer period.

The Chair called for public comment and recognized Dr. Abraham Weitzberg.

Dr. Weitzberg remarked that PG&E has not been known as a benevolent organization and the voluntary closure of DCPD has to do with financial reasons and there is an inherent conflict present as PG&E is asking its ratepayers to pay for costs PG&E has identified in the Joint

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Proposal including items in referred to in Dr. Budnitz' comments about necessary work being accomplished despite the plant's closure date and despite the cost. Dr. Weitzberg observed that there may be alternate modes of operation available to DCPD which would not compromise safety of operations such as degraded power, or flexible power operations, which should be considered in the last years of the plant's operation. He remarked that PG&E's ratepayers are also being asked to pay for salary incentives to PG&E's employees and the impact on the ratepayers should be fully considered.

Mr. Michael Graves was recognized. Mr. Graves stated he has been involved with local government for 40 years, including as a planning commissioner, and he remarked the comments about the differences between electrical energy and other types of energy is important to remember. Mr. Graves stated the negative impacts associated with energy production tend to dissipate as the distance from the production facility increases. He stated he would remain interested in the overall safety issues associated with DCPD and he appreciated that PG&E has proposed a program for closing DCPD over a nine-year period. He remarked he was involved with DCPD in the 1970's in reviewing safety between the plant and the County Sheriff's office and he intends to remain involved and will be looking for safe operations in the near term but his focus will be on the long term positive impact of DCPD.

Mr. William Gloege of Santa Maria, CA, was recognized. Mr. Gloege stated his interest was in maintaining the clean air and reduction of global warming effects that DCPD produces. Mr. Gloege observed a final decision to close DCPD has not been made and the plant is a benefit to the environment. He encouraged the DCISC to expand its inquiry into the threat posed to human safety by closure of DCPD as there will be more carbon produced and in the air as a result. He observed the warnings about nuclear power have not proven accurate and he remarked that PG&E is looking to make a huge amount of money through the closure and purchase of renewable equipment from which they will benefit and PG&E is responsible to its investors and not to the environment. He asked that the DCISC not roll over for the corporation as was done with the banking industry as the issue involves the destruction of the environment and the resulting threat to human safety and in the Committee's review of safety it should recognize that closing a nuclear plant also represents a threat to human beings and to the planet. In response to Mr. Gloege's inquiry, Dr. Budnitz confirmed that start up and shut down of the plant is within the Committee's remit, principally to protect the workers and the public from a radiological release but that this responsibility does not extend to the issues Mr. Gloege raised in his comments. Mr. Gloege closed his remarks by asking that the DCISC not interpret its mandate in a narrow fashion as he stated people were depending on the DCISC.

Dr. Alexander Cannara of Menlo Park, California, was recognized. Dr. Cannara asked that the DCISC not use any of the materials used by Mr. Jones during his presentation on its website. Dr. Cannara stated that closing DCPD was akin to replacing a limb with a prosthetic device which would not be as good as the original but he observed that PG&E can go to the CPUC and attempt to get a rate increase for its prosthetic devices to replace DCPD. He remarked the Joint Proposal does not provide any guarantee that the clean energy produced by DCPD will be replaced by energy equally as clean but it does guarantee that a rate increase will be requested. Dr. Cannara observed that some of the Joint Proposal's signors do not appear to really understand energy and environmental issues but PG&E surely does understand the

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implications of shutting down what represents 20% of its electrical sales. Dr. Cannara stated that the Joint Proposal violates the ethical rules adopted by the CPUC and makes unscientific, counterfactual, statements about what can be done to replace DCPD which has represented a safe, reliable, clean, electrical generation source that can run for decades more and therefore the Joint Proposal is flawed. He reported Citizens for Green Nuclear Power has filed a Protest to the Joint Proposal with the CPUC. He observed that the laws governing community choice aggregators and community choice energy providers do not provide for their regulation by the CPUC and those entities are afraid of CPUC regulation. He stated the environment under which the Joint Proposal is to be considered is politicized regarding the fees that community power providers are being asked to pay for opting out of PG&E service and community choice aggregators and community choice energy providers are reluctant to participate in CPUC proceedings due to the fear of triggering CPUC interest in their regulation. He further observed that there is no way those entities can audit their energy supply sources to ensure they are emission free as there is an issue of what is termed “green washing” in which emissions claimed to be GHG-free are not actually GHG-free and it is naive to believe that the green energy that is being supplied by community choice aggregators and community choice energy providers is actually GHG-free whereas with DCPD there is no question that its energy is GHG-free. He closed his remarks by stating there is no reason for PG&E to shut down DCPD other than to make money.

Ms. Sherry Lewis of Mothers for Peace was recognized. Ms. Lewis stated that DCPD is engaged in “green-washing” because the GHG emissions which are produced in making fuel for the reactors by refining uranium are not taken into account. Ms. Lewis observed that the amount of money PG&E has spent in correcting problems at DCPD from its inception and the amount of money that will be required to store the waste produced must be paid and if one speaks about cheap electricity those amounts need to be taken into account. Ms. Lewis stated that PG&E as a corporation did not think of safety first when it made the decision to not properly inspect the gas pipes that led to the explosion in San Bruno, California, in which several people were killed. She remarked in that instance PG&E was thinking only about money.

Dr. Budnitz stated the Charter of the DCISC is to review operational safety at DCPD and to advise, comment, and make recommendations and therefore the Committee is not empowered to review or opine about the composition of the electric grid or generation in the rest of California nor is the issue of whether the CPUC will take certain actions affecting PG&E’s profit. **Dr. Peterson stated he appreciated public’ input and remarked that operating the plant during its final years of operation in different modes, such as reduced power, is something that merits investigation.** He observed the general practice as a nuclear plant approaches shut down is to allow power to decline because you can extract more energy out of the final fuel load by so doing. **He stated it would be appropriate for the DCISC to review the question of alternative operating loads and, in particular, the plans for the final two years of operation. He also commented that the issue of whether the CPUC will fully fund all proposed work on DCPD is an issue on which the DCISC should maintain some cognizance.** Dr. Peterson remarked that the issue of the impact of the decisions to be made on the environment and on public health, security, and the issue of the production of waste although they represent extraordinarily important issues do not fall within the scope of the Committee’s Restated Charter from the CPUC. He commented those issues need to be addressed in the proper forums, whether with the CPUC, the Legislature, or elsewhere and Dr. Peterson encouraged

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those concerned to do so. He stated that as to the storage of spent fuel there are a number of approaches which would need to be reviewed but there is \$40 billion dollars in the nuclear waste fund available to cover storage.

Mr. John Geesman of the Alliance for Nuclear Responsibility was recognized. Mr. Geesman stated that a decision by the federal District of Columbia District Court suspended collection of nuclear decommissioning funds for interim storage of spent fuel and he reported those funds could only be spent for long term storage such as that proposed at Yucca Mountain, Nevada. Dr. Peterson confirmed Mr. Geesman's observation and stated that nuclear utilities have contracts with the federal Department of Energy which has been found to be in partial breach of those contracts and, therefore, since 2008 it is the federal taxpayers who are paying for the cost of interim storage at various nuclear facilities.

A short break followed.

XXI INFORMATIONAL DISCUSSION BY THE COMMITTEE

DCISC Comments on the Joint Proposal.

The DCISC's comments on the Joint Proposal were made during and following Mr. Jones' presentation.

XXII INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

Mr. Harbor introduced the Director of the Quality Verification (QV) organization at DCP, Mr. Pat Nugent, to make the next presentation and reported Mr. Nugent has more than 25 years' experience in the nuclear industry including in Quality and Engineering organizations.

Quality Verification's Perspective on Plant Performance, Top Issues, and the Quality Performance Assessment Report.

Mr. Nugent reported overall DCP has experienced good and stable performance, with improvement in the quality and timeliness of cause analysis, excellent performance in radiation protection, improvement in the rating for performance improvement, and satisfactory and stable performance in Operations. He reported QV has found indications of performance gaps in Chemistry and Learning Services. Mr. Nugent reported the role of QV is to be very critical of station performance and the gaps in performance identified have been low-level issues which QV tries to identify before they can have a significant impact on plant performance. He stated the QV organization is very sensitive to any impact on any issues adverse to quality or safety culture from the decision to not seek to relicense the plant.

Mr. Nugent reviewed ongoing monitoring area for QV:

- Confined Spaces - During 2R19 administrative non-compliance with confined space regulations and enhancements to confined space entry was identified. Follow up in preparation for October 2016 tunnel cleaning identified minimal action taken and, as a result of the major

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tunnel cleaning activity coming up, the issue was elevated to the Station Director. Actions were taken prior to start of tunnel cleaning to address the recommendations.

- Operations Verification Practices - During 2R19 multiple examples of poor use of human performance tools were identified when clearing or restoring plant equipment. Complacency in implementation of standards was found when risk and consequence are judged to be low. Although risk consequences were low, this behavior was found to possibly challenge higher risk activities. An action plan was developed to address this issue and actions are in progress. The next operating training cycle will have a dynamic learning activity incorporated in order to reinforce the importance of following human performance standards and ensure consistent implementation of procedural requirements.
- Security Audit Findings - two findings identified including failure to properly check radio functions and inconsistent use of security event logging software. Security immediately confirmed the radios were functional.
- Emergency Preparedness - change management issues were identified to have led to unclear roles and responsibilities, potentially impacting the future effectiveness of the emergency planning team. Actions were taken to define roles and responsibilities and to assure that emergency exercise training and preparedness is adequate. An emergency planning audit concluded that program is effectively implemented.
- Material Handling - material handling practices during 2R19 resulted in RCP rotor slipping from a pallet jack. Rigging practices for lifting material, which are included in material handling, were found to be sound. Dr. Budnitz remarked riggers are generally assigned within the crane group and have a certain set of practices and codes which must be followed. Mr. Nugent observed the oversight of rigging activities was generally better than for materials handling where different persons were more likely to be involved. He reported some aspects of the rigging program will be adopted by the materials handling program.

In response to Consultant Wardell's questions Mr. Nugent stated that QV has found the design modifications released to the field to be of high quality but is pursuing efforts to ensure that designs that were done some time ago continue to meet current standards and expectations and the QV organization is performing assessments and reviewing those designs prior to their release to the field. He confirmed, in response to Consultant Wardell's inquiry, that QV in addition to its auditing assessment function is also responsible for Quality Control and Supplier Auditing as independent functions. Mr. Nugent reported both Quality Control and Supplier Auditing are operating well, with Quality Control responsible for rejecting items in the field that are not completely consistent with standards. In response to Consultant McWhorter's questions Mr. Nugent stated the changes to the tagging program did not have a great impact on operator verification practices but the impact was greater on other parts of the organization. Mr. Nugent stated some broad concerns were identified in the Maintenance organization as a result of the changes to the tagging program and QV met with the Station Director to explain the issue and the Station Director instituted changes to address concerns expressed by Maintenance and Mr. Nugent stated that in his opinion these concerns were adequately addressed. In response to Dr. Lam's inquiry Mr. Nugent reported that this was the only issue which QV elevated to the Station

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Director level and it is unusual to do so. The issue he described was elevated because of reporting responsibilities associated with DCP's safety organization compared to PG&E's corporate organization. He stated, in response to Dr. Lam's question, if necessary as QV Director he can and would, consistent with his responsibilities, elevate an issue above the Station Director level to the Site Vice President, the Chief Nuclear Officer or to the Corporate President levels. In response to Dr. Budnitz' inquiry Mr. Nugent stated the QV organization now consists of 28 persons.

In response to Dr. Budnitz observation on the rotation tenure of persons assigned to QV, including the Director position, Mr. Nugent stated while there is a learning curve to the director's position there is a benefit to the rotation of directors in bringing new perspectives to the QV organization and overall DCP has been effective in striking a balance, based on benchmarking other quality organizations, and within the industry there does not appear to be a belief that a long-tenured QV organization performs better than the model adopted by DCP. Mr. Nugent reported QV is benchmarked by persons from other nuclear facilities and provides its audit and technical personnel to those facilities to acquire a perspective from the industry as a whole. In response to Consultant Wardell's question Mr. Nugent reported the last independent evaluation of the QV organization was conducted in April 2016 as part of the Nuclear Industry Evaluation Program (NIEP) under auspices of 10 CFR Part 50 Appendix B and the results were positive and the best achieved to date by DCP. For the second time the NIEP evaluation found no significant deficiencies in the Quality organization and a total of six deficiencies overall. **Mr. Wardell remarked the DCISC would like to review the latest NIEP evaluation of the Quality Organization during a future fact-finding.**

Ms. Linda Seeley, representing Mothers for Peace, was recognized. Ms. Seeley stated that Mothers for Peace remains concerned with the performance gaps described by Mr. Nugent in the Chemistry, Learning Services, Security and Emergency Preparedness organizations as she stated these represent a pattern which may be a result of the Joint Proposal, as DCP employees now understand that the plant is not likely to run for too much longer and become complacent as a result. She stated that DCP recently received a White finding from the NRC and Dr. Peterson assured Ms. Seeley that the DCISC was aware of that issue and would be receiving a report from PG&E at this public meeting. In response to Ms. Seeley's question on confined space entry and Chemistry organization problems Mr. Wardell and Dr. Budnitz reported that Mr. Nugent's report described errors and programmatic issues which occurred and were identified at a low level and that level of identification is crucial to ensure the issues are addressed before they can get worse. The DCISC holds detailed discussion with DCP staff during its fact-finding visits to the plant to understand these issues and to assess DCP's efforts in addressing them.

XXIII ADJOURN MORNING MEETING

The Chair thanked all the PG&E presenters and then adjourned the morning session at 11:45 A.M.

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XXIV RECONVENE FOR AFTERNOON MEETING

The afternoon meeting of the DCISC was called to order by Committee Chair, Dr. Lam, at 12:30 P.M. Dr. Lam welcomed members of the public to the afternoon session of this, the eighty-fifth public meeting of the DCISC.

XXV COMMITTEE MEMBER COMMENTS

Dr. Budnitz remarked he had received and reviewed Dr. Sewell's comments on the Minutes of Dr. Sewell's presentation during the DCISC's June 2016 public meeting and as Dr. Sewell's clarifying edits do not represent substantive changes to the Minutes and Dr. Budnitz proposed approval of the June 2016 Minutes on that basis (see above re Consent Agenda).

XXVI PUBLIC COMMENTS AND COMMUNICATIONS

Ms. Sherry Lewis of Mothers for Peace was recognized. Ms. Lewis observed that not all the power point slides provided in the binder from Mr. Nugent's presentation were discussed during his presentation. Dr. Lam stated Mr. Nugent structured his presentation at the Committee's request to accommodate its schedule. Dr. Budnitz observed that the information presented by PG&E at the DCISC's public meetings is the information the Committee has requested be presented. Ms. Lewis stated the power points in the material for Mr. Nugent's presentation were of interest to her and she recommended them to any interested persons for review.

XXVII INFORMATION ITEMS BEFORE THE COMMITTEE (Cont'd.)

Mr. Harbor introduced DCP Station Director Paula Gerfen to make the next informational presentation requested by the Committee. He reported Ms. Gerfen has more than 25 years of nuclear experience including in Maintenance, Engineering and Operations organizations.

State of the Plant Update Including Key Events, Highlights and Station Activities since the DCISC's June 2016 Public Meeting, Summary of Station Highlights and Performance.

Station Director Gerfen reviewed and provided an update on plant operations. She reported both units are safely operating with U-2 currently at 100% power and U-1 at 50% power due to a scheduled curtailment for circulating water tunnel cleaning and to address a salt leak. Ms. Gerfen stated two leaking tubes were found and plugged. All NRC performance indicators are Green at this time. Ms. Gerfen reported the year-to-date Generation Capacity Factor for 2016 was outstanding for U-1 at 100.2% and 88% for U-2. U-2 underwent a power reduction to 75% power when one control rod was found to have slipped approximately 18 steps during a routine surveillance test. The rod was successfully realigned following procedure but it was this event which caused the capacity factor to be 88% for the year and 95.1% for the plant. U-2 was also offline during 2016 for 32 days during refueling outage 2R19 which Ms. Gerfen described as a successful refueling outage which was on schedule but a bit over budget. In response to Dr.

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Peterson's question Ms. Gerfen reported that an unidentified deposit caused the rod to slip.

Ms. Gerfen reviewed with the DCISC the plant capacity factor for the last four months and for the past twelve months and noted the only dip in generation was for U-2, including completion of the 2R19 refueling outage. Ms. Gerfen reported that during refueling outage 1R20, beginning in April 2017, based on baffle bolt damage found at other nuclear power plants, which topic was previously reviewed with the Committee, U-1 having been visually inspected during 1R18 with no indications or problems, full ultrasonic testing will be performed during 1R20 and plans are in place for the replacement of approximately 120 bolts during 1R20 which has an estimated outage duration of 65 days. She reported U-2 is not susceptible to baffle bolt failure due to its different bolt material and a previous up flow modification.

In response to Dr. Budnitz' question Ms. Gerfen confirmed there may be an opportunity during 1R20, due to its extended duration, to perform some additional work which otherwise might not be planned for an outage of shorter duration. In response to Dr. Lam's inquiry concerning what issues, if any, would keep Ms. Gerfen awake at night she stated the pending decision not to seek a license extension for DCPD and the resulting need to maintain employee engagement and to operate the plant as excellently as possible is an issue which concerns her. Dr. Budnitz remarked that he cannot accept that DCPD will be able to be operated as safely in the last months of its operational life as it is today. Ms. Gerfen agreed and observed that during its operational life the risks of not replacing any equipment which would have been replaced were the plant going to operate in the future would be well understood and mitigated. Dr. Budnitz stated he accepted this assurance and he remarked that the NRC and the DCISC would continue to review operations and to ensure any compromises would be minor. Dr. Budnitz further stated that the DCPD organization will be challenged to remain important and valuable employees who would have otherwise stayed at DCPD were the plant not planned to close and there are likely other unmeasurable issues that are inevitably going to compromise safety. Dr. Lam observed that the Committee as a whole has yet to develop a consensus on the effects of the Joint Proposal. Dr. Peterson observed that the DCISC will be involved in assessing issues of retention of staff, employee morale, and investments in maintenance and equipment replacement in context of the Joint Proposal.

Following Ms. Gerfen's presentation the Chair called for public comment.

Dr. Abraham Weitzberg was recognized. Dr. Weitzberg stated that during a conversation with PG&E SVP/CNO Ed Halpin he was informed by Mr. Halpin that due to seismic considerations DCPD could not be operated in other than a base load generation manner and that DCPD could not be run similar to plants in France which operate in a flexible power operational mode. Dr. Weitzberg stated he understood there were reports by the Areva firm and by PG&E which may support this contention, however, those reports are considered to be confidential. He remarked that as DCPD moves toward closure there is the possibility that the need to adjust power up or down may become more frequent and he questioned whether this could become a safety concern and he further inquired whether the DCISC has reviewed those reports and can opine on the safety of DCPD operating in other than in a base load mode. In response to Dr. Peterson's reply that the Committee has not reviewed those reports, Dr. Weitzberg suggested that

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the DCISC should make a request of PG&E that it provide the reports to the Committee for review in context of evaluating operational contingencies as the plant moves toward license termination. Dr. Weitzberg also stated he would like to review the operational history of DCPD and that he firmly believes that there are remedies to any limitation on DCPD operating in a flexible power operational mode and that assertions to the contrary do not provide a justifiable rationale for shutting the plant down, that is, that DCPD cannot operate in a mix with renewables to accommodate anticipated or forecast demands in the evolving energy mix in California.

