

DIABLO CANYON
INDEPENDENT SAFETY COMMITTEE
“DCISC”
(www.dcisc.org)

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

* * * * *

Wednesday & Thursday
September 13-14, 2023
Avila Lighthouse Suites

Point San Luis Conference Facility
First and San Francisco Streets
Avila Beach, California

PUBLIC MEETING AGENDA

This public meeting will be webcast in real time at:
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PARTICIPATION

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Morning Session – 9/13/2023 – 8:00 a.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. The 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 ACTION ITEM

- A. DCISC 33rd Annual Report on
Safety of Diablo Canyon Nuclear Power Plant Operations;
July 1, 2022 – June 30, 2023. Discussion/Approval

V TECHNICAL CONSULTANT REPORT & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT-FINDING REPORT TO PG&E

- A. Consultant Richard D. McWhorter Jr.:
Fact-finding Topics; Partial Report on the
July 13, 26-27, 2023 Fact Finding Report.

VI COMMITTEE MEMBER REPORTS AND DISCUSSION

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

VII ACTION ITEM (Cont'd.)

- B Discussion of Open Items List. Discussion/Action

VIII ADJOURN MORNING MEETING

[Observe NRC-PG&E Public Meeting on License Renewal Application - Meeting Room.]

Afternoon Session – 9/13/2023 – 1:30 p.m.

IX RECONVENE FOR AFTERNOON MEETING

X COMMITTEE MEMBER COMMENTS

XI PUBLIC COMMENTS AND COMMUNICATIONS

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XII INFORMATION ITEMS BEFORE THE COMMITTEE

- A. Informational Presentations Requested by the Committee of PG&E:
 - 1) State of the Plant Update: including Key Events, Organizational Changes preparations for Refueling Outage 1R24, and other Station Activities since the DCISC June 2023 Public Meeting.
 - 2) Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Inspection Reports NRC Current Issues, and Current and Future License Amendment Requests.

XIII TECHNICAL CONSULTANT REPORT & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT-FINDING REPORT TO PG&E (Cont'd.)

- B. Consultant R. Ferman Wardell:
Fact-finding Topics; Partial Report on the August 9-10, 2023, Fact Finding Report.
- C. Consultants Richard D. McWhorter, Jr.:
Fact-finding Topics; Report on and Approval of the August 29-30, 2023, Fact Finding Report.

XIV ADJOURN AFTERNOON MEETING

Evening Session – 9/13/2023 – 5:15 p.m.

XV RECONVENE FOR EVENING MEETING

XVI COMMITTEE MEMBER COMMENTS

XVII PUBLIC COMMENTS AND COMMUNICATIONS

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

- B. Informational Presentations Requested by the Committee of PG&E:
 - 3) Engineering Department Overview, Update on Activities, Staffing, and Excellence Plan.

XIX TECHNICAL CONSULTANT REPORT & RECEIVE, APPROVE AND AUTHORIZE TRANSMITTAL OF FACT-FINDING REPORT TO PG&E (Cont'd.)

- D. Consultants Richard D. McWhorter Jr. and R. Ferman Wardell:
Fact-finding Topic; Comprehensive Review of Equipment Long-Range Planning and Maintenance (PMO++ Program); Approval of the July 13, 26-27 and August 9-10, 2023, Fact Finding Reports.

XX ACCEPTANCE OF MINUTES

- A. Minutes of June 28-29, 2023, Public Meeting. Accept

XXI ADJOURN EVENING MEETING

Morning Session – 9/14/2023 – 9:00 a.m.

XXII RECONVENE FOR MORNING MEETING

XXIII COMMITTEE MEMBER COMMENTS

XXIV 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.*

XXV ACTION ITEM (Cont'd.)

- C. Consider Engagement of a Technical Consultant
on an *ad hoc* basis to Perform Analysis of Unit 1
Pressure Vessel Integrity. Discussion/Approval

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

- C. Informational Presentations Requested by the
Committee of PG&E:
4) Quality Verification Organization's Perspective on Plant Performance,
Top Issues, Quality Performance Assessment Report.
5) Overview and Status of Performance Improvement Programs.

XXVII DISCUSSION, DIRECTION AND ACTION, AS APPROPRIATE, BY THE COMMITTEE, CONSULTANTS & COUNSEL

- A. Financial Matters including Consultant Compensation, Administrative and Regulatory Matters and the Status of Governmental Agency Interactions, Response to California Senate Bill 846 Directives, including the Order Instituting Rulemaking Proceeding (R.23-01-007) and California Public Utilities Commission (CPUC) Decision (D.23-08-004) in Phase 1 Track 1 of R.23-01-007 to Address DCISC Future Funding. Discussion/Direction

- B. Consider Approval of a Proposed Third Restatement of the Committee's Charter to be Submitted to the CPUC by PG&E for CPUC Energy Division Staff Approval through a Tier 2 Advice Letter in Accordance with D.23-08-004.
Discussion/Approval

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

XXIX ADJOURN MORNING MEETING

Afternoon Session - 09/14/2023 - 1:30 p.m.

XXX RECONVENE FOR AFTERNOON MEETING

XXXI COMMITTEE MEMBER COMMENTS – Report on any action taken in closed session.