Dr. Lam requested Assistant Legal Counsel Rathie to comment on any legal ramifications of obtaining the documents Dr. Weitzberg referred to in his comments. Mr. Rathie responded the Committee's Restated Charter provides for the DCISC to be able to receive and keep confidential proprietary information. However, there are also provisions in the California Public Records Act which govern the Committee's ability to keep such documents confidential and it would be important, prior to the Committee receiving any document, to understand the nature of the document and any legal implications concerning its subsequent disclosure. Dr. Peterson observed there are also implications under the U.S. Export Control Regulations for proprietary information that relates to reactor technologies which should be carefully considered. Documents received by the DCISC from PG&E are provided on encrypted thumb drives and proprietary or otherwise confidential information is not included in DCISC fact finding reports. If information received by the Committee in the course of its inquiries were restricted by federal law its dissemination would be prohibited. Dr. Peterson remarked the DCISC has not had a need to seek additional information on flexible power operations because of a lack of any plans on PG&E's part to implement that mode of operation but as there is an agreement between PG&E and the California Independent System Operator whereby power output by DCPD could be curtailed perhaps that should be taken into consideration regarding a decision to request that PG&E provide the documents cited by Dr. Weitzberg to the Committee. Dr. Budnitz recommended the Committee should determine, by working with PG&E through the office of DCISC's Legal Counsel, the nature of the documents referred to by Dr. Weitzberg and any restriction on their dissemination and, to that end, the DCISC should request the reports from PG&E in order to both be in a position to provide a response to the CPUC or to any one of the DCISC Members' appointing entities as to the safety implications of flexible power operation by DCPD or, in the event that PG&E decided to implement flexible power operations by DCPD, to be in a position to assess operational safety implications. Dr. Peterson remarked he accorded high deference to the wish of any member of the Committee to investigate any topic related to potential safety of operation of the plant and in that context he supports Dr. Budnitz' recommendation. **On a motion made by Dr. Budnitz, seconded by Dr. Peterson, the office of the DCISC's Legal Counsel was directed to make a request of PG&E for the documents referenced by Dr. Weitzberg and to inform the Committee of the conditions, if any, attached to their receipt.**

Mr. Harbor stated the DCPD is operated as a base load nuclear power plant like many in the U.S. and has always been operated in that manner. He reported PG&E plans to continue to operate DCPD as a base load generator. However, there is proprietary information involved concerning the market forces and the technology regarding the manner in which the plant can be

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operated. Mr. Harbor observed that a description of what the plant can do or when it might do it has dramatic market implications for PG&E. Mr. Harbor stated PG&E has reviewed the agreements it has with the California Independent System Operator (CAISO) and would present items that do not have an effect on the market in its next informational presentation. Mr. Harbor then introduced Director of Operations Services Mr. Ken Johnston and asked Mr. Johnston to make that presentation to the DCISC.

Plans for Managing Potential Future Power Reductions and/or Load Following.

Mr. Johnston presented a graph of what he described as California's diverse energy market and noted the nuclear component represented 4.1% of the approximately 60,000 megawatts managed on the electrical grid by the CAISO to serve 30 million Californians and this includes 760 power plants connected to 26,000 miles of transmission grid. He reported the CAISO's mission includes a component to address a transition to renewable power sources while maintaining reliability. Mr. Johnston stated that emergency curtailment orders may be issued to DCPD due to grid stability concerns. DCPD can be required to curtail operation by the CAISO. Specific criteria for requesting emergency curtailments and for DCPD's response to such a request are included in confidential section of DCPD Operation policy. Confidentiality is due to market sensitive nature of information. Emergency curtailment could be requested in the event of an unplanned risk to transmission system existing wherein over generation could increase those transmission resources. Dr. Budnitz commented that emergency curtailment could also occur if something were to occur at DCPD that prevented the plant from transmitting its power. Dr. Peterson observed that DCPD's safety is increased if reliable offsite power remains available and not curtailing the plant could increase the probability of transmission failure which would then likely cause a plant trip and loss of offsite power and therefore compliance with a request for curtailment based on an emergency curtailment order could have an impact on operational safety.

Mr. Johnston reported PG&E's Short Term Electric Supply's (STES) mission is to procure and schedule electricity to meet PG&E's retail load in a least cost fashion. STES is located in San Francisco and forecasts PG&E's retail load and schedules generation and load to CAISO in the day ahead and hour ahead markets. STES monitors system load and generation continuously and acts as PG&E's single point contact for generation related coordination. STES bids DCPD as base load (i.e. both units operating at full capacity) unless there is a scheduled outage or curtailment. Projections show that there may be high availability of renewable resources thereby creating a disincentive for base load generation although this scenario is hypothetical at this point and, to date, DCPD has not had to curtail the units to meet those conditions and although DCPD has an over generation curtailment agreement with STES, neither the CAISO or STES has ever requested that it be exercised.

Dr. Peterson commented that in over generation situations the CAISO would create disincentives including negative electricity pricing and, from the perspective of reducing the probability of reducing transmission failure there is a question whether you place the transmission system at greater risk of failure and an uncontrolled trip from full power is a very

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negative thing to occur for a nuclear power plant and that risk would exist due to the temporary conditions described by Mr. Johnston. Dr. Peterson observed that during periods of over generation it may actually be prudent to scale back power output from DCPD as it would make it easier to stabilize the grid and an event where the plant could lose transmission is very negative from a safety perspective and it might be prudent to look at curtailing DCPD output. Mr. Harbor stated that Dr. Peterson was correct and he observed that PG&E does not want to be the cause of an over generation situation that could threaten the grid and thereby create issues for DCPD to have access to an appropriate off site power source. **Dr. Peterson stated it would be interesting to understand the overall balance of the risk in this situation, recognizing that temporary curtailment also involves thermal issues and the question of whether it would be more prudent from the perspective of plant safety to reduce power output than to keep running is an interesting one for the Committee to consider.** Dr. Budnitz observed that certain direction under the emergency curtailment scenario might include planned activities or maintenance on the transmission grid's facilities.

Mr. Johnston stated the CAISO does an excellent job of maintaining a reliable power source for California and he stated he was unsure whether there would be a significant safety impact in projecting and identifying the loads that will curtail on the system. **Dr. Peterson observed this involves a balance of risk due to the risk associated with cycling the power output of DCPD together with the risk of transmission failure and, although both risks are small, how these risks balance against each other and might be mitigated by curtailing DCPD power output versus managing over generation in other ways should be compared.**

Dr. Budnitz stated he assumes the agreement contains various technical limits as there are certain limits below which the presence of xenon in the reactor will not allow operation. Mr. Harbor replied that because of market considerations PG&E cannot confirm or deny that DCPD can do that. Dr. Budnitz stated he understood but there are certain technical issues which would prevent the plant from honoring any generalized request as the request would need to fit within the plant's safety envelope. Mr. Johnston reported limitations under the curtailment agreement provide that curtailment would be for a limited amount of megawatts and curtailment duration would be limited to small fraction of the year. Sufficient notice would be provided to allow for safe execution of a normal power ramp. Mr. Johnston confirmed that DCPD Operations and Reactor Engineering staff worked with the STES to develop the agreement.

Dr. Peterson stated it would be timely and appropriate for the DCISC to review material while protecting the confidentiality of the information to have a better understanding of the potential scenarios where they might be requested to curtail generation and to potentially review issues of grid reliability and how the different risks affect one another given the over generation is going to occur on an increasingly frequent basis during the plant's projected operational life. In response to Dr. Lam's inquiry Mr. Harbor replied that the market sensitive nature of the information is the main reason for PG&E's claim of confidentiality and it would be necessary to confer with legal counsel before the information could be made available to the DCISC. In response to Dr. Lam's request Mr. Johnston stated his presentation should be remembered for the information that there are both emergency and market conditions under which DCPD could curtail its output and the plant is

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ready to do so and the operators are trained and have practice for this eventuality and have successfully curtailed power output in the past and, at the present time, U-1 is safely operating a 50% power for tunnel cleaning. He stated that irrespective of the Joint Proposal, changes in the California energy market over the next nine years will have an impact on how DCPD plans and operates. In response to Dr. Budnitz' observation on the confidential nature of sections of the Operations policy, Mr. Johnston stated DCPD plant Operations crews, as well as the CAISO, are fully aware of the provisions but due to market implications PG&E has choose to redact the information from public disclosure.

Dr. Abraham Weitzberg was recognized. Dr. Weitzberg offered to supply the DCISC with the title of the second document to which he referred in his earlier remarks. He remarked that we do not know what the future may hold and there is a question as to at what point it would be appropriate for the DCISC not just to request the documents but review and evaluate at what point and at what frequency it becomes a nonissue if power curtailment does occur or at what levels might it become excessive and have an impact on safety. He observed that Mr. Johnston indicated that DCPD can safely operate at 50% power and this was counter to information he received personally from Mr. Halpin and to the Joint Proposal which states that DCPD is a base load plant and that is the only what it can run. He noted that flexible power operation can have several meanings along a continuum from the French experience to occasional events and it is the DCISC's job to assess the safety implications of flexible operation by DCPD. Dr. Budnitz responded on his own behalf that the Committee routinely reviews the safety implications of reduced power operations to ensure the procedure used is adequate but he stated the power reductions by DCPD have not been in response to load following considerations and qualitatively present a different safety question. Dr. Budnitz stated that if PG&E were to propose to operate DCPD in load following mode or if a request was received from a California state agency for the DCISC to opine on load following those would be the situations which would make load following operations by DCPD subject to the DCISC's review. **Dr. Peterson stated he believed conditions around which curtailment might be requested on a discretionary basis would also provide a basis for review, including the risk tradeoff associated with reliability of the transmission system versus the reliability of the power plant and Dr. Peterson stated he believes that threshold has been triggered and he recommended the DCISC further pursue the matter.**

Ms. Sherry Lewis of Mothers for Peace was recognized. In response to Ms. Lewis' question, Dr. Peterson stated that the risks inherent in over generation of power on the grid include difficulties in balancing loads when power is generated through resources that fluctuate, such as those linked to weather conditions and this can lead to a greater risk of transmission failure and black out conditions such as recently occurred in South Australia. He observed California has a remarkably reliable transmission system but loss of transmission or failure of the transmission system is a bad thing for a nuclear power plant as it can result in the loss of ability to transmit electricity offsite which requires the plant to abruptly terminate the flow of steam into its turbines and to dump steam and may result in a reactor trip which places stress on the plant, while failure of the transmission system can also result in loss of offsite power leaving the plant with only emergency diesel generators or FLEX equipment as remaining power sources

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with a corresponding increase in risk. **Dr. Peterson commented the CAISO is faced with the need to manage conditions when there is excess generation from a variety of sources and understanding whether the balance of risks requires curtailment of power operations is a worthy of an assessment.** Dr. Budnitz commented that there have been studies done of the risk and tradeoff both by those concerned with the grid and those concerned with plant operations and the plant staff know what to do in an over generation scenario. Dr. Budnitz commented the crucial aspect is to find a way to minimize disruption consistent with other demands on the grid and the plant. He observed steady operation is always the best configuration for a power plant and grid engineers, to their credit, spent a good deal of time on grid reliability.

Mr. Harbor introduced Mr. Jan Nimick, Senior Director of Nuclear Services at DCPD and stated Mr. Nimick would make a presentation and provide an overview of the preliminary White finding recently assessed to DCPD by the NRC. Assistant Legal Counsel Rathie noted that Mr. Nimick's presentation was being made as part of agenda item XV.B.3. on the public agenda for this meeting.

Mr. Nimick reported the NRC has yet to reach a final decision on the severity of the issue which occasioned the preliminary determination of a White finding and a regulatory enforcement conference is to be held on November 15, 2016, for a discussion between the respective staffs of DCPD and the NRC.

Mr. Nimick reported the Emergency Core Cooling System (ECCS) has a number of interlocks installed to preclude certain valve alignments. One of the functions of one of the valve interlocks is to preclude an alignment of the residual heat removal pumps (RHR pumps), the Refueling Water Storage Tank (RWST), and the Containment recirculation sump at the same time. Mr. Nimick reported that were this to occur the inventory of the RWST would be drained into Containment. The interlock at issue to prevent this occurrence is installed on Valve 8700B, the valve between the RWST and the suction of No. 2 RHR pump. He reported that this interlock is known as 8982 and provides suction to the RHR pump from the Containment structure recirculation sump. The interlock on Valve 8700B is a position switch with a device that rides on the stem of the valve and when it reaches its full closed position the device actuates a position switch that then informs interlock logic that Valve 8700B is closed and it is permissive to allow 8982 to be opened. Mr. Nimick stated the interlocks are tested at each refueling outage before the fuel is reloaded to the core and during a recent test it was found that 8982B could not be opened even with Valve 8700B closed. Investigation determined the position switch on Valve 8700B was broken due to its having over traveled due to its having been incorrectly set up. The finger that rides on the stem of Valve 8700B had broken the rotating arm of the switch and therefore it did not change state when Valve 8700B was shut and therefore 8982B was unable to be opened from the control room.

The NRC assigned a performance deficiency finding for this issue due to the work instructions on how to set up the interlock switch not having been of sufficient quality for the work to be reliably accomplished and Mr. Nimick reported the work instructions have been corrected to insure sufficient detail is now included. All accessible valves have been inspected in an extent of condition inspection to verify that there are no other broken position switches and

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the problem was not identified anywhere else in the power plant. Mr. Nimick reported a root cause analysis is being done and the issue is being analyzed under the probabilistic risk assessment (PRA) process. DCPD has determined the issue was of very low safety significance, however, using its process the NRC has assessed the issue to be of moderate safety significance and accordingly assigned the finding a White characterization. Mr. Nimick stated the NRC uses the Dispar PRA model while DCPD has a plant-specific PRA model. He remarked that DCPD has access to the NRC's Dispar model and is now also using it to assess the safety significance with inputs modified based on certain probabilities identified by PG&E. In response to Dr. Lam's inquiry, Mr. Nimick reported that due to the failure of the interlock the plant would have been prevented from going on cold leg recirculation from the control room on ECCS Train B which is one of two redundant ECCS trains. The capability to access the RWST as a source of water was not affected by the problem with the interlock. In response to Dr. Peterson's inquiry Mr. Nimick replied that the assessment of the extent of condition included checking the procedures as well as inspecting the other limit switches to make sure they were intact. Dr. Budnitz observed that since DCPD and the NRC are now using the same PRA software with the same fault tree either different data is being used for the other pieces of the sequence or different models are being used for the dependencies and once these issues are resolved, the plant specific PRA model initially chosen by DCPD for use may be proven to be the more realistic model. Mr. Nimick stated DCPD intends to present its results to the NRC using both its plant specific and the NRC's Dispar PRA models. Mr. Harbor stated that the situation with the broken interlock was an issue which the industry projected might occur and there are procedures in place that allow the operators to manually operate the valve either at the valve or at by electronic controls at the control center and the operators are trained on those procedures. Mr. Harbor stated this is one of the issues, the probability of success with being able to perform that function, that the DCPD will discuss with the NRC at the regulatory enforcement conference to be held in Arlington, Virginia, on November 15, 2016, which is open to the public and will include an opportunity for public input both during and after the conference.

Dr. Budnitz remarked that the PRA models have as their basis the identification of all of the accident sequences that can occur and this represents a great benefit of the use of PRA in that the accident sequences are already incorporated into the PRA models.

Ms. Simone Malboeuf inquired as to how the public might receive information on the regulatory enforcement conference and Dr. Budnitz responded that this information and the ability to sign up for notification are available through the NRC's website, www.nrc.gov, and if power point slides and audio are part of the conference they will also be accessible through the web. This concluded the informational presentations requested by the Committee from PG&E for this public meeting.

The Committee then returned to item VII D, review of fact finding reports, and Consultant Wardell was requested to report on the August 31-September 1, 2016, fact-finding visit to DCPD with Dr. Lam. Mr. Wardell reviewed the topics discussed with PG&E during the visit including:

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- Meeting with NRC Senior Resident Inspector - the DCISC representatives met with the new NRC Senior Resident Inspector to discuss the White finding discussed previously at this meeting by Mr. Nimick, the Joint Proposal, the invitation extended to the inspector to attend a meeting of the DCISC, the NRC's final report and evaluation of PG&E flooding and tsunami analysis, and issues concerning fire doors reviewed previously during this meeting.
- Self-Assessment Program - Mr. Wardell reviewed the different formats for self-assessment at DCPD including formal self-assessments, independent assessments, ongoing self-assessments, quick-hit self-assessments, recurring assessments and outside assessment. He reported formal self-assessments are generally followed by an effectiveness review six months after their completion. The self-assessment benchmarking program found the program to be in Yellow system health because some of the more recent formal self-assessments required correction as they were determined not to be sufficiently thorough. Several actions to improve the program have been implemented and these issues have been corrected. Mr. Wardell reported the NRC performed a Problem Identification and Resolution inspection of DCPD programs and found self-assessment at DCPD to be self-critical and thorough.
- Annual Radiation Release and Radiation Environmental Operating Reports - each nuclear station submits an Annual Radiation Release Report to the NRC in April concerning routine releases radiation in liquid, gas or solid form. DCPD's releases were all routine and represented a very low fraction of the allowable amounts under the plant's technical specifications. Mr. Wardell reported there were no accidental releases and all releases were controlled and measured. The Radiation Environmental Monitoring Report records the results of environmental sampling around the plant compared to data observed before the plant was operational. Mr. Wardell reported that during DCPD's operational life there has been no measurable increase in any radioisotope or other radiation-related factors around the station.
- Containment Structure - the containment structures consist of the two large concrete domes and Mr. Wardell reported these are very substantial structures designed to contain any radioactivity that might otherwise escape. The containment structures are subject to inspection for cracks in the concrete every five years, for the inside steel liner every ten years, and subject to an integrated leak rate test every ten years. Mr. Wardell reported the containment structures are in Green health status.
- Dr. Lam's Meeting with DCPD Site Vice President Jim Welch - Dr. Lam reported the Joint Proposal formed a part of the topics for this discussion.
- DCISC Public Tours of DCPD - Mr. Wardell reported that PG&E has recently stopped taking members of the public through the security train to visit the turbine deck and the last visit by the DCISC with members of the public was significantly delayed due to security processing requirements. PG&E has requested the DCISC consider conforming its public tour format to areas outside of the protected area. Mr. Wardell observed that for the little time spent there and based upon what is available to see on the turbine deck the fact-finding team agreed with

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PG&E's request.