XXXII 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.*

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

- D. Informational Presentations Requested by the Committee of PG&E:
- 6) Status of Staff Retention Program and Update on Staffing in Support of Extended Operations.
 - 7) Update on Status of Studies Required Under SB846 for Independent Consultants to Catalog and Evaluate Maintenance Plans and for Conducting an Updated Seismic Assessment.

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

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

XXXV ADJOURNMENT OF THE ONE HUNDRED AND SIXTH PUBLIC MEETING

The Committee's policy is to schedule its public meetings in locations that are accessible to people with disabilities and to remain in compliance with state guidelines on COVID-19 prevention non-emergency regulations. 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 P.O. Box 4523, Carmel-by-the-Sea, CA 93921-4523 or by email to dcsafety@dcisc.org. 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:	September 13, 2023
AGENDA ITEM:	IV-A
AGENDA TITLE:	DCISC 33rd Annual Report on Safety of Diablo Canyon Operations; July 1, 2022 - June 30, 2023
CONSENT []	ACTION [XX] INFORMATION []

Staff Summary: The Settlement Agreement creating the DCISC provided “The Committee shall prepare an annual report and such interim reports as it deems appropriate, which reports shall include any recommendations of the Committee.” A draft report covering Fiscal Year 2022-2023 has now been prepared by Committee Members Budnitz, Lam and Peterson, with contributions from the Technical Consultants and Legal Counsel, and is presented at this meeting for consideration and adoption. This is the Committee’s thirty-third annual report.

Upon adoption, Public Utilities Code §712.1(e)(2) directs the Committee to annually transmit its findings and recommendations for improved safety to the Legislature (in accordance with California Government Code §9795), the Governor, the California Public Utilities Commission, the California Energy Commission, the United States Nuclear Regulatory Commission and Pacific Gas & Electric Company and to include the response Public Utilities Code §712.1(f) directs Pacific Gas & Electric Company to annually provide. The Committee’s annual reports are available to members of the public on the Committee’s website (www.dcisc.org) and through the California Polytechnic University Library, Special Collections and Archives Department, and local public libraries.

RECOMMENDED COMMITTEE ACTION: Motion to approve the DCISC 2022-2023 Thirty-Third Annual Report on Safety of Diablo Canyon Operations and to transmit same in accordance with Public Utilities Code §712.1(e)(2).

Diablo Canyon Independent Safety Committee

**THIRTY-THIRD ANNUAL REPORT ON THE SAFETY OF
DIABLO CANYON NUCLEAR POWER PLANT OPERATIONS**

July 1, 2022 - June 30, 2023

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1.5.1 Visits by DCISC Members to California State Agencies,

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D.10 Report on Fact Finding Meeting at DCPD on May 2-3, 2023

- 1.0 Summary
- 2.0 Introduction
- 3.0 Discussion
 - 3.1. Radiation Monitoring System
 - 3.2. Buried Piping and Tanks Program
 - 3.3. Refueling Outage 1R24
 - 3.4. Equipment Reliability Program
 - 3.5. Non-Licensed Operator Training
 - 3.6. FLEX and Probabilistic Risk Assessment
 - 3.7. Meet with DCPD Officer

- 3.8. PMO++ Process and Results
 - 3.9. License Renewal Application and Aging Management Plans
 - 3.10. Industry Efforts to Evaluate the Radiological Consequences of a Release of Radionuclides from a Crack in a Spent Fuel Storage Cask
 - 3.11. Workplace Seismic Safety
 - 3.12. Local NRC Meeting on DCPD Regulatory Performance and License Renewal
 - 4.0 Conclusions
 - 5.0 Recommendations
 - 6.0 References
- D.11 Report on Fact Finding Meeting at DCPD on May 5, 2023
 - 1.0 Summary
 - 2.0 Introduction
 - 3.0 Discussion
 - 3.1.Independent Peer Review Panel Meeting on May 5, 2023
 - 3.2.Comprehensive Seismic Safety Update
 - 4.0 Conclusions
 - 5.0 Recommendations
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- E. Record of DCISC Tours of DCPD
- F. DCISC Open Items List
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DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	September 13, 2023
AGENDA ITEM:	VII-B
AGENDA TITLE:	Review and Discussion of Open Items List.

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

Staff Summary: It is anticipated that the committee will hold discussion concerning the items appearing on its Open Items List prepared by Committee Technical Consultant Ferman Wardell.

RECOMMENDED COMMITTEE ACTION: As appropriate, review and provide direction.

Diablo Canyon Independent Safety Committee Open Items List – 2023-2024

Open Item Type: **M= Monitor** **F = Follow-up** **I = Issue** Items in *Red Italics* are new or revised
Items in **Yellow** are for the next 3 FF Meetings

ITEM NO.	TYPE	OPEN ITEM CATEGORY/DESCRIPTION	Last Actions	Next Action
CO		Conduct of Operations (CO)		
CO-7	M	Review DCCP storm response experience and strategy every two years [or as necessary] during or after annual winter storm season.	5/17FF 3/21FF	As necessary
CO-8	M	Monitor all reactor trips – automatic and manual – and forced outages. (review trip LERs at public meetings).	11/21FF 2/22PM	Post-trip FFs & PMs
CO-9	F	Reactivity Management – review every 18-24 months. [Reviewed Reactivity Management 5/16FF, 4/18FF, and 11/19FF – satisfactory.]	List end of OIL 4/23FF	Regularly
CO-10	M	Mispositioning Errors (Equipment Status) – monitor the status of mispositioning errors and actions to resolve.	12/21FF 4/23FF	2Q24FF
CO-13	M	Review any initiatives to operate DCCP in different modes, such as load following due to renewable energy fluctuations, during its final years of operation. Include 230kV voltage stability issues. Dr. Peterson observed there is potential that an increase in the risk of transmission problems or outages might affect the availability of alternate off site power sources for DCCP due to increasing incentives to curtail power output because of production or grid-related reasons. Mr. Peck and Dr. Peterson agreed this might be a suitable topic for a future DCISC fact-finding which should include representatives from the PG&E transmission organization.	12/19FF 12/21FF	As necessary
CO-14	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. Review operator staffing. (Also see EO-5.)	11/22FF 2/23PM	9/23PM 11/23FF
CM		Conduct of Maintenance (CM)		
CM-7	I	Review PG&E's progress in complying with (1) the amendment to 10CFR50.55a, which provides the requirements for ISI of containment structures (degradation) and (2) ASME Code requirements for steel liner weld inspections.	5/22FF 7/22FF	Each Pair of RFOs
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.	See list at end of OIL 5/22FF	Regularly 2Q24FF

CM-13	M	Review Maintenance Department performance measures, staffing, etc. approximately annually.	3/23FF	2Q24FF
EN		Engineering Programs (EN)		
EN-16	F	DCPP Systems – review a system (or structure or component), system health, long-term plan, Maintenance Rule performance & walkdown with System Engineer at FFs. [Note: Systems reviewed are listed with dates at the end of this Open Items List.]	See list at end of OIL	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: Programs reviewed are listed with dates at the end of this Open Items List.] Review Engineering reorganization 1Q23FF.	See list at end of OIL	9/23PM Regularly 1Q24FF
EN-20	F	Each Member should review or observe Plant Health Committee, Notification Review Team, Corrective Action Review Board, Performance Review Quarterly Meeting, <i>Plant Health Prioritization Committee</i> , <i>Plant Health Working Group</i> , and other regular meetings.	See list at end of OIL	Regularly
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 Pls, aberrant behavior statistics, FFD, stress reduction programs, Personnel Accountability Policy, Human Performance Steering Committee & Subcomm, Centers of Excellence, Org. Development). [Review biennially operator aging, physical fitness, "no solo" issues, attention enhancement, stress management, & incentives for operator focus.	4/22FF 3/23FF	2Q24FF
HP-25	M	Further observations and improvements in the Management Observation Program should be reviewed by DCISC.	4/19FF 7/21FF	12/23FF
HS		Health, Nuclear Safety and Safety Conscious Work Environment		
HS-6	F	Follow DCPP 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).	9/22FF 8/23FF#1	3Q24FF
PI		Performance Improvement Programs		
PI-1		DCPP Performance Improvement Programs: Corrective Action, Self-Assessment, Operating Experience, Benchmarking, etc. Programs reviewed are listed with dates at the end of the Open Items List. [CAP reviewed 4/23FF – satisfactory.]	See list at end of OIL	Annually 9/23PM
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 JIC communications to the media and public, including radiation release communications to the public, use of social media, coordination of information release with SLO County, and extension of drills to better exercise FMTs & JMC. <i>DCISC drill attendees should assure the confidentiality of the drill scenario by keeping the scenario hidden and under their control at all times.</i>	9/22FF 3/23FF	Next evaluated exercise 7/31/24?
EP-3	F	<i>Meet with Emergency Preparedness Group for updates and performance in years with no major exercises..</i>	-	12/23FF
RA		Risk Assessment and Management (RA)		
RA-5	M	Review overall [non-seismic] 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).	9/20FF 9/21FF 9/22FF	11/23FF RJB

RA-6	F	Review DCPD response to NRC re: 10CFR50.59 risk-informed rule changes. Review in FF.	3/23FF	4Q24FF
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.	7/21FF 7/22FF 7/23FF	Next meeting [see FFPM] 11/30/23 FF
NS-9	M	Monitor DCPD's program to track INPO Areas for Improvement. Review with DCPD Coordinator. Review DCPD August 2022 INPO evaluation.	1/21FF 8/21FF 12/22FF	11/23FF Mid-cycle
RP		Radiation Protection (RP)		
RP-3	M	Regularly review outage RP performance.	4/22FF 5/22FF 12/22FF	Each RFO 12/23FF
RP-12	M	Review annual DCPD radioactivity release report each year. Review at Summer or Fall FFs.	7/22FF 8/23FF#1	2Q24FF
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.	3/22FF	9/23PM
QP-9	F	Software QA Program	See list at end of OIL	Regularly
NF		Nuclear Fuel Performance (NF)		
NF-9	M	Nuclear Fuel Performance & Issues (review after RFOs). Observed new fuel receipt and inspection 8/22FF.	5/22FF 8/22FF 12/22FF	Each RFO
ER		Equipment Reliability and Life Cycle Management (ER)		
ER-5	M	Monitor the Equipment Reliability Process approximately annually.	See list at end of OIL 5/23FF	Annually 5/24FF
OE		Organizational Effectiveness & Development (OE)		
OE-1	F	Review DCPD Operating Plan each January after development.	2/23PM	2/24PM
OE-2	F	Station Excellence Plan & Management Review Meeting	3/23FF	1Q24FF
SE		System and Equipment Performance/Problems (SE)		