- DCPJ Joint Proposal - as this was discussed previously at this public meeting there was no discussion by Mr. Wardell of the Joint Proposal as part of his fact-finding report.
- Institute of Nuclear Power Operations (INPO) Update - every two years INPO visits DCPJ with a large team to do a very thorough two-week inspection. The results of these inspections are confidential between PG&E and INPO. The DCISC team reviewed information from the inspection but did not receive copies of the materials provided for review. DCPJ is in mid-cycle on the INPO inspection schedule and in August 2016 performed a mid-cycle evaluation which Mr. Wardell described as almost as broad as the INPO inspection itself. The purpose of the mid-cycle assessment is to identify and correct any areas for improvement.
- Electronic Work Orders - electronic work orders use portable electronic tablets to provide documentation and drawings for jobs in the plant. Mr. Wardell reported that the DCISC team reviewed a simple electronic work order and it has been determined that electronic work orders are appropriate for use with simpler jobs which do not require extensive drawings or procedures for reference. Mr. Wardell reported the DCISC representatives were well satisfied with DCPJ's use of electronic work orders.
- Lunch Meeting with Quality Verification Department - Mr. Wardell described this as a good meeting with discussion of the respective roles of both the DCISC and the QV Department which he stated is made up of very professional and knowledgeable people.
- Observe Licensed Operator Training on Storm Procedure - the training was focused on addressing procedures to address issues wherein during winter storms kelp can become dislodged or large waves can result in reducing the ability of the Intake Structure to draw in cooling water and as a preventive measure the plant's operating units are temporarily curtailed to 75% or 50% power. Mr. Wardell stated the training was thorough, the instructor knowledgeable, and there was an excellent discussion by the students. Mr. Wardell reported operations crews periodically spend one week out of every five weeks in training.
- Closed Loop Cooling Status - Mr. Wardell reported this issue represents a situation where the federal government acting through state regulators has considered requiring DCPJ to eliminate its use of once-through cooling and the possible replacement of that technology with the installation use of cooling towers. He reported the status of this proposal has not changed since it was last reviewed by the DCISC and if the Joint Proposal receives approval from the CPUC due to timing issues this matter will essentially be moot.

Following Mr. Wardell's report the Committee Members discussed and determined to alter the itinerary for the public tours the Committee conducts of DCPJ to eliminate the group entering into the protected area and thereby eliminate the need to go through the security train. Dr. Peterson and Consultant McWhorter observed that visiting the Control Room Simulator

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facility, a full scale mock-up of the U-1 Control Room, remains a very important part of any tour with members of the public and expressed their hopes that PG&E will continue to make every effort, consistent with operational requirements, to see the Simulator is available to the DCISC for its public tours.

Ms. Simone Malboeuf was recognized. Ms. Malboeuf stated that it was her understanding that there was no negligible level of radioactive release to the ocean and the release models being used by the industry to claim that releases are negligible were based on models developed in the 1950's before the discovery of DNA and therefore severely misrepresent the type and degree of radio toxicity associated with the internalization of radioisotopes and their subsequent adverse effect on the human body. She stated that this old model on the relative safety of nuclear energy conditions the world's perspective and the legacy of nuclear power will be pain, suffering, birth defects, miscarriages and premature death for countless generations to come. Mr. Malboeuf also provided material to the DCISC on the nuclear industry's compliance with fire safety regulations.

Ms. Sherry Lewis of Mothers for Peace was recognized. Ms. Leis expressed her thanks to the Committee and particularly to Dr. Budnitz for taking into account the very serious safety situation which will attend the end of the plant's operational life and she thanked the Committee for its continuing review of DCP's safety.

Dr. Peterson stated that with reference to radioactive releases and release limits for nuclear power plants the NRC's qualitative and quantitative safety goals require that persons living near a plant should be limited to levels where the qualitative requirement is that the risk posed by their exposure are small compared to other sources of risk to which they are routinely exposed. Release limits are established and intended to assure that there is a very small probability that those exposures might cause cancer and the actual releases compared to those limits are very small fractions. Dr. Peterson stated from his perspective he is much more concerned about accidents involving the reactors or spent fuel but the DCISC continues to confirm that routine releases are being monitored and that they remain well below regulatory limits.

Dr. Budnitz stated that the material provided by Ms. Malboeuf was from the Union of Concerned Scientists and dated from 2012 and has previously been provided to and reviewed by the DCISC. The material includes a list of U.S. nuclear plants claimed to be out of compliance with fire regulations and Dr. Budnitz stated that the inclusion of DCP on that list represented a false and misleading statement. He reported DCP is and has remained in full compliance with the NRC's fire regulations and review by the DCISC has confirmed this. Dr. Budnitz explained that DCP, like some other nuclear power plants, made a voluntary decision to transition to new fire regulations approved by the NRC as an alternate and different regulatory scheme and the plant is in the process of completing the process of coming into compliance with these new regulations and should be in full compliance by April 2017 but in the meantime DCP has been in compliance with the older, existing regulations. The DCISC will continue its review DCP's

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compliance with the new fire regulations and will in the future report to the public on this topic. Dr. Budnitz further observed concerning the material provided by Ms. Malboeuf on issues raised by former San Luis Obispo County Fire Chief Robert Lewin that the DCISC has reviewed DCP's response to all of Chief Lewin's issues and a report on that review was provided previously.

Upon a motion made by Dr. Budnitz, seconded by Dr. Peterson, the August 31-September 1, 2016, Fact Finding Report was approved by the Committee and its transmittal to PG&E was authorized.

**XXV CONCLUDING REMARKS & DISCUSSION BY COMMITTEE MEMBERS
OF FUTURE DCISC ACTIVITIES**

Dr. Lam expressed the Committee's sincere appreciation to the members of the public who attended and participated in this public meeting and also to the senior management of PG&E including Director Cary Harbor and Manager Brian McQuade and their associates. The Chair also expressed appreciation to the technicians of AGP Video who provided audio and visual recording and programming services for this public meeting.

XXV ADJOURNMENT OF EIGHTY-FIFTH PUBLIC MEETING

There being no further business, the eighty-second public meeting of the Diablo Canyon Independent Safety Committee was then adjourned by its Chair, Dr. Peter Lam, at 2:30 P.M.

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	February 8, 2017
AGENDA ITEM:	V-A
AGENDA TITLE:	DCISC Receipt of PG&E's Response to its Twenty-Sixth Annual Report on Safety of Diablo Canyon Operations; July 1, 2015 - June 30, 2016

CONSENT ☐ ACTION ☒ INFORMATION ☐

The Restated Charter for the DCISC approved by the California Public Utilities Commission in Decision 07-01-028 provides:

“The Committee shall prepare an annual report and such interim reports as it deems appropriate, which reports shall include any recommendations of the Committee. The report shall be submitted first to PG&E, and PG&E shall respond in writing within 45 days.”PG&E’s response is then included with the Annual Report

The Committee made no recommendation in its Twenty-Sixth Annual Report for the period July 1, 2015 – June 30, 2016.

RECOMMENDED COMMITTEE ACTION:

Motion to receive PG&E’s Responses to the DCISC’s Twenty-Sixth Annual Report.



**Pacific Gas and
Electric Company**

Edward D. Halpin
Senior Vice President
Generation &
Chief Nuclear Officer

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December 16, 2016

PG&E Letter ISC-16-001

Dr. Per F. Peterson
c/o The Diablo Canyon Independent Safety Committee
857 Cass Street, Suite D
Monterey, CA 93940

Response to the Diablo Canyon Independent Safety Committee's Twenty-Sixth
Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations - July 1, 2015,
to June 30, 2016

Dr. Peterson:

On November 14, 2016, Pacific Gas and Electric Company (PG&E) received the Diablo Canyon Independent Safety Committee's (DCISC) Twenty-Sixth Annual Report on the Safety of Diablo Canyon Operations for the period of July 1, 2015, to June 30, 2016. We are pleased that the DCISC has once again concluded that PG&E operated Diablo Canyon Power Plant (DCPP) safely, and has made no Recommendations during this period.

As you are aware, operating the plant conservatively to protect public health and safety is our highest priority, and we will continue to ensure that we fulfill this commitment.

We welcome the DCISC's independent review and oversight, as it contributes to the continued safe operation of DCPP.

Regards,

Edward D. Halpin

bem/6674

cc: Dr. Robert Budnitz
Dr. Peter Lam
Ferman Wardell
Richard McWhorter
Robert R. Wellington

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DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

Twenty-Sixth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations

July 1, 2015 - June 30, 2016

EXECUTIVE SUMMARY and CONCLUSIONS and RECOMMENDATIONS

History and Introduction

The Diablo Canyon Independent Safety Committee (DCISC) was established as part of the June 24, 1988, settlement agreement which arose from the rate proceedings for the Diablo Canyon Nuclear Power Plant (DCPP). The DCISC was formed in late 1989 with the appointments of Committee Members and began formal review activities and meetings on January 1, 1990. The original settlement agreement (D.88-12-083) was terminated by the California Public Utilities Commission (CPUC) in its decision to open the state electricity markets to competition on January 1, 1998; however, under the provisions of the Commission's Decisions 97-05-088, issued on May 21, 1997, and 04-05-055, issued on May 27, 2004, the DCISC will continue to function and fulfill its responsibilities as established under the terms of the 1988 settlement agreement.

On May 27, 2004, the CPUC issued Decision 04-05-055. In its decision, the CPUC changed the nomination procedures by eliminating from the process the participation of PG&E and the Dean of Engineering at the University of California at Berkeley; modified the requirements for membership on the DCISC to add "knowledge and background in nuclear safety issues" to the "experience in the field of nuclear power facilities" and modified the DCISC's mandate to require it to undertake public outreach in the community. The Decision concluded that the DCISC should retain the discretion to determine how best to accomplish its mandate, that the DCISC shall otherwise continue to exist and to operate, and that funding through cost-of-service rates should continue. To implement this directive, the DCISC has continued to expand its public outreach as described in Section 8.0, Public Input and Outreach, and continues to consider additional outreach activities.

On January 25, 2007, the CPUC issued Decision 07-01-028. The CPUC had previously adopted new practices and expectations for the DCISC without concurrently restating the Committee's charter to reflect the changes. In its decision, the CPUC granted the DCISC application for authority to restate its charter including the incorporation into the Restated Charter of several terms, conditions, changes and clarifications necessitated by, and previously authorized by, the CPUC which govern the composition, responsibilities and operations of the Committee. In its decision, the CPUC found the Restated Charter to be in the public's interest as it reflects the latest authority and obligations of the DCISC. The Committee's application was unopposed.

On June 21, 2016, PG&E announced a Joint Proposal with Friends of the Earth, the Natural Resources Defense Council, Environment California, the International Brotherhood of Electrical Workers Local 1245, Coalition of California Utility Employees, and the Alliance for Nuclear Responsibility to retire DCPD at the expiration of the current operating licenses. On August 11, 2016, PG&E filed an Application with the California Public Utilities Commission (CPUC) for approval of the retirement of DCPD, implementation of the Joint Proposal, and for recovery of associated costs through proposed ratemaking.

Under the Joint Proposal, PG&E will continue to operate DCPD at current levels through the current license periods. If the Application is approved by the CPUC, in 2024 PG&E would retire Unit-1, and in 2025 would retire Unit-2. To replace DCPD power, the Joint Proposal provides specific greenhouse gas (GHG)-free procurement requirements beginning in 2018 and continuing through 2031. The Committee will follow developments and activities at DCPD to assure continued nuclear safety during the remaining years of operation, if the joint proposal is adopted.

The original settlement agreement provided for a three-member Independent Safety Committee for the purpose of “reviewing and assessing the safety of operations of DCPD”. The members serve three-year staggered terms and remain on the DCISC until a new appointment or their reappointment is made. To fill an expired term or a vacancy, the CPUC issues a public notice soliciting applications from interested persons or nominations by others of prospective candidates. Under the revised process in accordance with the restated charter, candidates are selected by the CPUC from the applications plus the incumbent, if willing to serve.

The candidates must be “persons with knowledge, background and experience in the field of nuclear power facilities and nuclear safety issues.” From the list of candidates, the new or returning member is appointed by the Governor of California, the Attorney General of California or the Chairperson of the California Energy Commission (CEC), whichever made the original appointment.

The Committee Members during this period were as follows:

On October 10, 2007, Robert J. Budnitz, Ph.D. was appointed by California Attorney General Edmund G. Brown Jr. to a term on the Committee expiring June 30, 2010. On April 15, 2010, Attorney General Brown announced the reappointment of Dr. Budnitz to a second three-year term on the Committee commencing July 1, 2010 through June 30, 2013. On June 27, 2013, the CPUC ratified its President’s selection of Dr. Budnitz as one of two candidates for appointment by Attorney General Kamala Harris to serve a three-year term on the DCISC for the period July 1, 2013 to June 30, 2016. During that period, Dr. Budnitz continued to serve as a member of the Committee pending his reappointment or replacement. On July 7, 2016, Attorney General Harris announced the reappointment of Dr. Budnitz to serve a three-year term on the Committee commencing July 1, 2016 through June 30, 2019.

On June 3, 2009, Peter Lam Ph.D. was appointed by Chair Karen Douglas, J.D. of the California Energy Commission (CEC) to a three-year term on the Committee commencing July 1, 2009 through June 30, 2012. On July 12, 2012, CEC Chair Robert B. Weisenmiller, Ph.D., announced his reappointment of Dr. Lam to a second three-year term on the Committee commencing July 1,

2012 through June 30, 2015. On April 1, 2015, Dr. Weisenmiller announced Dr. Lam's reappointment to another three-year term on the Committee commencing July 1, 2015 and expiring June 30, 2018.

On July 9, 2008, California Governor Arnold Schwarzenegger announced the appointment of Per F. Peterson, Ph.D., PE, to a three-year term on the Committee through June 30, 2011. Prof. Peterson previously served as a Committee member from September 2, 2004, through October 9, 2007. Governor Edmund G. Brown Jr. reappointed Professor Peterson to a term on the Committee commencing July 1, 2011 through June 30, 2014. On September 10, 2014, Governor Brown announced Professor Peterson's reappointment to a three-year term on the DCISC commencing July 1, 2014 and expiring on June 30, 2017.

Overview of Activities during the Current Period

The DCISC held three public meetings in the vicinity of the Diablo Canyon Power Plant on the following dates:

October 20-21, 2015	Public Meeting and Public Plant Tour
February 3-4, 2016	Public Meeting and Public Plant Tour
June 21-22, 2016	Public Meeting and Public Plant Tour

The Committee regularly performs the following activities:

- Three two-day public meetings each year in the vicinity of the plant
- Three tours of the Diablo Canyon Nuclear Power Plant each year with members of the public held in conjunction with the three public meetings
- Numerous fact-finding visits by individual Committee Members and Consultants to assess issues, review plant programs and activities, and interview PG&E personnel
- Reviews of technical documents received from PG&E, the Nuclear Regulatory Commission, various state and local agencies, and other interested parties. The DCISC requests, and PG&E routinely provides copies of essentially all relevant documents generated by PG&E, the NRC, and other parties.
- Visits by the DCISC Members and legal counsel to offices of the CPUC and appointing officials (the Governor of California, California Attorney General and California Energy Commission) to update them on DCISC activities
- Use of regular part-time technical consultants to assist the DCISC to perform assessments and reviews
- Use of legal counsel to advise the Committee on its activities

- Use of expert consultants, as needed

The DCISC issues a report for each reporting year, which runs from July 1 to June 30. The report is approved by the Committee Members at the fall public meeting following the end of the reporting period. The first six-month interim report and subsequent twenty-five annual reports covered the periods January 1, 1990 – June 30, 2015.

This twenty-sixth annual report covers the period July 1, 2015 - June 30, 2016.

The technical items covered during these public meetings were selected by the DCISC based on the DCISC's own priorities concerning which technical issues are important to cover. PG&E then responds by providing presentations and experts to participate in the public meetings as requested. The following significant items were reviewed:

- DCPD performance and operational events
- Refueling outage overviews, plans and results
- Review of DCPD performance indicators
- Human error performance improvement program
- Radiation exposure during refueling outages
- Plant security review for effects on plant safety
- Problem Identification and Resolution Program (Corrective Action Program)
- Operating Experience Program
- Online Maintenance
- Radiological Release Reports
- Transformer malfunctions and oil leaks
- Reactivity Management Program
- Engineering, Operations and Maintenance Organizations
- Emergency Preparedness
- Management Review Committee
- Fire Protection
- Public Outreach
- Equipment Reliability
- Troubleshooting
- Error Prevention tools and Human Performance and Safety Training
- Component Mispositioning
- Containment Fan Cooler Reverse Rotation
- INPO (Institute of Nuclear Power Operations) Evaluations
- Natural Phenomena (earthquakes and tsunamis)
- Office workplace seismic safety
- DCPD Operating Plan
- Quality Verification Organization, Performance Reports and Audits
- DCPD responses to the Fukushima accident & review of NEI FLEX strategies
- Pressurizer weld overlay indication review for the California Energy Commission
- Evaluations of Studies to Replace DCPD's Once Through Cooling

- Regular discussions with NRC Resident Inspectors

Individual Committee Members and consultants reviewed many other items in nine fact-finding visits, inspections and tours at DCP. The DCISC keeps track of past, current and future items for review in its Open Items List (Section 6.0 and Volume II, Exhibit F).

A DCISC Member visited officials from the California Energy Commission to provide updates on DCISC activities, to discuss agency concerns and comments, and to provide copies of the Committee's Annual Report.

Public input and questions were received at the public meetings, and by telephone, letter, and e-mail. Members of the public spoke at each of the three DCISC public meetings held in San Luis Obispo. The DCISC has responded to all of their questions and requests during this period.

Overall Conclusion

The DCISC concludes that PG&E operated DCP safely during the period July 1, 2015 – June 30, 2016.

Specific Conclusions

Based on its activities, the DCISC has the following specific conclusions from the major review topics examined during the current reporting period (references to sections of this report are shown in parentheses). Conclusions are based on, but may vary from, information contained in Committee Fact-finding Reports in Exhibit D in Volume 2 of this report.

- 1. The DCISC received regular reports on the Nuclear Regulatory Commission (NRC) Performance Indicators, DCP License Event Reports (LERs) sent to NRC, and NRC Inspection Reports and Enforcement Actions (violations) at each of its Public Meetings as well as copies of these documents throughout the reporting period. The DCISC investigated selected reports at its fact-finding meetings. The number of LERs has decreased significantly and was one during this period.**

The Committee notes that, although the NRC concluded that DCP operated acceptably, it identified 18 Non-cited Violations of "very low safety significance." The number of violations has increased to an undesirable level. DCP appears focused to improve its regulatory performance.