SE-39	F	Review and tour the inspections and repairs of concrete Intake Structures following selected refueling outages.	12/19FF 8/21FF 8/23FF#2	Next RFO 2Q24FF
SE-26 Return ed	F	Review reactor pressure vessel compliance status after next set of surveillance samples is analyzed and effective vessel lifetime projections are updated. [Reviewed specimen status at 10/10 FF: satisfactory.] [RV Coupon status 5/13FF.] [Reviewed Pressurized Thermal Shock Rule 8/13FF – satisfactory.] [Reviewed 1/15FF – satisfactory.]	1/15FF 8/23FF#1	11/23FF with consultant
SE-49	F	Emergency Diesel Generators (EDGs)	See list at end of OIL	Regularly 12/23FF
SE-50	F	Maintenance Rule Functional Failures [Change from SSFFs to MRFFs beginning 3/21FF.]	11/22FF	Regularly 11/23FF
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. Review Steam Generator performance metrics and inspection results.	5/22FF 11/22FF	Each RFO 11/23FF
OM-4	M	Review Outage Safety Plan, safety margin trends, outage results, including clearances, following each outage at FFs and PMs.	9/22FF 8/23FF#2	Each RFO
OM-5	F	Review FME Program Performance.	See list at end of OIL	Each RFO 12/23FF
OM-6	F	Monitor Changes in 1R24/2R24 Outage Scopes Needed to Support Extended Operations. <i>Outage 1R24 scope complete. Review 2R24 outage plans 1Q24FF.</i>	5/23FF#2 6/23PM 8/23FF#2	9/23PM 1Q24FF
SEC		Security (SEC)		
SEC-3	M	Monitor interaction of Security and Operations, Engineering, Maintenance, and Emergency Preparedness for effects on nuclear safety. Plant security per se not reviewed but reviewed only in the context of impact on plant operation.	12/19FF 12/20FF 12/22FF	2Q24FF
SEC-4	M	Review status of DCPD cyber security (but not physical security) program in compliance with NRC requirements.	9/22FF 1/23FF	3Q24FF
SF		Independent Spent Fuel Storage Installation – ISFSI (SF)		
SF-1	F	Monitor ISFSI operations, including the development of new procedures by Orano for the loading of new Dry Storage Canisters (DSCs), movement of DSCs from SFP to ISFSI, and loading of DSCs into new Horizontal Storage Module (HSM).	10/20PM 5/21FF	2Q24FF

SF-2	M	Follow technical advances of relative risks of existing (Holtec) casks and pool storage. Follow relicensing of ISFSI including seismic adequacy reviews and the implementation of aging management plans.	6/23PM 8/23FF#2	2Q24FF
SF-4	F	Review the adequacy of the design for new (Orano) spent fuel storage system focusing on items of safety significance including seismic adequacy, criticality control, storage of damaged fuel, thermal analyses, effects of extreme environmental conditions, long-term (>100 years) integrity assurance, radiation/neutron shielding, and accident analyses.	1/23FF 8/23FF#2	2Q24FF
SF-5	F	Monitor the submittal and approval of license amendment(s) for the Orano spent fuel storage system.	1/23FF 6/23PM 8/23FF#2	TBD
SF-7	M	Monitor Plans for Storage of Greater than Class C Waste	8/22FF	3Q24FF
SF-8	M	<i>EPRI study [Radiological Consequences of a Release of Radionuclides from a Spent Fuel Storage Cask] has not yet finished although some supporting studies have been concluded regarding source term and what flow rate should be estimated for use in the study. He reported EPRI plans to issue its study in early spring of 2023 and the DCISC should review it at that time. Update 5/23 – study completion deferred until 2025 to obtain additional research data from DOE.</i>	5/23FF#1	4Q25FF
SC	M	Seismic, Tsunami and Other External Events		
SC-3	M	Long-Term Seismic Program: review periodically. Review significant seismic events as they occur. (See also EO-8.)	9/22FF 11/22FF 5/23FF	4Q24FF
SC-4 Returned	M	Monitor new DCCP risk-based Probabilistic Tsunami Hazard Analysis or other new tsunami information from the License Renewal process.	3/15FF 6/15PM	1Q24FF
SC-12	F	Workplace seismic safety – review annually.	5/23FF#1	7/24FF PFP
SC-14	M	Monitor the Work of the Independent Peer Review Panel	11/22FF 3/23FF 5/23FF#2	Next mtg.
SC-15	M	The DCISC should review post-earthquake procedures for the fire department and for security personnel with respect to FLEX equipment and plant access.	5/23FF 7/23FF	12/23FF
FP		Fire Protection (FP)		
FP-5	M	Review NFPA-805-based 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. Monitor fire doors (Plant Door Life Cycle Management Plan) for correction of impairments.	See list at end of OIL 4/23FF	Regularly 3Q24FF
LD		Learning & Development Programs (LD)		
LD-3	M	Review non-license technical, operations & accredited training programs at least annually.	5/23FF#1	3Q24FF