The DCISC will continue to review DCP's NRC regulatory performance during the next reporting period, paying particular attention to the number and significance of DCP violations and LERs. (3.0)

- 2. DCP's simulator is a valuable tool used for operator training and testing, and the two new Glass-top Simulators were valuable additions to DCP's training assets. The Operations Control Room shift turnover was comprehensive, professional and**

effective. The Operations Department performance with respect to Limiting Conditions of Operation has been generally good during the past two years. DCP's increased emphasis on component mispositioning since 2008 has contributed to maintaining a small number of significant mispositionings and to reducing the number of lower level mispositionings. The confidential power curtailment agreement between DCP and the California Independent System Operator did not compromise nuclear safety. DCP's procedures, process, and training for transferring control to the Remote Shutdown Panel appeared to be sound, and Reactivity Management Program health was acceptable. (4.1)

3. DCP's Maintenance Program appears to be implemented effectively and is generally healthy. (4.2)
4. Overall, DCP's Engineering Programs appear to be healthy and effective. Design Quality, an issue for the past several years, has improved due to corrective actions to tighten the design process. Design Quality measures showed satisfactory performance based on scores of final designs released for installation. (4.3)
5. DCP takes personnel safety (industrial safety) seriously and has a good personnel safety track record. (4.4)
6. The DCISC did not review topics that focused specifically on Health, Nuclear Safety Culture, or Safety Conscious Work Environment, in this reporting period; however, its observations made during other topic reviews indicate that the safety culture at DCP is strong. (4.5)
7. DCP has been continuing to increase its emphasis on the Corrective Action Program, and improved performance in recent months appears to be a product of this increased emphasis. The Performance Improvement Programs appear to be effectively managed to identify, track and correct plant issues. (4.6)
8. The September 9, 2015, emergency preparedness drill was successfully performed by DCP and San Luis Obispo County. The post-drill critique was effective with the most significant "gap" to good performance being less-than-satisfactory communication in keeping all participants current on plant status. The County of San Luis Obispo Emergency Services Group appears to be well prepared for using social media as a helpful tool to aid in responding to nuclear plant events requiring evacuation and/or sheltering of the public. PG&E utilizes a number of social media to expand and enhance communications within PG&E, with outside organizations including response organizations, and with the general public. DCP's selection of the social media networks to employ appears to be well conceived, dovetails well with San Luis Obispo County networks, and appears to be manageable. Likewise, PG&E's network of staffed, social media trained employees appears to be reasonable. The April 18, 2016 inadvertent activation of the Voice Activated Notification System was determined to have been caused due to human error, when a security officer had pressed the wrong button due to not having been trained for the evolution, not having

had a pre-job brief, and not having the proper procedure. The investigation and corrective actions, personnel awareness and training, and appropriate procedure changes appeared satisfactory. (4.7)

9. Probabilistic Risk Assessment (PRA) is an effective tool in understanding and determining nuclear reactor safety. PG&E has established an effective PRA Program staffed by experienced personnel and utilizes PRA to the full extent in analyzing and operating DCPD safely. (4.8)
10. Attending Nuclear Safety Oversight Committee (NSOC) meetings is an excellent way for the DCISC to learn about various plant issues, and therefore the DCISC will continue to attend them regularly. The DCISC believes that the DCPD NSOC is effective in advising plant management on items of nuclear safety and operational improvement. DCPD is satisfied that DCPD is taking its Institute of Nuclear Power Operations/World Association of Nuclear Operators evaluation seriously and satisfactorily working to resolve the evaluation areas for improvement. (4.9)
11. DCPD's 2014 total liquid and gaseous radiological releases were very small fractions of amounts permitted by regulations and Technical Specifications. The Radiological Environmental Monitoring Program confirmed that the operation of DCPD had no significant radiological impact on the environment in 2014. There were no uncontrolled or accidental releases. The Radiation Monitoring System Long Range Plan for the current licensing period appears to be well thought out and practical. (4.10)
12. DCPD Quality Verification (QV) appeared to be performing a satisfactory job in assessing quality performance across all departments. In its current Quality Performance Assessment Report, QV identified Equipment Reliability as its top issue and the plant was addressing this with action plans. (4.11)
13. DCPD's nuclear fuel has continued to function without any fuel failures since DCISC's prior review of this topic in November 2011. Implementation of the Electric Power Research Institute's guidelines for nuclear fuel management appears to have contributed positively to nuclear fuel performance and is aiding the continued preparation for transfer of used fuel to the Independent Spent Fuel Storage Installation. (4.12)
14. DCPD appears to have a strong and deep organizational commitment to achieving and maintaining high levels of equipment reliability. Previous recent issues affecting equipment reliability have been actively pursued, and results to date have been positive. DCPD has continued to make substantial progress in reducing the number of Critical Equipment Event Clock resets, and DCPD's efforts to address Single Point Vulnerabilities for plant equipment appears to be achieving the desired results of minimizing the occurrence of plant trips. (4.13)

15. Organizational effectiveness at DCPD continues satisfactorily, especially in the area of knowledge transfer, which will be critical in the future as employees retire. (4.14)
16. DCPD has dealt effectively with most equipment and system problems and is focused on improving system health. Systems that are the sources of emergency electrical power to the station's vital electrical equipment, the station's Emergency Diesel Generators and the 230 kV system that is supplied from the offsite electrical grid, were found to be operational but have been a focus of station and NRC attention. DCPD's Plant Health Committee has been improved to focus more on system/component health and meets more frequently, and overall system health has improved. DCPD has improved its performance with Safety System Functional Failures. (4.15)
17. Although the DCISC did not specifically review Steam Generator performance, it concluded that the performance was satisfactory in its reviews of secondary water chemistry and refueling outage results. (4.16)
18. DCPD performed two generally successful refueling outages, and there have been five consecutive outages with no recordable injuries. In 1R19, collective radiation exposure to personnel was higher than planned due to addition of unplanned work and to elevated levels of cobalt 60. In 2R19, two in-service inspection ultrasonic tests revealed questionable indications; however, no American Society of Mechanical Engineers Code defect criteria were exceeded. (4.17)
19. The Cyber Security Program appears to be satisfactorily implemented at DCPD. (4.18)
20. The DCISC believes that DCPD is prudent in its planned campaigns to expand its Independent Spent Fuel Storage Installation (ISFSI) and move its spent fuel from the Spent Fuel Pools to the ISFSI in a timely manner. The potential chloride stress corrosion cracking issue in stainless steel spent fuel casks, which is not an urgent issue, is being addressed by PG&E, the NRC, and the nuclear industry. The DCISC plans to monitor this issue. (4.19)
21. DCPD's progress on resolving its workplace personnel seismic safety issues has been satisfactory and responsive to the DCISC's concerns. PG&E's technical work on tsunami hazards at the DCPD site is well planned, proceeding very well so far, and working on the correct set of problems. The DCISC finds that the current project to develop probabilistic seismic hazard information about the Diablo Canyon site is going well. The DCISC will continue to follow the progress of this important work. (4.20)
22. DCPD's transition from NRC's Appendix R Fire Protection regulations to National Fire Protection Association Standard NFPA-805 is nearing completion. In April 2016, the NRC accepted DCPD's NFPA-805 Fire Protection Program as the licensing basis and provided 365 days for DCPD's training and procedure changes to be

completed. Applicable plant modifications have been completed with the final one, incipient fire detection, to be completed in 2017. The level of attention to DCP's Fire Protection Program and System has been increasing, although much still needs to be accomplished. The Health of the Fire Protection System in each Unit is rated as Green, or Healthy, but a number of aging issues are in the process of being addressed. Action plans have been developed to return Fire Protection Program Health from a Yellow to Green rating by June 2017. The Union of Concerned Scientists' statement that the plant "does not comply with either the 1980 or the 2004 regulations" is not an accurate or complete description of the current situation. (4.21)

23. The backgrounds of the students in DCP's Initial Non-licensed Operator Training Course N161 were strong, their participation in their meeting with the DCISC Fact-finding Team members was active and positive, and their understanding of the importance of nuclear safety was apparent. (4.22)
24. In 2011 DCP had requested that NRC pause its review of license renewal pending completion and submittal of its seismic evaluations. These evaluations were completed and submitted in March and April 2015. In June 2016, PG&E participated in a Joint Proposal to shut the plant down at the end of its original licensed life in 2024 for Unit 1 and 2025 for Unit 2. On June 21, 2016, PG&E requested that the NRC suspend review of its license renewal application. (4.23)
25. In June 2016, PG&E participated in a Joint Proposal to shut the plant down at the end of its original licensed life in 2024 for Unit 1 and 2025 for Unit 2. This apparently obviates the need for consideration of elimination of closed loop cooling; however, the DCISC will follow developments in this area. (4.24)
26. The DCP responses on Fukushima to NRC and the FLEX Initiative (post-Fukushima analysis and modifications) appeared well resourced, comprehensive, and on schedule to meet NRC and industry requirements. The DCISC will follow up periodically to assess DCP's progress. (4.25)

Concerns

Concerns are items, which, while not necessarily warranting recommendations, need enhanced continuing Committee review and scrutiny, or attention by PG&E. Concerns are monitored more actively and frequently by the Committee than other items. The DCISC concerns are as follows:

1. PG&E entered into an agreement, the Joint Proposal, to close DCP at the end of its original operating license (2024 for Unit 1 and 2025 for Unit 2). As a result, the DCISC has specific interest/concerns in two areas and will follow them closely:
 - a. Retention of qualified, experienced personnel necessary to operate DCP at an appropriate level of safety
 - b. Adequate spending on programs and equipment to sustain an appropriate level of nuclear safety

2. The DCISC is interested in further analysis of the potential effects of tsunamis on DCPD generated from submarine landslides.
3. The DCISC is interested in understanding the potential plans for cycling DCPD power levels to meet grid demands while sustaining an appropriate level of nuclear safety.
4. The DCISC is interested in following PG&E's ongoing program to monitor seismic activity and to improve the understanding of the safety of the plant against large earthquakes
5. The DCISC is interested in following PG&E's ongoing program to monitor the safety of the Independent Spent Fuel Storage Installation.
6. The DCISC is interested in following PG&E's ongoing program of working with local, state, and Federal agencies to assure adequate emergency preparedness in the event of a significant accident.
7. The DCISC is interested in following PG&E's ongoing program to respond to all of the NRC's and the Industry's post-Fukushima-accident safety improvement initiatives.

Recommendations: None

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	February 8, 2017
AGENDA ITEM:	V-B
AGENDA TITLE:	Update on Financial Matters and DCISC Activities During 2017.
CONSENT [☐] ACTION [☐] INFORMATION [☒]	

Staff Summary: It is expected that the Committee Members will hold a discussion regarding Committee financial matters and DCISC planned activities during 2017.

The Actual and Proposed DCISC Fact-Finding and Public Meeting Items, with Key Dates, prepared by Committee Consultant Wardell is provided for your use in reviewing and planning Committee activities.

RECOMMENDED COMMITTEE ACTION: As appropriate

DCISC Fact-Finding and Public Meeting Agenda Items for 2016-2017

July 20-21, 2016 Fact-finding Meeting (D.1) (PFP, RFW)

1. Meeting of DCISC Member Peterson with DCPD CNO Ed Halpin
2. Meeting with NRC Resident Inspector
3. Salt Deposition Rates
4. Safety/Security Interface and Accidental Discharge of Weapons
5. Reactor Coolant Pump Thermal Shutdown Seals
6. Emergency Diesel Generator (EDG) Health
7. Fire Doors
8. Design Quality
9. FLEX Training
10. Independent Spent Fuel Storage Installation (ISFSI) Fuel Loading
11. DCPD Safety and Wellness Expo and Barbeque Throwdown
12. Power Reduction Data

August 10-11, 2016 Fact-finding Meeting (D.2) (RJB, RDM)

1. Observe Plant Health Committee Meeting
2. Plant Protection System Upgrades
3. Review of Operations Human Performance and Operations Excellence Plan
4. Review of Operator Aging and Retention
5. DCISC Member Discussion with DCPD Senior Manager
6. Crane Program Health
7. Containment Spray System Update
8. Meeting with NRC Acting Senior Resident Inspector
9. Probabilistic Risk Assessment Program
10. Updated Seismic Probabilistic Risk Assessment
11. Tsunami Hazard Analysis Update

August 31 – September 1, 2016 Fact-finding Meeting (D.3) (PL, RFW)

1. Meeting with New NRC Senior Resident Inspector
2. Self-Assessment Program
3. Annual Radiation Release and Radiation Environmental Operating Reports
4. Containment Structure
5. Dr. Lam Meeting with DCPD Site Vice-President Jim Welsch
6. DCISC Public Tours of DCPD
7. DCPD Joint Proposal
8. Institute of Nuclear Power Operations (INPO) Update
9. Electronic Work Orders
10. Lunch Meeting with Quality Verification Department
11. Observe Licensed Operator Training on Storm Procedures
12. Closed Loop Cooling Status

October 19-20, 2016 Public Meeting (B.3)

1. Current Status of PG&E's Review of the Tsunami Hazard and Risk at DCPD and its Environs
2. DCISC Comments on Tsunami Hazard and Risk at DCPD and its Environs
3. Response to Question Posed by the CEC Technical Representative to the DCISC

4. Update on Emergency Preparedness Programs & Preparations for 11/2/16 Evaluated Exercise
5. Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Notices of Violation, and Issues Raised by NRC Resident Inspectors
6. Joint Proposal for the Retirement of DCPD at Expiration of the Current Operating License: Summary of Proposal, Approval Process/Status, Plans for Retaining Adequate and Qualified Staffing, Plans for Ensuring Plant Equipment Continues to be Adequately Maintained to Ensure Safe and Reliable Operation, Plans for Review of Major Capital Projects, and DCPD Plans for Participation in the NEI Program "Delivering the Nuclear Promise"
7. QV's Perspective on Plant Performance, Top Issues, QPAR
8. State of the Plant Update Including Key Events, Highlights, And Station Activities since the DCISC's June Public Meeting, Summary of Station Highlights and Performance
9. Plans for Managing Potential Future Power Reductions and/or Load Following

November 2-3, 2016 Fact-finding Meeting (D.4) (RJB, RFW)

1. Observe November 2, 2016 Ingestion Pathway Evaluated Emergency Exercise
2. Meet with NRC Senior Resident Inspector
3. National Fire Protection Association (NFPA)-805 Progress
4. DCPD Audit Program Update and Results of 2016 Audits
5. Reactor Coolant System Process Control System Health/Update
6. Emergency Auxiliary Saltwater Pump Flow Test Results
7. Meet with DCPD Station Director
8. Review Westinghouse Reanalysis of Reactor Coolant System Supports
9. Nuclear Fuel Program Health/Update/Plans

December 7-8, 2016 Fact-finding Meeting (D.5) (PFP, RDM)

1. Update on Spent Fuel Multipurpose Canister Inspections and Corrosion Issues
2. Review of Extent of Condition Evaluation for Emergency Diesel Generator Trip Pushbutton Covers
3. 230kV Electrical System Health
4. Review of the DCPD Excellence Plan
5. Update on National Fire Protection Association (NFPA) 805 Program Implementation Status and Remote Hot Shutdown Panels
6. Operations Focus Daily Briefing and Accompanying Operator on Rounds
7. Probabilistic Risk Assessment (PRA) Analysis for Nuclear Regulatory Commission (NRC) White Finding
8. Long Term Capital Project Planning Under the Joint Proposal
9. DCISC Member Discussion with DCPD Senior Manager
10. Observation of Operations Continuing Training Session

January 18-19, 2017 Fact-finding Meeting (D.6) (RJB, RFW)

1. Attend Plant Health Committee Meeting
2. Emergency Diesel Generator Health and Status
3. Buried Piping and Tanks Program
4. Large Transformer Health
5. Meet with NRC Senior Resident Inspector
6. Margin Management Program
7. Meet with DCPD Vice-President, Nuclear Generation

8. Results of November 2, 2016 Emergency Exercise
9. Local Intense Precipitation and Tsunami Status
10. Joint Proposal and DCPD Decommissioning Status

February 8-9, 2017 Public Meeting (B.6)

1. Update on the DCPD Excellence Plan and Plant Investment Review Process
2. NRC Senior Resident Inspector Remarks
3. State of the Plant Update including Key Events, Highlights, and Station Activities since DCISC's October 2016 Public Meeting: Summary of Station Highlights and Performance, and an update on the NRC's Evaluation of PG&E's Seismic Hazard Submittal
4. Identification on May 16, 2016, of Inoperability of Valve RHR-2-8700B, Investigation into Causes and Significance, Corrective Actions And Related NRC Enforcement Actions
5. Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Notices of Violation, and Issues Raised by NRC Resident Inspectors
6. Plans and Preparations for the Twentieth Refueling Outage for Unit-1 (1R20)
7. Results of the 2016 Operating Plan and Key Elements of the 2017 Operating Plan
8. Results of the November 2-4 2016, Evaluated Ingestion Pathway Emergency Exercise

March 8-9, 2017 Fact-finding Meeting (D.7) (PL, RDM) (Proposed agenda)

1. *Meet with DCPD Officer*
2. *Meet with NRC Senior Resident Inspector*
3. *Observe Plant Health Committee Meeting*
4. *ISFSI Operations, Recent Loading Campaign*
 - a. *Review Prompt Operability Assessment on Insufficient Stud Engagement on ISFSI Cask Hold Down Studs*
5. *Update on the Status of the Joint Proposal (latest developments in review process and approvals) and the DCPD Excellence Plan*
6. *Update on Reactor Vessel Material Surveillance Program*
7. *Review of Fire Protection Program Health (Non-NFPA-805)*
 - a. *Overview of Fire Protection Program Activities and Status*
 - b. *From 11/16 FFM: Review results of Quick Hit Self-Assessment*
 - c. *Review the NRC's October 2016 Triennial Fire Protection Inspection*
 - d. *Status of System Upgrades; Pipe and Pump Replacements; Tank Refurbishments*
8. *Nuclear Safety Culture & Safety-Conscious Work Environment*
 - a. *Review status of programs fostering a Safety Conscious Work Environment*
 - b. *Review activities of the Nuclear Safety Culture Monitoring Panel*
 - c. *Statistics for concerns reported by employees and NRC allegations*
9. *Observe FLEX Training (if occurring during visit)*
10. *Auxiliary Building Ventilation System Health*
 - a. *Include issue on 480 V Switchgear Room Ventilation Duct seismic interaction does not meet FSAR requirements*
11. *Centrifugal Charging Pump System Health*

April 18-19, 2017 Fact-finding Meeting (D.8) (PL, RFW)

May 10-11, 2017 Fact-finding Meeting (D.9) (PFP, RFW)

June 7-8, 2017 Public Meeting (B.9)

July 19-20, 2017 Fact-finding Meeting (PFP, RFW)

August 9-10, 2017 Fact-finding Meeting (RJB, RDM)

September 6-7, 2017 Fact-finding Meeting (PL, RDM)

October 18-19, 2017, Public Meeting

November 14-15, 2017 Fact-finding Meeting (RJB, RFW)

December 13-14, 2017 Fact-finding Meeting (PFP, RDM)

January 17-18, 2018 Fact-finding Meeting (PL, RFW)

February 7-8, 2018 Public Meeting

DCPP 2015-2016 Key Dates

NSOC Meetings (DCISC invited only to the 2 hour exit meeting on the final day)

March 20-23, 2017

June 26-29, 2017

October 2-5, 2017

Refueling Outages

1R20 April 23 – June 27, 2017

2R20 February 4 – March 17, 2018

1R21 February 4 – March 8, 2019

2R21 September 29 – December 8, 2019

Emergency Preparedness

Team Training & FLEX Tabletop February 2, 2017

Team Training & FLEX Tabletop March 2

Full Scope Drill – Drill/Exercise Performance Evaluated July 12 (Teams C & D)

“ “ “ “ “ “ “ “ October 4 (Teams A & B)

Performance Review Meetings (12:15 – 3:00pm)

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE	
AGENDA TRANSMITTAL FORM	
MEETING DATE:	February 8, 2017
AGENDA ITEM:	V-C
AGENDA TITLE:	Consideration of Issues on the Open Items List
CONSENT [] ACTION [X] INFORMATION [X]	
Staff Summary: It is anticipated that the committee will hold discussion concerning the items appearing on its Open Items List prepared by Committee Consultant Wardell.	
RECOMMENDED COMMITTEE ACTION: As appropriate, provide direction.	