LD-6	F	Observe operator <u>license</u> , re-qualification, classes periodically in FF meetings. [Reviewed licensed operator simulator training 11/21FF & 12/21FF – satisfactory.]	4/23FF	3Q24FF
NR		Nuclear Regulatory Commission Items (NR)		
NR-3	M	Monitor the Non-Cited Violation Tracking & Trending Program annually at the Jan/Feb Public Meetings.	3year	Each PM
NR-4	F	Meet with NRC Resident Inspectors regularly.	Most FFs	Regularly
DEC		Decommissioning		
DEC-1	F	Review DCCP decommissioning plans periodically as a result of the Joint Proposal 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 DCCP because of the potential impact on staffing and future options with respect to managing spent fuel.	10/22PM 2/23PM 6/23PM	4Q24FF
DEC-4	F	Emergency preparedness during decommissioning. [Met with SLO OES 11/22FF.]	11/22FF 2/23PM	4Q24FF
DEC-5	F	DCCP's approach to submitting LAR requests for decommissioning appears appropriate and the DCISC should continue to follow from a safety perspective all the regulatory activities which will define the reduction in requirements which will occur at shutdown.	9/22FF 9/22PM	4Q24FF
EO		Extended Operations (EO)		
EO-1	M	Monitor the Purchasing of New Fuel [12/22FF fuel performance & future purchases satisfactory for 2030 operation.]	12/22FF	As appropriate
EO-2	M	Monitor the Procurement of New Spent Fuel Canisters to Support Extended Operations and Changes to the Schedule for Fuel Movement from SFP to ISFSI	2/23PM 6/23PM 8/23FF#2	2Q24FF
EO-3	M	Monitor the State and Local Permitting Process	-	As needed
EO-4	M	Monitor the NRC License Renewal Application and Review Process	6/23PM 8/23FF#2	4Q23FF
EO-5	M	Monitor Staffing for Extended Operations	8/23FF#2	9/23PM 1Q23FF
EO-6	M	Monitor Reviews of Preventive and Corrective Maintenance Schedules and Deferred Capital Improvement Projects	6/23PM 7/23FF 8/23FF#1	Complete Close
EO-7	F	Independently Look for Needed Improvements and Enhancements (Use PRA to Guide) [In-depth review of PMO++ process, results & decision bases. Extended operation PM/CM review of process, results & decision bases.]	6/23PM 7/23FF 8/23FF#1	Complete Close
EO-8	F	Independently Review Seismic Programs; Report Results to IPRP and State Authorities	3/23FF 5/23FF#2 8/23FF#2	9/23PM Close to SC-14
EO-9	F	Monitor and review the updated seismic assessment required by SB846 (PG&E reported at 5/23 IPRP that completion is expected in 9/23 unless additional study required.)	-	9/23PM 11/23FF

EO-10	F	Monitor and review the maintenance study by independent consultants required by SB846 (PG&E reported at 4/23 FF that completion is expected in 10/23.)	-	9/23PM 12/23FF
O		Other Items (O)		
O-1	F	Perform observations of evolutions (work processes) within the plant periodically. Continue with these about annually. Work process observations: Observe in the plant work processes important to nuclear safety, such as operator rounds, Control Room shift turnover, surveillance tests, preventive and corrective maintenance, system modifications, system walk downs with system engineers; outage activities, etc.	11/22FF 8/23FF#1	Regularly
O-2	F	COVID-19 responsibilities/practices.	9/21FF 1/22FF	As appropriate
		Public Meeting Items (PM) (Reference: Public Meeting Minutes Pages)		
9/22 PM 1	F	Dr. Budnitz remarked it is difficult to project the cost for the additional scope of review, to include the safety of the Orano spent fuel system, the potential license extension and the review of decommissioning and he suggested these matters and the format for a request of the CPUC for additional funding would be properly before the Committee at its public meeting in February 2023. He suggested and Dr. Peterson agreed that the Legal Counsel's Office should open an inquiry with the CPUC staff concerning the format for a request for additional funding and to develop a possible projection for the cost of Committee operation in 2023. Mr. Wardell volunteered to assist the Counsel's office with an estimate for Committee operations during 2023.	9/22PM 2/23PM 6/23PM	Close?
2	F	Dr. Budnitz remarked that when the DCISC reviews the Performance improvement Department in the future inquiry should be made concerning whether the scope has changed in light of continued operation after 2025.	9/22PM	9/23PM
4	F	Mr. McWhorter reported the EPRI study [Radiological Consequences of a Release of Radionuclides from a Spent Fuel Storage Cask] has not yet finished although some supporting studies have been concluded regarding source term and what flow rate should be estimated for use in the study. He reported EPRI plans to issue its study in early spring of 2023 and the DCISC should review it at that time. Update 5/23 – study completion deferred until 2025 to obtain additional research data from DOE.	5/23FF#1	4Q25FF Moved to SF-8. Close here.
16	F	Ms. Seeley stated DCPD was scheduled to conduct testing of a coupon from the reactor vessel to assess the extent of embrittlement of the Unit 1 vessel in March 2021 or 2022, but that test did not take place. She inquired if the DCISC were following up on the matter and whether the public could get answers about the embrittlement issue for Unit 1 which she stated PG&E claims as proprietary information. Dr. Peterson replied that the issue raised by Ms. Seeley is one the Committee should review in context of continued operation as it represents a key aging management question and a central part of the license extension review.	9/22PM 6/23PM 8/23FF#1	1R24 RFO 2/24PM
21	F	Dr. Budnitz remarked that the requirement to prepare simultaneously for both decommissioning and extended operation creates a burden on the plant's Training Organization to ensure both reactor operators and certified fuel handlers are available, and this will be an area the DCISC will need to review.	9/22PM	11/23FF RJB
2/23 PM 4	F	Dr. Peterson stated he believed it to be within the DCISC's Charter to assess any life-safety risks associated with the buildings mentioned by Mr. Weisman because their complete collapse could affect the ability to conduct emergency response. He commented the likely effect of a seismic event is that life safety is preserved, the building can be evacuated, and it would be interesting to learn what continuity of operations PG&E may have considered for DCPD and across the entire company for post-seismic events. Completed 7/23FF.	2/23PM	Close

9	F	In response to Dr. Budnitz question as to whether certain portions of the License Renewal Application, even if in draft form, could be made available for DCISC review in advance of their submission to the NRC, Mr. Jones replied he would take that into consideration, and it might be a possibility.	2/23PM	11/23FF RJB
10	F	Dr. Peterson observed that by checking a sufficient range of issues a certain level of confidence can be developed and then the focus can be placed on issues or problems as they are identified, but he remarked the Committee does need to develop a prioritization schedule for its review of PMO+++. <i>Review complete – close.</i>	2/23PM 7/23FF 8/23FF#1	Close
12	F	Mr. Rathie remarked as the contract is not projected to be entered into until the third or fourth quarter of 2023 and the schedule for the Order Instituting Rulemaking now provides for the Committee's evaluation of mandates under SB846 to be approved at the DCISC's September 2023 public meeting. Mr. Rathie stated this might be an appropriate topic for a fact-finding and for a discussion with the DWR.	2/23PM	Close?
14	F	Dr. Peterson commented he favors the wider application of Wi-Fi technology in the plant and moving toward electronic procedures as both can objectively improve plant safety and these applications also create opportunities for the plant staff to acquire new skills which are beneficial to them independent of the future of DCCP and he remarked creating these opportunities for plant staff make it more attractive to remain at DCCP.	2/23PM 8/23FF#1	12/23FF PFP
16	F	In response to Consultant McWhorter's inquiry, Mr. Petersen reported the post outage critique identified several dozen actions which he offered to review with the Committee during a fact finding.	2/23PM 8/23FF#2 ?	Close
17	F	Mr. Petersen offered to review the [capacity factor] data for each year from 2022 to 2018 with the DCISC at a fact finding and he stated the statement that the plant was down 40% of the time during that period was incorrect.	2/23PM	9/23PM
25	F	Dr. Peterson recommended, and Mr. McWhorter confirmed the Fact-Finding Report suggests, that FLEX be an area of focus for the Committee in the future both in general and for use of FLEX in post-seismic events. [Reviewed at 3/23FF, 4/23FF and 7/23FF – satisfactory.]	2/23PM 7/23FF	Complete Close
26	F	Dr. Lam suggested the Committee conduct fact-finding and make further inquiry concerning the parameter or the magnitude for such seismic movement for the four dominant beyond design basis seismic events. Dr. Lam commented that a facility cannot be designed against a very low frequency initiator and perhaps these scenarios can be dismissed on probability considerations. Dr. Lam observed if his recollection was correct the forces involved may be only two or three times bigger than the Hosgri plus 25% and he asked that Drs. Budnitz or Peterson make that inquiry as to what forces were discussed.	2/23PM 8/23FF#2 RJB	Close
27	F	Dr. Lam then suggested that during future fact-finding the Committee confirm what Dr. Budnitz indicated, and he stated he remembered hearing about 2g to 3g. Dr. Budnitz stated the DCISC should inquire concerning which are the important seismic sequences of concern and for each whether the Committee can answer the question FLEX exists but is not in the analysis yet, is there some FLEX intervention that could reduce each one of those sequences. He remarked the conclusion of the FLEX inquiry is to see if FLEX capabilities will or perhaps will not substantially improve the safety of the plant even if the Committee judges the plant is safe enough as it is. Dr. Lam requested a future fact-finding team to confirm or deny the 5g or 6g observation as that was not the number the January FFT was briefed on, and Dr. Lam stated the FFT was told for forces of two or two and one-half times the margin in the design basis could result in the four scenarios he described.	2/23PM 8/23FF#2 RJB?	Close
28	F	Mr. McWhorter reported the DCISC should review the root cause evaluation of a previous [boric acid leak on a 2" vacuum fill line coming off the Loop 1 Reactor Coolant System cold leg] once it is complete.	2/23PM 8/23FF#1	Awaiting Final RCE