Diablo Canyon Independent Safety Committee Open Items List

Open Item Type:

M= Monitor

F = Follow-up

I = Issue

Items in Italics are new or revised

ITEM NO.	TYPE	OPEN ITEM CATEGORY/DESCRIPTION	Last Actions	Next Action
CO		Conduct of Operations (CO)		
CO-5	M	Clearance Process Performance & Improvements. [Reviewed Outage 1R18 results at May 2014 FF and 2R18 at 1/22/15 FF: no clearance problems.] [2R19 outage results on 6/16PM agenda.]	5/14FF 1/15FF	Post-2R20
CO-7	M	Review DCCP storm response experience and strategy every two years [or as necessary] during or after annual winter storm season. [Reviewed at 4/15 FF – no significant storms]	4/14FF 4/15FF	2Q17FF, if any
CO-8	M	Monitor all reactor trips – automatic and manual (review trip LERs at public meetings). [Reviewed two reactor trips at 1/14 FF: satisfactory.] [Reviewed the commonality of three 2013-2014 trips caused by flashovers at 8/14FF – satisfactory.]	7/11FF 1/14FF 8/14FF	Post-trip FFs & PMs
CO-9	F	Reactivity Management – review every 18 months. [Reviewed Reactivity Management 5/16FF – satisfactory.]	8/14FF 5/16FF	3Q17FF
CO-10	M	Mispositioning Errors (Equipment Status) – monitor the status of mispositioning errors and actions to resolve. [Reviewed at 1/15FF – satisfactory.] [2R19 outage results on 6/16PM agenda.]	6/14FF 11/15FF	Post-2R20
CO-11	M	Operator concerns and issues – review periodically the status of operator concerns and issues. [Reviewed Ops Human Performance & Ops Excellence Plan 8/16FF – satisfactory.]	7/15FF 8/16FF	4Q17FF
CO-12	M	Mr. Geesman stated that as information on the increasing prospects for curtailing renewable sources of electric power such as wind or solar (renewables) appears to be one of the primary motivating factors behind the Joint Proposal the issue of DCCP load following is likely to come up frequently. Dr. Budnitz responded that the DCISC will be following and reviewing this issue. Dr. Peterson observed the issue of load following operations by DCCP will remain on the DCISC's Open Items List. Dr. Budnitz remarked that as load following is part of an implemented operational policy the DCISC should be prepared to review the procedures, plans, checks and balances which will necessarily be in place prior to commencement of any load following operations. <i>[Redundant with CO-13. Close here.]</i>	6/16PM	Close

February 8-9, 2017 Public Meeting

FF = Fact-finding Meeting

PM = Public Meeting

Q=Quarter

CO-13	M	This [load follow policy with CAISO] policy has never been implemented and Mr. Wardell reported in the DCISC representatives' opinion it would preserve nuclear safety but any implementation of the policy should be reviewed by the Committee. (From 6/16PM, Item 1.) Operating the plant during its final years of operation in different modes, such as reduced power, is something that merits investigation. To understand the overall balance of the risk in this situation, recognizing that temporary curtailment also involves thermal issues and the question of whether it would be more prudent from the perspective of plant safety to reduce power output than to keep running. This involves a balance of risk due to the risk associated with cycling the power output of DCCP together with the risk of transmission failure and, although both risks are small, how these risks balance against each other and might be mitigated by curtailing DCCP power output versus managing over generation in other ways should be compared.	6/16PM	3Q17FF
CM		Conduct of Maintenance (CM)		
CM-7	I	Review PG&E's progress in complying with the amendment to 10CFR50.55a, which provides the requirements for ISI of containment structures (degradation). [Reviewed Unit 2 inspection at 7/12FF - satisfactory]	7/12FF	3/17FF
CM-10	M	On-line Maintenance: review the implementation of on-line maintenance bi-annually, including the 12-week Rolling Maintenance Schedule about how well it is working & impacting risk. Review trend of amount of on-line maintenance. DCCP Assessment of Maintenance Risk and On-Line Maintenance Risk Procedures have been substantially upgraded with the addition of an Integrated Risk Review Team [Reviewed on-line maintenance risk 4/16FF - satisfactory.]	1/12FF 9/13FF 6/14FF 4/16FF	2Q18FF
CM-13	M	Review Maintenance Department performance measures, staffing, etc. approximately annually. [Reviewed Trouble-shooting 3/16FF - satisfactory.]	7/15FF 3/16FF	2Q17FF
EN		Engineering Program (EN)		
EN-16	F	DCCP Systems - review a system (or structure or component), system health, long-term plan, Maintenance Rule performance & walkdown with System Engineer at FFs. [Note: Next Action changed to "Regularly," and systems reviewed are listed with dates at the end of the Open Items List.]	11/15FF 3/16FF	Regularly
EN-19	F	Review every 12-18 months major Engineering Programs, including Configuration Management, Management, System Engineering (system health & long-term plans), Valve Testing, Margin Management, Staffing, etc. [Note: Next Action changed to "Regularly," & programs reviewed are listed with dates at the end of the Open Items List.]	9/15FF 3/16FF 11/16FF	Regularly
EN-20	F	Each Member should review or observe Plant Health Committee meetings. [Note: next action changed to "Regularly" and noted in table at the end of the OIL.] [Reviewed at 7/16FF & 8/16FF - satisfactory.]	11/16FF 1/17FF	Regularly
EN-31	F	Mr. Linnen stated the fact-finding team received an overview of the [Engineering Excellence] plan and he recommended the DCISC follow up in the future with a more detailed review of selected elements of the plan.	6/16PM	2Q17FF
HP		Human Performance: Human Errors and Improving Safety & Efficiency of Plant Performance		
HP-1	M	Review human performance & human behavior items (including error reduction programs, HP PIs, aberrant behavior statistics, FFD, stress reduction programs, Personnel Accountability Policy, Human Performance Steering Committee & Subcomm, Centers of Excellence, Org. Development). [Reviewed Ops Human Performance at 8/16FF - satisfactory.]	3/15FF 8/16FF	3/17FF 1R20 2R20
HP-18	M	Review biennially operator aging, physical fitness, "no solo" issues, attention enhancement, stress management, & incentives for operator focus. [Reviewed 8/16FF - satisfactory.]	3/14FF 8/16FF	3Q18FF

HP-25	M	Further observations and improvements in the Management Observation Program should be reviewed by DCISC. [Reviewed as part of AFI actions with Station Director at 12/13FF. Significant increase in frequency & intensity.] [Reviewed 12/14FF – satisfactory.]	10/15PM	3Q17FF
HS		Health, Nuclear Safety Culture and Safety Conscious Work Environment		
HS-6	F	Follow DCCP progress in establishing/improving its safety culture (and its subset Safety Conscious Work Environment, including Safety Culture Monitoring Panel, and including Employee Concerns & Differing Professional Opinion Programs). [Reviewed knowledge transfer 4/16FF – satisfactory.]	3/15FF 4/16FF	3/17FF
PI		Performance Improvement Programs		
PI-1		DCCP Performance Improvement Programs: Corrective Action, Self-Assessment, Operating Experience [and line use of OE], Benchmarking, etc. Review DCCP's improving the Corrective Action Program to make it very easy for any employee to enter an issue into the Corrective Action Program and issues may now be entered on an anonymous basis [2/14PM]. [Note: Next Action changed to "Regularly," and programs reviewed are listed with dates at the end of the Open Items List.] [Reviewed PIP/Procedures 3/16FF – satisfactory.]	9/14FF 1/15FF 11/15FF 3/16FF 9/16FF	At least one per year
EP		Emergency Preparedness (EP)		
EP-2	M	Attend and observe DCCP emergency drills and exercises annually [including Hostile Action Based Exercises], paying special attention to JMC communications to the media and public, including radiation release communications to the public, coordination of information release with SLO County, and extension of drills to better exercise FMTs & JMC. Consider public participation in drills. [Observed 9/9/15 drill – satisfactory.] [See FFPM for EP schedule.] [Ingestion Pathway Eval. 11/2/16 FF.]	9/9/15 11/16FF 1/17FF	Next exercise
EP-5	F	DCCP use of social media for emergency response. [Reviewed social media use with DCCP and SLO County at 1/16FF – satisfactory] [Limited use noticed at 11/2/16 exercise.]	5/14FF 1/16FF	2016 exercises
RA		Risk Assessment and Management (RA)		
RA-5	M	Review overall PRA program annually. Include Fire PRA Upgrade & Shutdown Analysis in next review. Much work underway (including plant specific shutdown risk analysis). Review PRA Group resources/capabilities. Turbine Bldg. (CCW & Condenser) internal flooding. Include external flooding and tsunami risk (see SC-6).	3/15FF 6/15FF 8/16FF	2Q17FF RJB
RA-6	F	Monitor Seismic Fragility Analysis progress. [Reviewed at 8/16FF – satisfactory.]	8/16FF	3Q17FF RJB
NS		Nuclear Safety Oversight and Review (NS)		
NS-5	M	Monitor NSOC meetings periodically to observe their processes and their review of nuclear safety issues. [Reviewed at 11/15FF – satisfactory.] [FFPM: 2017: March 23, June 29, October 5]	11/14FF 11/15FF	Next meeting
NS-9	M	Monitor DCCP's program to track INPO Areas for Improvement. Review with DCCP INPO Coordinator. Review after mid-cycle review. [Reviewed DCCP Strategic Performance Improvement Plan at 5/14FF: sat.] Biannual INPO Evaluation August 2015. [Reviewed INPO 8/16 evaluation response at 9/16FF – satisfactory.]	5/14FF 9/15FF 9/16FF	3Q17FF
RP		Radiation Protection (RP)		
RP-3	M	Regularly review outage RP performance. [Reviewed results of 1R19 at 11/15FF – total dose far exceeded goal due to higher rad levels and dose-intensive work.]	11/15FF 2/16PM	1R20 2R20
RP-12	M	Review annual DCCP radiological release report each year. Review at Summer or Fall FFs. [Reviewed radiation release reports 9/16FF – satisfactory.]	7/15FF 9/16FF	7/17FF

RP-13	F	The PHC also reviewed the Radiation Monitoring System, which is white status for Unit-1 (U-1) and in yellow status for Unit-2 (U-2) because of equipment reliability problems due to aging. The PHC expects to review a long-term strategy to address these issues by mid-2014. [Reviewed 3/16FF – satisfactory.]	2/14PM 11/14FF 3/16FF	4Q17FF
QP		Quality Programs (QP)		
QP-3	M	Review the activities, organization and results of QV audits as well as PG&E's outside biennial audits, including timeliness of corrective actions. Review annually – include 4 th quarter QPAR with yearly results. [Reviewed QV Org. & QA Audits at 9/15FF & 11/16FF – satisfactory.]	9/14FF 9/15FF 11/16FF	1Q17FF QPAR
QP-9	F	Software QA Program: SQA Program determined satisfactory in Sept. 2006 FF meeting. [Reviewed at December 2010 FF – satisfactory.] [Reviewed Cyber Security 12/15FF – satisfactory.]	12/13FF 12/15FF	1or2Q17F F
NF		Nuclear Fuel Performance (NF)		
NF-9	M	Nuclear Fuel Performance & Issues (review after RFOs). [Reviewed fuel performance 6/14FF: satisfactory.] [2R19 RFO on 6/16PM agenda.] [Reviewed at 11/16FF – satisfactory.]	6/14FF	Each RFO
ER		Equipment Reliability and Life Cycle Management (ER)		
ER-5	M	Monitor the Equipment Reliability Process approximately annually. The indicators for Deficient Critical Components Backlog and Operational Work-arounds rated as needing improvement and the DCISC should continue its review of this item in the future. [Reviewed critical equipment clock resets 4/16FF – satisfactory.]	6/14FF 6/15F 7/15FF	3Q17FF
OE		Organizational Effectiveness & Development (OE)		
OE-1	F	Review DCCP Operating Plan each January after development. [Reviewed at 1/16FF & on agenda for 2/16PM.]	1/16FF	2/17PM
SE		System and Equipment Performance/Problems (SE)		
SE-26	M	Review reactor pressure vessel compliance status after next set of surveillance samples is analyzed and effective vessel lifetime projections are updated. [Reviewed 3/16FF – satisfactory.]	8/13FF 1/15FF 3/16FF	After applicable RFOs
SE-39	F	Review and tour the inspections and repairs of concrete Intake Structures following selected refueling outages. [Reviewed at 7/09 FF, 6/13 FF, and 11/14FF – satisfactory.]	7/09 FF 6/13FF 11/14FF	After applicable RFOs
SE-40	F	Monitor the status of transformers & leakage, failures, corrective actions. Follow status of transformer protection barrier. [Reviewed at November 2010 PM – satisfactory & follow after 1R16.] [Large transformers 9/11FF] [Reviewed large transformers 4/13FF – satisfactory, but wall schedule delayed until R21 outages. DCISC follow-up needed.] [Reviewed 2/15PM – satisfactory.]	4/13FF 12/14FF 2/15PM 1/17FF	1Q18FF
SE-42	F	Safety System Functional Failures – review annually. [Reviewed at 7/12FF – satisfactory.] [Reviewed 9/13FF – not satisfactory - follow up needed.] DCCP continues to have safety system functional failures and that, while redundant systems and components remain available, progress in addressing this issue has been less than desired. DCCP has now commenced an augmented program and Mr. Wardell stated the DCISC should review the results of these efforts during the third or fourth quarter of 2014 [Reviewed 3/14FF: no improvement. Review again 3Q14FF.] [Reviewed 11/14FF – no improvement – initiate DCISC recommendation.] [Reviewed at 9/15FF – much improvement – continue to monitor.] [Reviewed 3/16FF – satisfactory.]	7/12FF 9/13FF 10/13PM 3/14FF 11/14FF 9/15FF 3/16FF	2Q17FF

SE-45	F	Control Room Ventilation System Issues. This (Control Room Ventilation System licensing basis change) is expected to be completed by the end of 2015. Mr. Wardell suggested the DCISC review this issue when DCCPP submits its license amendment (LAR) to the NRC and following NRC approval of the LAR. [Reviewed 5/16FF – satisfactory. NRC approval expected mid-2017.]	6/13PM 3/14FF 5/16FF	3Q17FF
SE-47	F	The DCISC concluded the station continues to set high performance goals and is maintaining effective control of secondary water chemistry and is responding proactively to identify issues. Review all Chemistry in future. [Reviewed 9/15FF – excellent performance.] [Reviewed at 4/16FF – satisfactory.]	10/13P 9/15FF 4/16FF	2Q17FF all Chem.
SE-48	F	Voltage stability issues with the 230kV System should be pursued at least annually not only with the plant but also with the appropriate group in the PG&E corporate organization. [Reviewed at 9/15FF – progress made – continue to monitor until complete following 2R19.] [Reviewed at 4/16FF – satisfactory.]	6/14FF 9/15FF 4/16FF	3/17FF
SE-49	F	Emergency Diesel Generators (EDGs) – [Reviewed EDGs at 6/15FF & 9/15FF – satisfactory. Health Yellow but to become White 4Q15, reviewed at 7/16FF – White.]	9/15FF 7/16FF	1Q17FF
SE-50	F	Monitor the status of DCCPP's decision on purchase of a new generator stator.	6/16PM 12/16FF	3Q17FF
SG		Steam Generator Performance (SG)		
SG-6	M	Review Steam Generator performance metrics & inspection results after refueling outages and the 5-year tube inspections. [Tube inspections 11/10PM, SG performance 6/11PM] [Reviewed 5/12 FF & 6/12PM – satisfactory – continue to monitor.] [Reviewed at 8/13FF – satisfactory.] [Reviewed 11/14FF – SG tubes in good shape.]	6/12PM 8/13FF 11/14FF	Following RFOs
OM		Outage Management (OM)		
OM-3	M	During outages, monitor Outage Coordination Center, Control Room, and containment walkdown/inspection (end of outage). Review outage turbine work. Dr. Peterson would welcome an opportunity to observe a containment closure drill during a future outage. [Per & Brian should schedule this.]	5/11 FF 5/12 FF 11/15FF	Next RFO
OM-4	M	Review Outage Safety Plan, safety margin trends, outage results following each outage at FFs and PMs. [Reviewed 2R19 outage results at 5/16FF – satisfactory.]	6/15FF 2/16PM 5/16FF	Each RFO
OM-5	F	DCCPP has determined that it needs to do a better job of foreign material exclusion (FME) and this resolution appeared satisfactory to the DCISC team but Mr. Wardell recommended the DCISC follow up on this issue following 2R18. [Reviewed 12/14FF – satisfactory.]	1/12FF 12/14FF	3/17FF
SEC		Security (SEC)		
SEC-3	M	Monitor interaction of Security and Operations, Engineering, Maintenance, and Emergency Preparedness for effects on nuclear safety. [Reviewed Cyber-Security April 2011 FF: satisfactory. Review specific mods to see how handled with new NRC regs. [Reviewed Safety-Security Interface 8/14 FF & 7/16FF – satisfactory.]	12/12FF 8/14FF 7/16FF	2Q18FF
SF		Independent Spent Fuel Storage Installation – ISFSI (SF)		
SF-1		Monitor ISFSI operations, including cask transfer. [Reviewed at 7/15FF ISFSI corrosion potential and ISFSI additions.] [Reviewed ISFSI inspection program 12/15FF – satisfactory.] [DCCPP corrosion presentation at 2/16PM.] Review following next campaign.	12/15FF 7/16FF 12/16FF	3/17FF
SF-2	M	Follow technical advances of relative risks of cask and pool storage. NRC Staff study and Commissioners' vote. Monitor needs for opening casks to inspect fuel. Monitor SONGS spent fuel transfer plans. Include corrosion of metals [reviewed 5/15FF]. [Reviewed ISFSI MPC corrosion at 7/15 – satisfactory.]	2/16PM 12/16FF	3Q17FF

SC	M	Seismic, Tsunami and Other External Events		
SC-3	M	Long-Term Seismic Program: review periodically. Review significant seismic events as they occur. Reviewed at 6/09 PM. [Reviewed 3/10 FF – progress satisfactory. Continue to monitor.] DCCP Seismic study reviewed 3/15 FF & to be presented by DCCP at 6/15PM. Shoreline Fault – follow activities and events with the Shoreline Fault. Review NRC's Review Report within several months. [Reviewed Seismic PRA 8/16FF – satisfactory.]	6/15PM 11/15FF 8/16FF	3Q17FF
SC-4	M	Monitor new DCCP risk-based Tsunami Hazard Analysis. [PG&E has completed.] [Coordinate with BDB-1, Fukushima review.] Include Bartlett data and submarine landslide potential. Review DCCP tsunami design and licensing bases. [Reviewed at 12/8/15FF and 1/6/16 FF & 2/16PM - satisfactory. Dr. Robert Sewell presented his evaluation at June 2016 Public Meeting. Dr. Peterson remarked that with the Bartlett cruise data some fairly good conclusions may be possible related to the risk associated with submarine landslide as well as the magnitude and size of tsunamis produced by such events. Dr. Peterson reported he has asked PG&E for an estimate of the thickness and length of offshore deposits in order to get preliminary estimates on the volume of the sediment involved for use in comparison to the proxies that have been used to estimate run ups for the entire coastline subject to these sorts of events because this matter relates to the general safety of the populations that live close of the ocean along California's central coast. In response to Dr. Budnitz' inquiry as to the annual probability of a 29.9-foot tsunami, Dr. Doohar replied that the probability was very low but PG&E is still working on estimating probabilities and would be reporting to the DCISC in the future. Dr. Budnitz observed that those results would be important in context of assessing any threat to the plant and until some sort of state of knowledge of the probability is established, that is a probabilistic understanding of the epistemic uncertainty, the DCISC's inquiry would remain open. Dr. Peterson, while acknowledging the difficulty based on limited data, stated he would be interested in understanding more about the projections for tsunamis which might have been generated by those landslides [shown by the Bartlett data.] [Need to clean all this wording up.]	2/16PM 6/16PM 8/16FF	2Q17FF
SC-11	F	Monitor the local intense precipitation flooding hazard at the plant after NRC releases its report on its review of DCCP 3/15 submittal. [Reviewed at 5/16FF. NRC approval to be issued.]	5/16FF 1/17FF	Post NRC final report
SC-12	F	Workplace seismic safety – review annually.	2/16PM	3Q17FF

SC-13	F	Dr. Sewell concluded his presentation with a recommendation that a state of the art probabilistic tsunami hazard assessment, akin to a SSHAC Level 2 review, is warranted which would involve consulting multiple disciplines and selecting experts capable of representing the informed technical community. Dr. Gibson stated he will await the NRC's response to PG&E's 2015 Report but from a public policy perspective he encouraged the DCISC to pursue Dr. Sewell's recommendations to gain a better understanding, as a part of the fundamental role played by the DCISC to communicate with the public, concerning the level of every possible hazard to DCCP. The Committee directed that the NRC's review of PG&E's 2015 Report on the evaluation of the tsunami risk be addressed during future fact-finding with PG&E with the goal of developing actionable recommendations to PG&E with respect to additional studies to characterize the submarine landslide induced tsunami hazard at the DCCP plant site and its environs. Dr. Budnitz stated that a fact-finding should also be scheduled with PG&E to review with the Probabilistic Risk Assessment Group at the plant how feasible it is for that group to work with the Structural and Tsunami Groups on a CDDP study for tsunamis of differing sizes. Dr. Budnitz also recommended that the Committee during fact-finding meet with PG&E's consultants and contractors in the tsunami group as well as with the PG&E Geoscience Department to pursue how much and how quickly more information might be obtained. Dr. Budnitz further recommended a fact-finding, perhaps with Dr. Sewell, to explore a long-term evaluation compromise. Dr. Lam stated he endorsed Dr. Budnitz' proposals and directed they the items identified be placed on the Open Items List. Dr. Peterson stated he recommended more effort be invested to analyze and interpret the data that is available from the Bartlett cruise and to explore what types of resources PG&E should be expected to bring to bear on this problem given the finite period now under consideration for DCCP's future operation. <i>[Reviewed at 1/17FF. DCCP pursuing funding for DCISC requested analysis.]</i>	1/17FF	2Q17FF
FP		Fire Protection (FP)		
FP-5	M	Review Fire Protection Program and Systems every two-three years, including QV audits and NRC triennial inspections. Review the health and correction of degraded systems every six months. [3/15FF: review pipe & pump replacement & tank refurbishment by mid-2016.]	3/15FF 1/16FF	3/17FF
FP-6	M	Monitor DCCP's process of converting to the National Fire Protection Association's Regulation 805 (NFPA 805) standard. [Reviewed at 5/16FF – NRC approval issued. DCCP has a year to complete procedures, training, etc.]	11/16FF 12/16FF	2Q17FF
FP-7	F	Mar 2014 FF Report: Ten remaining fire doors have been included as highest priority in the Plant Door Life Cycle Management Plan. This plan was presented in April 2014 to the Plant Review Committee & received 2015 funding. [Reviewed at 7/16FF – satisfactory.]	11/14FF 3/15FF 7/16FF	2Q17FF
LD		Learning & Development Programs (LD)		
LD-3	M	Review non-license technical, operations & accredited training programs at least annually. [Reviewed Maintenance Training Programs 12/14FF – satisfactory.]	12/14FF 12/14FF	2Q17FF
LD-6	F	Observe operator license, re-qualification, classes periodically in FF meetings. Include Enhanced Simulator Training.] [Observed Ops TCOA training & Eng. DC Power System training at 6/14FF – satisfactory.] [Discussions with SRO trainees at 4/16FF.] [Reviewed at 9/16FF – satisfactory.]	6/14FF 9/16FF 12/16FF	10/17FF
NR		Nuclear Regulatory Commission Items (NR)		

NR-3	M	Monitor the Non-Cited Violation Tracking & Trending Program annually at the Jan/Feb Public Meetings.	9/12FF 6/14PM	Public Meetings Regularly
NR-4	F	Meet with NRC Resident Inspectors regularly. [Note: Next Action changed to "Regularly."]	1/17FF	
LR		License Renewal (LR)		
LR-1	F	CEC: The Committee should conduct an evaluation of issues and make recommendations for any mitigation plans related to reactor pressure vessel integrity . . . in connection with PG&E's application for a 20-year license renewal (LR) and should consider reactor vessel surveillance reports in context of changes predicted to the predicted seismic hazard in the vicinity of the plant site.	11/10 PM 2/11 FF 2/11 FF 8/13FF	Monitor re Joint Proposal decision
CL		Closed Loop Cooling (CL)		
CL-1	M	Monitor DCP's responses and actions to the EPA proposed regulations on closed loop cooling (best technology available) for thermal power plants. [Reviewed at December 2010 FF – DCP's feasibility study satisfactory.] [Reviewed at 12/11 FF – satisfactory.] [Reviewed at 9/12FF – satisfactory.] Dr. Peterson commented the DCISC needs to monitor issues with respect to safety evaluation of any such possible modifications and the transition that might occur from the elimination of the once-through cooling system now used by DCP [6/12PM]. [Reviewed at 5/14FF, continue to follow.] [Reviewed 12/14FF – nothing new.]	12/11FF 9/12FF 9/13FF 10/13PM 5/14FF 12/14FF	Monitor re Joint Proposal decision
CL-2	F	Monitor response to DCISC input sent to SWRCB and its Nuclear Review Committee. Bechtel is performing the safety review.) [RJB attended SWRCB meeting on July 17, 2013 in Sacramento.] (DCISC 9/5/13 Bechtel evaluation report to SWRCB.)	6/11 PM	Monitor re Joint Proposal decision
CL-4	M	Monitor salt deposition on external equipment, systems, EDG, ventilation systems, transformers, etc. [Check with DCP on data availability beforehand.] [Determine rate of salt deposition.] [Reviewed at 7/16FF.]	4/15FF 7/16FF	Review annually
BDB		Beyond Design Basis Events (e.g., Fukushima Event)		
BDB-6	F	DCPP FLEX Status – review status of progress on FLEX, including EASW screen plugging, SFP level instrumentation; SAMG, EDMG, EOP consolidation; portable instrumentation; operator actions; temporary connections; equipment storage. Review BDB & FLEX storage re: PPR & dosimetry. Review FLEX training. [DCISC should observe future FLEX training and FLEX overall. [Reviewed EASW pump test results at 11/16FF. Results satisfactory. Close.]	4/15FF 7/15FF 12/15FF 5/16FF 11/16FF	Close
DEC		Decommissioning (New)		
DEC-1	F	Review DCP's decommissioning plans periodically as a result of the Joint Proposal forced plant shutdown in 2025. Review the timing of spent fuel transfer from wet to dry storage and when the spent fuel pools are decommissioned the plant will lose the capability to open multipurpose canisters for inspection. DCISC should actively review the decommissioning plans for DCP because of the potential impact on staffing and future options with respect to managing spent fuel	10/16PM	3Q17FF
O		Other Items (O)		
O-1	F	Perform observations of evolutions (work processes) within the plant periodically. [Performed observation of Turbine Building rounds 11/13FF – satisfactory. Continue with these about annually.]	11/13PM 12/16FF	4Q17FF

O-2	F	Dr. Peterson commented one of the issues with decommissioning a nuclear power plant involves the SFPs which are costly to maintain but which when they are decommissioned lose the ability to be used for purposes of inspecting fuel or making transfers. There is also an issue of what types of transportation casks will be required to move the fuel to a consolidated fuel storage facility when one is available and whether this might require the ability to use the SFP. Dr. Peterson recommended the Committee review these issues with PG&E during a future fact-finding. Review of Decommissioning added at 10/16PM.	6/16PM	4Q17FF
		Public Meeting Items (PM) (Reference: Public Meeting Minutes Pages)		
6/15 PM 8	F	The LBVP review discovered that due to a misinterpretation by the vendor equipment was not designed to the fullest extent for seismic and loss of coolant accident (LOCA) loads. A prompt operability assessment (POA) was completed which justified continued operation with the loading as calculated by the vendor and margins were judged to be sufficient until reanalysis is completed. That reanalysis is in progress and is due to be completed by mid-October 2015. [Reviewed at 9/15FF. RV Head calculation completed with issue resolved. Awaiting SG analysis, expected 9/16.] [Reviewed at 11/16FF. Calculations completed with satisfactory results. Close.]	6/15PM 9/15FF 11/16FF	Close
10/15 PM 4	F	The reanalysis of the steam generators being performed by Westinghouse is scheduled to be complete by the end of September 2016. The plant has continued operations under a Prompt Operability Assessment document. Mr. Wardell suggested an item be added to the Open Items List to provide for DCISC review of this issue in [November] 2016. [Reviewed at 11/16FF. Calculations completed with satisfactory results. Close.]	10/15PM	Close
2/16 PM 3	F	Portable Electronic Device Use and Plans for Use of Wireless Technology within the Power Block - Mr. Wardell reported the Electronic Device Project is focused on increasing the use of electronic devices, including tablets, in connection with maintenance tasks and for recording data during inspection rounds. This is intended to improve efficiency and reduce paper. Mr. Wardell stated a few electronic work packages have been issued and he suggested these be reviewed during a future fact-finding. A second project involves use of electronic devices and increased use of wireless information technology (IT) within the Power Block. The Power Block consists of those portions of the plant used to generate electricity including the Turbine Building, the Auxiliary Building and the Control Rooms. One of the problems with use of wireless technology is the potential for radio interference with a plant control system which must be properly shielded and protected. The DCISC team concluded both projects appear to be beneficial and Mr. Wardell recommended the DCISC continue to follow these projects as they are being implemented. [Review electronic work packages.] [Reviewed at 9/16FF – satisfactory.]	12/15FF 2/16PM 9/16FF	Monitor annually
10	F	Permanent corrective action installing [4kV] solid state relays will be completed during refueling outages 1R21 2R21. The fact-finding team concluded reasonable progress has been made but the DCISC should continue to monitor station progress with regard to the potential under voltage conditions which could affect plant safety systems. [Reviewed at 4/16FF – satisfactory. Continue to monitor.]	4/16FF 2/16PM	Post 1R21 & 2R21 RFOs
12	F	The fact-finding team concluded the station [Margin Management Program] is focused on issues directly affecting operating margins and suggests that for a future review during the first quarter of 2017, after both program owners are fully qualified, one or two margin issues should be selected for review. [Regarding the Nuclear Promise, is DCCP keeping its Margin Management Program? Yes, as per 1/17FF.]	2/16PM 1/17FF	2Q18FF

17	F	In response to Consultant Wardell's inquiry, Mr. Strickland confirmed the NRC is undertaking an independent study and assessment of the tsunami risk and has completed the initial phase of that work, but the final validation and publication is expected in the second of third quarter of 2016. Dr. Peterson remarked the DCISC hopes to be able to review the NRC independent assessment prior to its June 20-21 2016, public meeting but does not expect to fully close out this issue at that time.	2/16PM	Awaiting NRC final report
6/16 PM 1	F	This [load follow policy with CAISO] policy has never been implemented and Mr. Wardell reported in the DCISC representatives' opinion it would preserve nuclear safety but any implementation of the policy should be reviewed by the Committee. <i>[Moved to Item CO-13. Close here.]</i>	6/16PM	Close
2	F	The balance of the [reactor coolant system] analysis is being performed by Westinghouse and by the Areva firm and is expected to be complete by the end of 2016. Mr. Wardell suggested the DCISC review the results in early 2017. <i>[Reviewed in 11/16FF – analysis completed with satisfactory results – close]</i>	6/16PM 11/16FF	Close
3	F	The PHC also discussed funding for modifications including installation of a cover over a Unit-2 diesel generator trip button to prevent inadvertent operation and the DCISC will follow up on why that action was not taken when Unit-1 had an inadvertent actuation of the same button which was addressed by installation of a similar cover.	6/16PM	3/17FF
4	F	The DCISC team found a significant reduction in SSFF during 2015 with one SSFF for Unit-1 and four for Unit-2 with none experienced in the fourth quarter of 2015. The DCISC team recommends the Committee continue to routinely monitor progress in mid-2017.	6/16PM	3Q17FF
Oct 2016 PM 1	F	<i>During discussion of an item in the Minutes, Dr. Peterson requested that a visit to the hot shutdown panel be scheduled during the December 2016 fact-finding visit to DCPP.</i>	10/16PM 12/16FF?	Close?
2	F	<i>During review of the Minutes Dr. Budnitz was delegated by the Committee to contact and provide a review of comments from the June 2016 Minutes, including a recommendation as to what additional work may be needed, to be provided by DCISC Consultant Dr. Robert T. Sewell regarding the presentation Dr. Sewell made at the June 2016 DCISC public meeting on the tsunami hazard and risk at DCPP.</i>	10/16PM	RJB?
3	F	<i>They agreed that some of those materials, including the Minutes and the Open Items Lists, will be in the future labeled as "drafts" with the dates inserted on every page but will continue to be made available to the public prior to the public meetings of the Committee at the Cal Poly Library and on the Committee's website as well as at the public meeting. [Completed. Close.]</i>	10/16PM	Close
4	F	<i>In response to Ms. Lewis inquiry, the Members directed an open item be added concerning the U-2 stator upgrade project (see above) with attribution to Ms. Lewis. [Already included in Item SE-50. Close.]</i>	10/16PM	Close
5	F	<i>Dr. Peterson observed, and Drs. Budnitz and Lam agreed, that classification of systems, structures and components is a topic which should be considered for a presentation by PG&E at the next public meeting of the DCISC.</i>	10/16PM	6/17PM
6	F	<i>Mr. Wardell observed that he would distribute a revised version of the Open Items List which includes the comments in bold text from the June 2016 Minutes. [Completed. Close.]</i>	10/16PM	Close

7	F	Drs. Peterson and Budnitz responded and confirmed the DCISC would follow up on the White finding and the issue raised by Ms. Becker at a future fact-finding and this review would include an assessment of extent of condition as the most important lesson from many events is the extent of condition rather than a single occurrence. [Completed in 12/16FF. Close.]	10/16PM	Close
8	F	Mr. Wardell reported in accordance with discussion of the Open Items List, the salt deposition issue will remain open for future review by the DCISC. [Completed. Close.]	10/16PM	Close
9	F	Mr. Wardell reported that during the last refueling outages modifications have been successful and this issue can be removed from the Open Items List. [Completed. Close.]	10/16PM	Close
10	F	Dr. Lam stated he would follow up on Mr. Geesman's concern on accelerating the transfer of spent fuel to dry cask storage at the ISFSI at his scheduled fact-finding in March 2016 [2017?].	10/16PM	3/17FF
11	F	This project [Plant Protection System Upgrade] and others of this nature are subject to review and the process for that review is now under consideration and development to review major capital projects in light of the currently proposed remaining period of operations under the Joint Proposal. The DCISC team found the project on schedule but the entire process of major capital project review is a topic the DCISC should pursue and review in the future. [Reviewed at the 12/16FF – project is under review by DCCP. Continue to follow.]	10/16PM 12/16FF	4Q17FF
12	F	The DCISC team found the operator retention project to be effectively managed but the Committee should follow this issue closely with reference to licensed operators and well as the station in general.	10/16PM	3Q17FF
13	F	Overall, Mr. McWhorter stated the DCISC team concluded the seismic PRA process is proceeding satisfactorily and the Committee should continue to follow the activity in the future and that the use of magnitude saturation for short period ground motion is appropriate.	10/16PM	3Q17FF
14	F	The fact-finding team recommends that the DCISC follow up on that assessment and the team included in its report what Mr. McWhorter described as a generically worded recommendation that PG&E proceed with doing additional study of submarine landslide induced tsunami hazards at DCCP and its environs.	10/16PM	3Q17FF
15	F	Dr. Budnitz remarked that the June 2016 DCISC public meeting coincided with the NRC's annual meeting in the local San Luis Obispo area and he requested that the office of the Committee's Legal Counsel inform the NRC's Senior Resident Inspector of the dates of June 7-8, 2017, for the June 2017 public meeting of the DCISC so that the NRC might consider the dates of the DCISC's public meeting if and when the NRC sets the date for its June 2017 public meeting in the local community so that persons interested may be able to attend both meetings. [Completed. Close.]	10/16PM	Close
16	F	Dr. Budnitz requested and Mr. Jones agreed to have the power point slides used by Mr. Jones in presentation placed on the DCISC's website for public informational purposes. [Completed. Close.]	10/16PM	Close
17	F	Dr. Peterson remarked that, as DCCP relies on offsite power for safety of operations, it will be important to assess whether the Joint Proposal might have an impact or result in a change to reliability of electric supply. Mr. Jones responded that while he did not expect there would be any such effects he would need time to provide an answer to the Committee.	10/16PM	Awaiting DCCP
18	F	Dr. Peterson observed there have been multiple approaches taken to decommissioning in terms of rate and timing and the DCISC will need to review and discuss with its appointing entities whether and to what extent it will engage in a review of PG&E's decommissioning plans for DCCP. [Reviewed at 1/17FF. DCCP is forming decommissioning organization to look into decommissioning options.]	10/16PM	3Q17FF