6/23 PM 1	F	He [Geesman] called the Committee's attention to a PG&E quality assurance audit from 2018 of the PG&E Geosciences Department and remarked the DCISC may have already received the report of the audit, but if not he encouraged the Committee to gain access to it. Dr. Peterson directed that action be taken to obtain the document.	6/23PB 8/23FF#2	Complete Close
2	F	Mr. Wardell reported the DCISC will continue its review of the PMO++ Program during fact-finding to be conducted in April, May, July and August 2023.	6/23PB 8/23FF#1	Complete Close
3	F	Mr. Wardell reported the FFT found DCPD was proceeding properly in upgrading and adding aging management plans and the DCPD will continue this review in context of its review of the DCPD License Renewal Application.	6/23PB	Close to EO-4
4	F	He [McWhorter] recommended the DCISC observe another meeting of the CARB in the near future.	6/23PB	12/23FF
5	F	Mr. McWhorter stated there is also an element of the DCISC's previous reviews of items identified which could improve performance, and he gave as an example the emergency diesel generator governors which were changed for four of the six diesels. Mr. McWhorter stated it will be instructive to learn how DCPD will disposition the replacement of the governors for the two diesels that lack them now.	6/23PB 8/23FF#2	Close
6	F	Dr. Peterson remarked a DCISC FFT is scheduled to meet with DCPD in July 2023 including Fire and Security organization personnel and Dr. Peterson remarked Mr. Weisman's question [raises an interesting point and the DCISC would follow-up on his inquiry when meeting with DCPD in July.	6/23PB 7/23FF	Complete Close
7	F	The independent review is now scheduled to be complete in September 2023 and Mr. Jackson stated DCPD would share information with the DCISC during fact-finding in a matter that ensures the independent nature of the reviewer as is required by SB846. Dr. Peterson observed the DCISC should also assess the independence of the review process and possibly provide the DCISC's independent input to the reviewers.	6/23PB	Close to EO-10
8	F	The DCISC should review any new seismic-related information that could be forthcoming when PG&E submits a new (undated) License Renewal Application to the NRC at the end of 2023. ➤ The DCISC should review the seismic-safety review that PG&E will conduct as required by California legislation SB846. ➤ The DCISC should review any analyses that may be performed by the NRC or other entities in response to the May 2, 2023, SLOMFP filing with the NRC claiming that PG&E has underestimated the seismic hazard at DCPD.	6/23PM	Awaiting any new info. Close to EO-4 and EO-9
9	F	Dr. Budnitz commented the issue raised by Mr. Severance as to any compromise due to corrosion might be a worthwhile inquiry for the DCISC to assess if it were accounted for in the margin needed.	6/23PM	2/24PM

10	F	Mr. Jones replied he will report back to the Committee on the actual measured [ISFSI] dose rate on the day of Ms. Seeley's visit. From August 16, 2022 FF report: "The DCISC FFT [PFP, RFW], equipped with radiation dosimeters and briefed on radiation protection at the ISFSI, joined Mr. Million and Mr. Brackett at the Security and Radiation Control entrances to the ISFSI. After following Security and Radiation Protection protocols, the group entered the ISFSI. Inside the ISFSI fence the group walked among the spent fuel casks taking radiation readings with portable radiation measurement instruments. The instruments measured gamma and neutron radiation levels. Gamma radiation ranged from 0.4 to 2.5 millirem per hour and little to no neutron levels. Outside the ISFSI fence, radiation levels ranged from 18 to 120 microRoentgens per hour with no detectable neutron levels. The DCISC FFT received no measurable radiation dose during this observation."	6/23PM	Close
11	F	In response to Consultant Wardell's question as to when the DCISC might have the opportunity to review the outage safety plan Mr. Werner stated a preliminary version of the outage safety shutdown defense-in-depth planning for 1R24 should be available for review by the time of the August 29-30, 2023 DCISC fact-finding.	6/23PM	Complete Close
12	F	In response to Consultant McWhorter's query Mr. Jones reported the next spent fuel loading campaign will take place after the next refueling outage. Mr. McWhorter recommended the DCISC observe that loading campaign as it has been seven years since a loading campaign was undertaken by DCCP.	6/23PM	Close to SF-1
13	F	In response to Consultant McWhorter's inquiry as to an expected change to the reference temperature, given additional information, and whether the analysis is in the nature of a confirmatory fact analysis, Mr. Soenen stated he would need to review the matter and provide a subsequent response to the Committee.	6/23PM	2/24PM
14	F	In response to Dr. Lam's request concerning the factual inquiries raised by Mr. Severance regarding certain capsules not being tested Mr. Jones replied DCCP would provide a response to the Committee during its next fact-finding visit.	6/23PM 8/23FF#2	Awaiting DCCP

DCCP Systems/Components Reviewed Periodically [Yellow = Upcoming FF]

4 kV – July 2022
 230 kV & 500 kV – Dec 2022
 Aux Feedwater – Sep 2021 **Nov. 2023 FF**
 Aux Saltwater – Jan 2023
 Aux Bldg Ventilation – **July 2023**
 Chemical & Volume Control System and High Pressure Injection – Jan 2021
 Component Cooling Water – Mar 2023
 Compressed Air – Apr 2023
 Condensate & Feedwater – Nov 2021
 Containment Structure – July 2022
 Containment Spray – May 2022