19	F	Dr. Peterson remarked that there are also issues related to the timing of spent fuel transfer from wet to dry storage and when the spent fuel pools are decommissioned the plant will lose the capability to open multipurpose canisters for inspection and this led Dr. Peterson to the conclusion that the DCISC should actively review the decommissioning plans for DCPD because of the potential impact on staffing and future options with respect to managing spent fuel and an item should be added to the Open Items List for the purpose of reviewing decommissioning activities. [Added new Item DEC-1 to review decommissioning. Close here.]	10/16PM	Close
20	F	Dr. Peterson stated he appreciated public input and remarked that operating the plant during its final years of operation in different modes, such as reduced power, is something that merits investigation. He stated it would be appropriate for the DCISC to review the question of alternative operating loads and, in particular, the plans for the final two years of operation. The issue of whether the CPUC will fully fund all proposed work on DCPD is an issue on which the DCISC should maintain some cognizance. [Added to Item CO-13. Close here.]	10/16PM	Close
21	F	Mr. Wardell remarked the DCISC would like to review the latest NIEP evaluation of the Quality Organization during a future fact-finding.	10/16PM	2Q17FF
22	F	On a motion made by Dr. Budnitz, seconded by Dr. Peterson, the office of the DCISC's Legal Counsel was directed to make a request of PG&E for the documents referenced by Dr. Weitzberg and to inform the Committee of the conditions, if any, attached to their receipt. [Completed. Close.]	10/16PM	Close
23	F	Dr. Peterson stated it would be interesting to understand the overall balance of the risk in this situation, recognizing that temporary curtailment also involves thermal issues and the question of whether it would be more prudent from the perspective of plant safety to reduce power output than to keep running is an interesting one for the Committee to consider. [Added to Item CO-13. Close here.]	10/16PM	Close
24	F	Dr. Peterson observed this involves a balance of risk due to the risk associated with cycling the power output of DCPD together with the risk of transmission failure and, although both risks are small, how these risks balance against each other and might be mitigated by curtailing DCPD power output versus managing over generation in other ways should be compared. [Added to Item CO-13. Close here.]	10/16PM	Close
25	F	Dr. Peterson stated it would be timely and appropriate for the DCISC to review material while protecting the confidentiality of the information to have a better understanding of the potential scenarios where they might be requested to curtail generation and to potentially review issues of grid reliability and how the different risks affect one another given the over generation is going to occur on an increasingly frequent basis during the plant's projected operational life. [Added to Item CO-13. Close here.]	10/16PM	Close
26	F	Dr. Peterson stated he believed conditions around which curtailment might be requested on a discretionary basis would also provide a basis for review, including the risk tradeoff associated with reliability of the transmission system versus the reliability of the power plant and Dr. Peterson stated he believes that threshold has been triggered and he recommended the DCISC further pursue the matter. [Added to Item CO-13. Close here.]	10/16PM	Close
27	F	Dr. Peterson commented the CAISO is faced with the need to manage conditions when there is excess generation from a variety of sources and understanding whether the balance of risks requires curtailment of power operations is a worthy of an assessment. [Added to Item CO-13. Close here.]	10/16PM	Close

Diablo Canyon Independent Safety Committee Open Items ListDCPP Systems/Components Reviewed (EN-16)

4 kV – Nov 2015
 230 kV – Dec 2016
 500 kV – Dec 2014
 Aux Feedwater – Jan 2016
 Aux Saltwater – Apr 2016
 Aux Bldg Ventilation – Mar 2017
 Centrifugal Charging Pumps – 3/17FF
 Component Cooling Water – Apr 2014
 Compressed Air – Mar 2015 (review prior to 3Q16)
 Condensate – Apr 2016
 Containment Structure – Sep 2016
 Containment Spray – August 2016
 Control Room Simulator – Jun 2015
 Control Room Ventilation – May 2016
 Digital Systems – Dec 2013 & Oct 2014 PM
 DC Power – Sep 2014
 EDG – Jan 2017
 High Pressure Injection – April 2015
 Plant – Dec 2013
 Process Protection System Digital Upgrade – Jun 2016
 Radiation Monitoring – Nov 2014
 Radwaste Processing – Nov 2014
 Reactor Coolant – Sep 2014 (review again 4Q15FF)
 RCS Process Control System – Nov 2016
 Reactor Coolant Pumps – Jan 2015
 Refueling Equipment – Nov 2015
 RCS Process Control – Jun 2013
 RHR – Mar 2016
 Safety Injection Pumps Mar 2015
 Spent Fuel Pool – Mar 2015 & Apr 2015
 Steam Generators – Nov 2014

DCPP Programs Reviewed (EN-19 & PI-1)

AOV – Jun 2015
 Benchmarking – May 2015 (review biennially)

Boric Acid Corrosion Control – Apr 2016 (review biennially)
 Buried Piping & Tanks – Jan 2017
 Chemistry – Apr 2016
 Cranes – August 2016
 Configuration Management – Jul 2015 & Sep 2015
 Corrective Action – Nov 2015
 Door Life Cycle Management Plan – Mar 2014
 Environmental Qualification – Nov 2014
 Fire Doors – July 2016
 Fire Protection – Jun 2014 PM
 Flow Accelerated Corrosion – Apr 2016
 FME – Dec 2014
 Integrated Risk Assessment Program – Jun 2015
 Large Motors – Mar 2016
 Margin Management – Jan 2017
 MIDAS – Mar 2015
 Nuclear Fuel Program – Jun 2014
 On-Line Maintenance – Apr 2016
 Operating Experience – May 2015 (review biennially)
 Operational Decision Making – Apr 2015
 Performance Improvement – Mar 2016
 Performance Review Quarterly Meeting – May 2015
 Plant Health Committee – Jan 2017
 Reactivity Management – May 2016
 Safety-Security Interface – Jul 2016
 Self-Assessment – Sep 2016
 Single Point Vulnerabilities – Jan 2015
 Seismic PRA – Aug 2016
 Seismically Induced System Interactions – May 2015 (review biennially)
 System Engineering – Mar 2015
 Transformers, Large – Jan 2017
 Trending Analysis – Jan 2014
 Troubleshooting – Jan 2015
 Tsunami Hazard Analysis – August 2016
 Vibration Monitoring

February 8-9, 2017 Public Meeting

FF = Fact-finding Meeting

PM = Public Meeting

Q=Quarter

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE	
AGENDA TRANSMITTAL FORM	
MEETING DATE:	February 8, 2017
AGENDA ITEM:	VI-B
AGENDA TITLE:	Documents Provided to the Committee
CONSENT [] ACTION [] INFORMATION [X]	
Staff Summary: Attached for your information are copies of the transmittal memoranda which list the various documents provided to the Committee by PG&E since your last public meeting in October 2016.	
RECOMMENDED COMMITTEE ACTION: None, information item only.	

**December 2016 DCISC
List of Documents Transmitted Electronically**

A. Licensing Basis Impact Evaluations

Date	LBIE No.	Title
12/9/16	2016-011	E-Plan Coversheet
12/9/16	2016-012	Use of SAP2000 Code
12/9/16	2016-013	Open Phase Protection – Unit 1

B. NRC Outgoing Correspondence (incl. LERs, LARs, etc.)

Date	Letter No.	Title
12/1/16	DCL-16-129 DIL-16-019	Emergency Plan. Appendix F Update
12/5/16	DCL-16-126	Technical Specification Bases, Revision 10
12/5/16	DCL-16-128	Updated Final Safety Analysis Report, Revision 23
12/27/16	DCL-16-124	Technical Report Revision; License Amendment Request 15-03, "Application of Alternative Source Term"
12/27/16	DCL-16-132	Request for 180-Day Implementation Schedule for License Amendment Request 16-01, "Application to Revise Technical Specifications to Adopt TSTF-523, 'Generic Letter 2008-01, Managing Gas Accumulation,' Using the Consolidated Line Item Improvement Process"

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
12/1/16	Diablo Canyon Power Plants, Units 1 and 2, -NRC Examination Report 05000275/2016302; 05000323/2016302
12/7/16	Acceptance Review – Relief Request NDE-SIF-U2, Diablo Canyon Power Plant, Unit 2 (CAC No. 8188)
12/21/16	Diablo Canyon Power Plant, Units 1 and 2 – Issuance of Amendments Re: Digital Replacement of the Process Protection System Portion of the Reactor Protection System and Engineered Safety Features Actuation System (CAC Nos. ME7522 and ME7523)
12/21/16	Diablo Canyon Power Plant, Unit Nos. 1 and 2 – Staff Assessment of Information Provided Under Title 10 of the Code of Federal Regulations Part 50, Section 50.54(f), Seismic Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident (CAC Nos. MF5275 and MF5276)
12/22/16	Forthcoming Closed Meeting with Pacific Gas and Electric Company to Discuss the Proposed Change to the Defensive Strategy and 10 CFR 50.54(P) Documentation for Diablo Canyon Power Plant (CAC Nos. MF8959 and MF8960)
12/28/16	Diablo Canyon Power Plant – Final Significance Determination of a White finding, Notice of Violation, and Follow-Up Assessment Letter; NRC Inspection Report 05000275/2016010 and 05000323/2016010

**December 2016 DCISC
List of Documents Transmitted Electronically**

12/28/16	Diablo Canyon Power Plant, Unit Nos. 1 and 2 – Safety Evaluation Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 and EA-12-051 CAC Nos. MF0958, MF0959, MF0963, and MF0964)	
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D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
PSRC Minutes		
12/6/16	2016-023	E-Plan Coversheet LBIE 2016-011 Use of SAP2000 Code LBIE 2016-012 DCP 1000025148 Open Phase Protection – Unit 1; LBIE 2016-013

E. CAP Documents (RCAs, ACEs, CAP Effectiveness Evaluations)

Type	Doc. No.	Title
RCAs	SAPN 50870357	Root Cause Evaluation Report – Undetected ECCS Interlock Failure
ACE		There are no ACEs for this month.
Eff. Eval	SAPN 50518473	Effectiveness Evaluation for Root Cause Evaluation Unit 2 “A” Phase CCVT Flashover Results in U2 Trip
12/5/16		Condition Report Backlog Curves
12/12/16		Condition Report Backlog Curves
12/19/16		Condition Report Backlog Curves
12/27/16		Condition Report Backlog Curves
1/4/17		Condition Report Backlog Curves

F. QV Documents (QPAR, Audit Reports, Audit Schedule, Assessments)

Date	Doc. No.	Title
		There is no QPAR for this month.
		There are no Audit Reports for this month.
		There is no new Schedule for this month.
12/14/16	FileNet No. 162990011	DCPP Site Status Report (November 2016)

**December 2016 DCISC
List of Documents Transmitted Electronically**

G. Nuclear Safety Culture Monitoring Panel Reports

Date	Doc. No.	Title
		There is no Nuclear Safety Culture Monitoring Panel Report for this month

H. Self Assessment/Benchmarking (SA/BM Reports/Schedules)

Date	Doc. No.	Title
		There is no updated Quick Hit Self-Assessment (QHSA) Schedule for this month.
		There is no Formal Benchmarking and Self-Assessments Schedule for this month.
11/7/16	ASMP SAF 50828684	NRC 71111.11 Pre-Inspection Self-Assessment Report Rev. 1
11/10/16	SAPN 50634980	Updated Final Safety Analysis Report Self-Assessment
12/19/16	SAPN 50849179	Perform Quick Hit Assessment – Review the Priority 1 procedure distribution process to ensure standards, compliance, program effectiveness, and identify any performance gaps.
12/15/16	SAPN 50883751	SONGS Decommissioning Benchmarking

I. Performance Information (PPIR, Operating Plan, Station Initiatives, IPMs)

Date	Doc. No.	Title
4/4/16		Operating Plan 2016 – 2020, No new updates this month.
PPIR		Diablo Canyon Power Plant; Plant Performance Improvement Report; Achieving Results: Data: November 2016
Station Initiative		
12/13/16		Operations Excellence Plan
12/6/16		Engineering Department 2017, Our Path Forward
IPM		3Q2016 Station IPM Report

J. INPO

Date	Doc. No.	Title
		There are no INPO documents for this month.

**December 2016 DCISC
List of Documents Transmitted Electronically**

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
ODMs		There are no ODMs for this month.
POA		There are no POAs for this month.

L. Safety Limit Violation Report

Date	Doc. No.	Title
		There are no Safety Limit Violation Reports for this month.

M. Significance Determination Process Calculations

Date	Doc. No.	Title
		There are no Significance Determination Process Calculations for this month.

N. Miscellaneous

Date	Title
	There are no miscellaneous documents for this month.

O. Functional Area Documents

Subcommittee	Date/Doc	Title
Maintenance	Week 201648	T+1 Performance Critique
	Week 201649	T+1 Performance Critique
	Week 201650	T+1 Performance Critique
	Week 201651	T+1 Performance Critique
	Week 201652	T+1 Performance Critique

P. Documents Previously Transmitted during the Month

Date	Doc. No.	Title
		There were no documents previously transmitted during the month.

**November 2016 NSOC
List of Documents Transmitted Electronically**

A. Licensing Basis Impact Evaluations

Date	LBIE No.	Title
		There are no LBIEs for this month.

B. NRC Outgoing Correspondence (incl. LERs, LARs, etc.)

Date	Letter No.	Title
11/2/16	DCL-16-113	Corrections to the 2014 and 2015 Annual Radioactive Effluent Release Reports
11/3/16	DCL-16-114	Response to Generic Letter 2016-01
11/10/16	DCL-16-115	Supplement: ASME Section XI Inservice Inspection Program Relief Request NDE-RCS-SE-1 R20 to Allow Use of Alternative Depth Sizing Criteria
11/10/16	DCL-16-116	ASME Section XI Inservice Inspection Program Relief Request NDE-SIF-U2 due to Impracticality of Full Examination Volume Coverage Requirements
11/10/16	DCL-16-117	Reactor Coolant System Pressure and Temperature Limits Report for Units 1 and 2
11/17/16	DCL-16-120 DIL-16-018	Emergency Plan Implementing Procedure Updates

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
10/07/16	Project Manager Change for the License Renewal of Diablo Canyon Power Plant, Units 1 and 2 (TAC Nos. ME2896, ME2897, MF4019, and MF4020)
10/26/16	(NSOC only) Diablo Canyon Power Plant, Units 1 and 2 – NRC Security Inspection Report 05000275/2016201 and 05000323/2016201
10/27/16	Diablo Canyon Power Plant – NRC Integrated Inspection Report 05000275/2016003 and 05000323/2016003
11/14/16	Diablo Canyon Power Plant Units 1 and 2 – Request to Adopt Emergency Action Level (EAL) Schemes Pursuant to Nuclear Energy Institute (NEI) 99-01, Revision 6 (CAC Nos. MF8528 and MF8529)
11/23/16	Diablo Canyon Power Plant and Independent Spent Fuel Storage Installation (ISFSI) – NRC Inspection Report 05000275/2016001, 05000323/2016011, and 07200026/2016001

D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
PSRC Minutes		
10/11/16	2016-020	License Amendment Request 16-04 Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors"
10/25/16	2016-021	License Amendment Request 13-02 Technical Specification Changes for License

**November 2016 NSOC
List of Documents Transmitted Electronically**

		Amendment Request 13-02, "revision to Technical Specifications to Adopt Risk Informed Completion Times – RITSTF Initiative 4B"
10/25/16		Plant Staff Review Committee (Members/Alternates)
11/22/16	2016-022	XI3.ID9 Independent Decision-making Panel (IDP) XI3.ID10 Surveillance Test Interval Evaluation Process (Deletion) XI3.ID11 Surveillance Frequency Control Program

E. CAP Documents (RCAs, ACEs, CAP Effectiveness Evaluations)

Type	Doc. No.	Title
RCAs		There are no RCAs for this month.
ACE	SAPN 50872133	DA-Rupture Restr. MS-31RR not full enga
Eff. Eval	SAPN 50804873	DA-EDG 1-1 Failed to Start
	SAPN 50706314	ISFSI Uniform Loading Not Fully Preferential
11/8/16		Condition Report Backlog Curves
11/14/16		Condition Report Backlog Curves
11/21/16		Condition Report Backlog Curves
11/28/16		Condition Report Backlog Curves

F. QV Documents (QPAR, Audit Reports, Audit Schedule, Assessments)

Date	Doc. No.	Title
		There is no QPAR for this month.
11/21/16	FileNet # 162450002	2016 Maintenance Audit Report
		There is no new Schedule for this month.

G. Nuclear Safety Culture Monitoring Panel Reports

Date	Doc. No.	Title
		There is no Nuclear Safety Culture Monitoring Panel Report for this month.

H. Self Assessment/Benchmarking (SA/BM Reports/Schedules)

November 2016 NSOC
List of Documents Transmitted Electronically

Date	Doc. No.	Title
		There is no updated Quick Hit Self-Assessment (QHSA) Schedule for this month.
		There is no Formal Benchmarking and Self-Assessments Schedule for this month.
8/26/15	SAPN 50867490	Foreign Material Exclusion (FME) Program Quick Hit Self-Assessment Report
3/1/16	SAPN 50862382	Swagelok Vendor Training and Industry Discussion Informal Benchmark-Report Vendor Training/Discussion
4/16	SAPN 50842783	Digital Asset Management Action Plan, Assess the Process of Designing, Installing and Maintaining Digital Components Quick Hit Self-Assessment Report
4/28/16	SAPN 50846127	Snubber Program Assessment
5/9/16	SAPN 50849316	Security Target Sets Quick Hit Self-Assessment (QHSA)
6/8/16	SAPN 50857277	On-Shift Table-Top Drill Analysis Quick Hit Self-Assessment Report
6/15/16	SAPN 50858501	Track Cable program self assessment
7/7/16	SAPN 50851479	2R19 Human Performance Quick Hit Self-Assessment Report
7/19/16	SAPN 50863314	INPO EP Advisory Taskforce Meeting 7/19
7/25/16	SAPN 50864171	Use of Force Quick Hit Self-Assessment Report
7/26/16	SAPN 50857263	NRC Pre-Inspection 71124.05 Radiation Monitoring Instrumentation
9/6/16	SAPN 50870411	Quick Hit Self Assessment: BACCP
9/6/16	SAPN 50857266	NRC IP 71124.08, Radioactive Solid Waste Processing and Radioactive Material Handling, Storage and Transportation Quick Hit Self-Assessment
9/19/16	SAPN 50869941	DCPP Fire Department Triennial Readiness Assessment (B.5.b)
10/14/16	SAPN 50874636	Post Maintenance Testing (PMT)
11/8/16	SAPN 50875802	Review of CF3.GE1 and CF3.GE2 (DLAPs) Quick Hit Self-Assessment
11/22/16	SAPN 50880867	QHSA – Plant Health Prioritization Comm

**November 2016 NSOC
List of Documents Transmitted Electronically**

7/6/15	SAPN 50694594	Clearance and Tagging Benchmark
8/25/15	SAPN 50802046	Benchmark Missed Opportunity rve process
2/4/16	SAPN 50833326	Calvert Cliffs EP Informal Benchmark
2/10/16	SAPN 50834190	Conduct Formak Benchmarking – ER.1-1
2/21/16	SAPN 50836243	Informal Benchmarking – Motor User Group
2/25/16	SAPN 50832145	Informal Benchmark Trip to Columbia Generating Station in Richland, WA
2/29/16	SAPN 50837655	* Work Management Benchmark AP-928 Smnr
3/9/16	SAPN 50838987	Control of lifting and landing of leads and jumpers Informal Benchmark/Trip Report
3/14/16	SAPN 50840539	Nuclear Operator Engagement and Ownership Benchmark Report
3/28/16	SAPN 50844004	INPO Work Control and Maintenance Check-in Informal Benchmark/Trip Report
3/29/16	SAPN 50842792	Benchmark Chubu PRA - Informal
5/4/16	SAPN 50849239	Utility Simulator Users Group (USUG) E-mail Survey on Simulator Alarm Fidelity
5/9/16	SAPN 50834190	Equipment Reliability Benchmark – Engineering tools, processes and behaviors
5/14/16	SAPN 50851562	Trip report – PI Managers working mtg
6/1/16	SAPN 50845542	Formal Benchmark Report – Dynamic Learning Activity
6/17/16	SAPN 50862425	STARS On-line Work Management Semi-annual Peer Team Meeting & INPO AP-928 Work Management Working Group Working Meeting
7/26/16	SAPN 50864294	EP Decommissioning Industry Taskforce
7/27/16	SAPN 50874927	SNUG Conference Trip Report
8/1/16	SAPN 50865210	Trip Report Holtec Users Group
8/3/16	SAPN 50865619	2016 West/Master-Lee Refueling Conf Benchmarking
8/8/16	SAPN 50866378	Trip Report – Procedure Professionals Association 28 th Annual Procedure Symposium
8/11/16	SAPN 50867843	8/10/16 NIEP Trip Report

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8/15/16	SAPN 50828677	RP Portable and Counting Instrument Program Formal Benchmark Report
8/18/16	SAPN 50868150	Informal Benchmark – Exam Security
8/25/16	SAPN 50868714	QV Manager Benchmarking Trip
8/26/16	SAPN 50865889	Westinghouse Refueling Conference Informal Benchmark/Trip Report
8/29/16	SAPN 50869591	2016 FME Industry Working Group (IWG) Meeting Informal Benchmark Report
8/29/16	SAPN 50869970	STARS Outage Manager Meeting
8/31/16	SAPN 50869678	2016 NPUG Planning Meeting
8/31/16	SAPN 50869933	EPRI Informal Benchmark/Trip Report
8/31/16	SAPN 50803071	Informal Benchmarking at Palo Verde
9/1/16	SAPN 50869970	Informal BM – STARS OM meeting
9/14/16	SAPN 50877669	WM & Maint INPO Atlanta 9/12-14/2016
9/21/16	SAPN 50873693	INPO Emergency Management Workshop
9/30/16	SAPN 50877854	NSOC DWC Mgr Benchmarking / Mentoring
10/12/16	SAPN 50876600	Decommissioning Benchmarking
10/20/16	SAPN 50875829	Trip Report – Vogtle ATV
10/21/16	SAPN 50875875	IST Program Informal Benchmarking
11/1/16	SAPN 50877385	2016 PV Refueling Outage
11/4/16	SAPN 50877904	INPO Training Manger Workshop
11/8/16	SAPN 50878493	Diablo Canyon EDG MOW Duration and Palo Verde Best Practice
11/21/16	SAPN 50881400	Fall 2016 INPO Radiation Protection Manager's Workshop
11/21/16	SAPN 50876627	Confined Space Informal Benchmark Report
12/20/11	SAPN 50448507	Modification Installation Procedures Assessment Self-Assessment Report

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3/17/16	SAPN 50828705	Pre-PI&R Inspection Self-Assessment
5/12/16	SAPN 50828705	Pre-PI&R Inspection Self-assessment Report
8/3/16	SAPN 50826179	ICES Records Informal Self-Assessment
8/18/16	SAPN 50828273	Self-Assessment of Fire Protection Program
8/25/16	SAPN 50851708	Diablo Canyon 2016 Mid-Cycle Assessment
8/25/16	SAPN 50826016	Rigging Self-Assessment
9/6/16	SAPN 50857266	NRC IP 71124.08, Radioactive Solid Waste Processing and Radioactive Material Handling, Storage and Transportation

I. Performance Information (PPIR, Operating Plan, Station Initiatives, IPMs)

Date	Doc. No.	Title
4/4/16		Operating Plan 2016 – 2020, No new updates this month.
11/15/16	PPIR	Diablo Canyon Power Plant; Plant Performance Improvement Report; Achieving Results: Data: October 2016
Station Initiative		
11/03/16		Operations Department Excellence Plan; Operational Focus
11/23/16		DCPP Excellence Plan; A Living Plan
IPM		There are no IPMs for this month.

J. INPO

Date	Doc. No.	Title
		There are no INPO documents for this month.

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
ODMs		There are no ODMs for this month.
POA		There are no new POAs for this month.

L. Safety Limit Violation Report

Date	Doc. No.	Title
		There are no Safety Limit Violation Reports for this month.

**November 2016 NSOC
List of Documents Transmitted Electronically**

M. Significance Determination Process Calculations

Date	Doc. No.	Title
		There are no Significance Determination Process Calculations for this month.

N. Miscellaneous

Date	Title
11/1/16	PG&E @ Work – The Bulletin
11/7/16	Diablo Canyon Power Plant Emergency Response Organization (ERO) Leadership Team – “Emergency Preparedness Evaluated Exercise”

O. Functional Area Documents

Subcommittee	Date/Doc	Title
Maintenance	Week 201643	T+1 Performance Critique
	Week 201644	T+1 Performance Critique
	Week 201645	T+1 Performance Critique
	Week 201646	T+1 Performance Critique
	Week 201647	T+1 Performance Critique

P. Documents Previously Transmitted during the Month

Date	Doc. No.	Title
		There were no documents previously transmitted during the month.

**October 2016 DCISC
List of Documents Transmitted Electronically**

A. Licensing Basis Impact Evaluations

Date	LBIE No.	Title
10/27/16	2016-009	CR Insertion WCAP-16231-P
10/27/16	2016-010	E-Plan, Appendix F

B. NRC Outgoing Correspondence (incl. LERs, LARs, etc.)

Date	Letter No.	Title
10/6/16	DCL-16-100	Material Status Report for the Period Ending August 31, 2016
10/6/16	DCL-16-101	NRC Submittal DCL-16-101, Response to NRC Request for Additional Information Regarding License Amendment Request 15-03. "Application of Alternative Source Term"
10/10/16	DCL-16102	ASME Section XI Inservice Inspection Program Relief Request NDE-RCS-SE-1 R20 to Allow Use of Alternative Depth Sizing Criteria
10/12/16	DCL-16-103 DIL-16-015	Emergency Plan Section 8 Update
10/12/16	DCL-16-106	Pacific Gas and Electric Company Request for Regulatory Conference (EA-16-168)
10/18/16	DCL-16-105	10 CFR 50.46 Annual Report of Emergency Core Cooling System Evaluation Model Changes for Peak Cladding Temperature for 2015
10/19/16	DCL-16-109, DIL-16-017	Emergency Plan Implementing Procedure Updates
10/25/16	DCL-16-099	License Amendment Request 16-04, Request to Adopt Emergency Action Level Schemes Pursuant to NEI 99-01, Revision 6. "Development of Emergency Action Levels for Non-Passive Reactors
10/27/16	DCL-16-104	Technical Specification Changes for License Amendment Request 13-02, "Revision to Technical Specifications to Adopt Risk Informed Completion Times TSTF-505, Revision 1, 'Provide Risk-Informed Extended Completion Times – RITSTF Initiative 4B'"

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
10/3/16	Diablo Canyon Power Plant – NRC Inspection Report 05000275/2016010 and 05000323/2016010; Preliminary White Finding
10/4/16	Diablo Canyon Power Plant, Units 1 and 2 – NRC Initial Operator Licensing Examination Approval 05000275/2016302; 05000323/2016302
10/27/16	Regulatory Conference with Pacific Gas and Electric Regarding Diablo Canyon Power Plant

**October 2016 DCISC
List of Documents Transmitted Electronically**

10/27/16	Diablo Canyon Power Plant, Units 1 and 2 – Regulatory Audit Report for the August 3-4, 2016, Audit at the Westinghouse Facility in Rockville, Maryland, in Support of Alternative Source Term License Amendment Request (CAC Nos. MF6399 and MF6400)
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D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
PSRC Minutes		
9/27/16	2016-019	E-Plan, Appendix F, Revision 4.04: ERO On-Shift Staffing
9/13/16	2016-018	WCAP-16231-P, Control Rod Insertion After Cold Leg LOCA

E. CAP Documents (RCAs, ACEs, Effectiveness Evaluations, CCAs, Jesse Reports)

Type	Doc. No.	Title
RCAs		There are no RCAs for this month.
ACE	SAPN 50864834	DA-Employee injured on 211-1 switch work
	SAPN 50866481	STP R-19 not performed within 1 hour.
Eff. Eval		There are no Evals for this month.
CCAs	SAPN 50861706	LTCA – Cyber Sec. MS 1-7 NCVs ACE
10/26/16		Operations – Learning Services – Condition Reports
10/26/16		Maintenance – RP – Work Management – Condition Reports
10/26/16		Engineering – Reg Services – Condition Reports
10/26/16		All Others Condition Reports
11/1/16		Condition Report Backlog Curves

F. QV Documents (QPAR, Audit Reports, Audit Schedule, Assessments)

Date	Doc. No.	Title
		There is no QPAR for this month.
		There are no Audit Reports for this month.
		There is no new Schedule for this month.

**October 2016 DCISC
List of Documents Transmitted Electronically**

10/25/16	PBA # 162930004	Quality Verification Performance Based Assessment # 162930004 – Section Clock Reset Documentation
10/10/16	FileNet # 162360006	DCPP Site Status Report – September 2016

G. Nuclear Safety Culture Monitoring Panel Reports

Date	Doc. No.	Title
		There is no NSCMP report for this month.

H. Self Assessment/Benchmarking (SA/BM Reports/Schedules)

Date	Doc. No.	Title
		There is no updated Quick Hit Self-Assessment (QHSA) Schedule for this month.
		There is no Formal Benchmarking and Self-Assessments Schedule for this month.
		There are no QHSAs this month.
8/25/16		Diablo Canyon 2016 Mid-Cycle Assessment – August 15-25, 2016

I. Performance Information (PIIR, Operating Plan, Station Initiatives, IPMs)

Date	Doc. No.	Title
4/4/16		Operating Plan 2016 – 2020, No new updates this month.
PIIR		Diablo Canyon Power Plant; Plant Performance Improvement Report; Achieving Results; Data: September 2016
Station Initiative		
10/31/16		Operations Department Excellence Plan
IPM		There are no IPMs this month – they should be finalized the week of 11/7.

J. INPO

Date	Doc. No.	Title
		There are no INPO documents for this month.

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
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**October 2016 DCISC
List of Documents Transmitted Electronically**

ODMs		There are no ODMs for this month.
POA	11/2/16	Screenshot of all open POAs.
		There are no new POAs this month.

L. Safety Limit Violation Report

Date	Doc. No.	Title
		There are no Safety Limit Violation Reports for this month.

M. Significance Determination Process Calculations

Date	Doc. No.	Title
		There are no Significance Determination Process Calculations for this month.

N. Miscellaneous (The Bulletin, EP, Outage Reports, RP)

Date	Title
10/4/16	PG&E @ Work – The Bulletin
10/11/16	PG&E @ Work – The Bulletin
10/18/16	PG&E @ Work – The Bulletin
10/25/16	PG&E @ Work – The Bulletin

Emergency Planning Documents

10/11/16	Drill Critique Report; Team Bravo DEP and Training Drill – 8/24/2016
10/13/16	Drill Critique Report; MPMC Dress Rehearsal and FEMA Evaluated Medical Exercise – 7/13/2016 & 8/10/2016
10/14/16	Drill Critique Report; Evaluated Exercise Dress Rehearsal – 9/21/2016

Outage Reports

6/2/16	2R19 Post Outage Report
6/27/16	2R19 Critique (PowerPoint)
	1R20 Executive Summary

Radiation Protection and ALARA

9/15/16	On-Line ARC Meeting Package
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Training Committee

4/28/16	Instructor Curriculum Review Committee
6/7/16	Maintenance Supervisor Curriculum Review Committee
6/13/16	(Radiation Protection) Curriculum Review Committee
6/20/16	Chemistry Curriculum Review Committee
6/21/16	Initial Licensed Operator Training Curriculum Review Committee
6/29/16	Instructor Training Advisory Committee
6/30/16	Engineering Support Personnel Training Advisory Committee
7/12/16	OJT/TPE Subcommittee Minutes

**October 2016 DCISC
List of Documents Transmitted Electronically**

7/13/16	Instrument and Controls Curriculum Review Committee
7/15/16	STA/IA and SM Training Curriculum Review Committee
8/3/16	Chemistry Training Advisory Committee
8/3/16	Mechanical Maintenance Curriculum Review Committee
8/10/16	ESP Continuing Training Curriculum Review Committee
8/11/16	Training Advisory Committee – ILOT, LOCT, IOTC, NOCT, STA/IA and SM Training Programs
8/12/16	LOCT Curriculum Review Committee
8/16/16	ESP Initial Training Curriculum Review Committee
8/29/16	(Radiation Protection) Training Advisory Committee
8/30/16	Electrical Maintenance Curriculum Review Committee

O. Functional Area Documents

Subcommittee	Date/Doc	Title
Maintenance	Week 201642	T+1 Performance Critique

P. Documents Previously Transmitted during the Month

Date	Doc. No.	Title
		No documents previously transmitted.

**September 2016 DCISC
List of Documents Transmitted Electronically**

A. Licensing Basis Impact Evaluations

Date	LBIE No.	Title
		There are no licensing basis impact evaluations for this month.

B. NRC Outgoing Correspondence (incl. LERs, LARs, etc.)

Date	Letter No.	Title
9/15/16	DCL-16-090	Supplement to License Amendment Request 15-03, "Application of Alternative Source Term"
9/21/16	DCL-16-092 DIL-16-014	Emergency Plan Implementing Procedure Update
9/28/16	DCL-16-094	Response to NRC Request for Additional Information Regarding "License Amendment Request 16-02, License Amendment Request to Revise Technical Specification 3.4.12, 'Low Temperature Overpressure Protection (L TOP) System'"

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
9/7/16	Request for Additional Information – License amendment Request for Implementation of Alternative Source Term (CAC Nos. MF6399 and MF6400)
9/12/16	Errata for Mid-Cycle Assessment Letter for Diablo Canyon Power Plant, Unit 1 and 2 (05000275/2016005 and 05000323/2016005)

D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
PSRC Minutes		
4/26/16	2016-008	LER 2015-001-01, Both trains of residual heat removal inoperable due to circumferential crack on a socket weld" LER 1-2015-002-00, "Environmental qualification of wide range resistance temperature detectors wiring exceeded?"
8/16/16	2016-017	E-Plan, Section 8, Rev. 4.15, "Maintaining Emergency Preparedness" PSRC Open Action Items

E. CAP Documents (RCAs, ACEs, CAP Effectiveness Evaluations)

Type	Doc. No.	Title
RCAs		No RCAs for this month.
ACE	50834304	DA-Incorrect Met Data Submitted to the NRC
	50861706	LTCA – Cyber Sec. MS 1-7 NCVs ACE
	50864413	DA-Ops Trng Comp S/A Finding Retrtn Task

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List of Documents Transmitted Electronically**

	50864636	LTCA DA-Circuit Switcher 211-1 1R20
Eff. Eval	50804873	DA-EDG 1-1 Failed to Start

F. QV Documents (QPAR, Audit Reports, Audit Schedule, Assessments)

Date	Doc. No.	Title
9/29/16		Quality Performance Assessment Report (QPAR) – Second Period 2016, May 1, 2016 through August 31, 2016
		There are no Audit Reports for this month.
		There is no new Schedule for this month.
9/21/16	SFA # 162420006	Quality Verification Short Form Assessment #16242006, "Operations Precise Plant Control"
9/21/16	SFA # 162210005	Quality Verification Short Form Assessment # 162210005, "Work Package Review Prior to Issue"

G. Nuclear Safety Culture Monitoring Panel Reports

Date	Title
	There is no Nuclear Safety Culture Monitoring Panel Report for this month.

H. Self Assessment/Benchmarking (SA/BM Reports/Schedules)

Date	Doc. No.	Title
		There is no updated Quick Hit Self-Assessment (QHSA) Schedule for this month.
		There are no Formal Benchmarking and Self-Assessments Schedule for this month.
		There are no QHSA for this month.

I. Performance Information (PPIR, Operating Plan, Station Initiatives, IPMs)

Date	Doc. No.	Title
4/4/16		Operating Plan 2016 – 2020, No new updates this month.
PPIR		Diablo Canyon Power Plant; Plant Performance Improvement Report; Achieving Results: Data: August 2016
Station Initiative		There are no new or revised station initiatives this month.
IPM		There are no IPMs for this month.

**September 2016 DCISC
List of Documents Transmitted Electronically**

J. INPO

Date	Doc. No.	Title
		There are no INPO documents for this month.

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
ODMs		There are no ODMs for this month.
POA		There are no new POAs this month.

L. Safety Limit Violation Report

Date	Doc. No.	Title
		There are no Safety Limit Violation Reports for this month.

M. Significance Determination Process Calculations

Date	Doc. No.	Title
		There are no Significance Determination Process Calculations for this month.

N. Miscellaneous

Date	Title
9/7/16	PG&E @ Work – The Bulletin
9/13/16	PG&E @ Work – The Bulletin
9/20/16	PG&E @ Work – The Bulletin
9/27/16	PG&E @ Work – The Bulletin

O. Functional Area Documents

Subcommittee	Date/Doc	Title
Maintenance	Week 201637	T+1 Performance Critique
	Week 201638	T+1 Performance Critique
	Week 201639	T+1 Performance Critique
	Week 201641	T+1 Performance Critique

P. Documents Previously Transmitted during the Month

Date	Doc. No.	Title
		There were no documents previously transmitted during the month.

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	February 8, 2017
AGENDA ITEM:	VII
AGENDA TITLE:	Consultant & Legal Counsel Reports; Receive, Approve and Authorize Transmittal of Fact Finding Reports, and receive report by Legal Counsel.

CONSENT [☐] ACTION [☒] INFORMATION [☒]

Staff Summary: It is anticipated that oral or written reports will be presented at the meeting by Technical Consultants Mr. Wardell and Mr. McWhorter and DCISC Assistant Legal Counsel Rathie concerning items listed or on other matters.

Fact finding reports may be submitted for consideration and comment by members and consultants since the last public meeting of the DCISC in October 2016. These reports may be received by the Committee, approved as to form and content and be authorized for transmittal to PG&E for its consideration and response.

Fact finding reports become a part of the next DCISC Annual Report.

RECOMMENDED COMMITTEE ACTION: Receive reports by Consultants and Legal counsel reports and provide direction.

Motions to receive and approve transmittal of fact finding reports to PG&E concerning fact-findings conducted on November 2-3, 2016, December 7-8, 2016 and January 18-19, 2017.