Containment Ventilation and H₂ Purge – **July 2023**
 Control Room Simulator – Nov 2020 **Nov. 2023 FF**
 Control Room Ventilation – **July 2023**
 Digital Systems – Nov 2021
 DC Power – Mar 2022
 EDG – Nov 2022 **Dec. 2023 FF**
 Fire Protection & Detection Systems – Apr 2023
 Nuclear Instrumentation & In-core Instrumentation – Sep 2022
 Plant Protection System – Mar 2023
 Radiation Monitoring – May 2023
 Radwaste Processing – Nov 2020
 Reactor Coolant System & Pumps – Apr 2023

September 13-14, 2023 Public Meeting

FF = Fact-finding Meeting

PM = Public Meeting

Q = Quarter

Buried Piping & Tanks – May 2023
 RCS Process Control System – May 2020
 Refueling Equipment – Jan 2022
 RHR – Jan 2021
 Rod Control & Indication – **Aug 2023**
 Safety Injection Pumps – Jan 2021
 Spent Fuel Pool Cooling & HVAC – July 2021
 Steam Generators – **Aug 2023**
 Special Protection System – Mar 2020
 Turbine-Generator – Jan 2023

DCPP Programs Reviewed Periodically [Yellow = Upcoming FF]

10CFR50.59 Program – July 2021
 ALARA – May 2022
 Air Operated Valves – Dec 2020
 Benchmarking – Mar 2022
 Boric Acid Corrosion Control – Apr
 Chemistry – Aug 2021
 Cranes – Dec 2021
 Configuration Management – Apr 2022
 Corrective Action – CARB – Apr 2023
 Emergency Preparedness– Sep 2022 **Dec. 2023FF**
 Employee Concerns Program – **Aug 2023**
 Equipment Environmental Qualification – Dec 2022
 Equipment Reliability – May 2023
 Fire Doors & Door Life Cycle Mgm't. Plan – Jan 2022
 Fire Protection Program (NFPA-805) – Apr 2023
 FLEX Program – **Jul 2023**
 Flow Accelerated Corrosion – May 2022
 Foreign Material Exclusion – May 2022
 Greater Than Class C Waste – Aug 2022 PFP
 In-service Inspection Program – Jul 2023
 Integrated Risk Assessment Program – Mar 2022
 Large Motors – Jul 2023
 Long-Term Capital Planning Process – May 2023
 MIDAS – Dec 2021
 Maintenance Rule – Apr 2021
 Margin Management Program – May 2020

September 13-14, 2023 Public Meeting
 9/5/23

Motor Operated Valves – Jan 2023
 Notification Review Team – Mar 2022
 Nuclear Fuel Program – May 2022
 On-Line Maintenance – May 2022
 Operating Experience – Nov 2021 (review biennially)
 Operability Assessment Program – Jan 2022
 Operational Decision Making – Sep 2020
 PRA Programs (non-seismic) – Sep 2022
 Performance Improvement – **Sep 2023 PM**
 Performance Review Quarterly Meeting – Apr 2021
 Plant Health Committee/Subcommittee – Jul 2023
 Plant Health Prioritization Committee – **Aug 2023**
 Reactivity Management – Apr 2023
 Safety-Security Interface – Dec 2022
 Self-Assessment – Jan 2023
 Single Point Vulnerabilities – Jan 2022
 Seismic PRA – **May 2023**
 Seismically Induced System Interactions – Nov 2020
 Software QA - Aug 2021
 Spent Fuel Management – **Aug 2023**
 System Engineering – Mar 2022
 Transformers, Large – **July 2023**
 Troubleshooting – Dec 2022
 Tsunami Hazard Analysis – August 2022
 Vibration Monitoring – Mar 2021

PM = Public Meeting Q = Quarter

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**AGENDA TRANSMITTAL FORM**

MEETING DATE:	September 13, 2023
AGENDA ITEMS:	V-A, XIII-B & C, XIX-D
AGENDA TITLE:	Consultant Reports; Receive, Approve and Authorize Transmittal of Fact Finding Reports.

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

Staff Summary:

It is expected that oral or written reports will be presented at the meeting by Technical Consultants Mr. Wardell and Mr. McWhorter. 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. In accordance with the CPUC's Order Instituting Rulemaking (R.23-01-007) comments on DCISC fact finding reports will be received in that proceeding. The Committee reserves the right to revise any fact finding report prior to its inclusion in an Annual Report. Fact finding reports in their final "as approved form" become a part of the DCISC's next Annual Report.

Fact Finding Reports will be made available for public inspection immediately following their approval by the Committee at a public meeting or as may be directed by the CPUC in R.23-01-007.

RECOMMENDED COMMITTEE ACTION:

Receive and approve reports by Consultants and Members, and approve resolutions certifying approval, concerning fact-finding conducted on July 13, 26-27 [Resolution 2023-13], August 9-10 [Resolution 2023-13], and August 29-30, 2023 [Resolution 2023-14].

RESOLUTION NO. 2023- 12

**RESOLUTION OF THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE
APPROVING REPORT ON FACT-FINDING MEETING
AT DIABLO CANYON POWER PLANT (DCPP)
ON JUNE 13, 26-27, 2023**

**THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE HEREBY
RESOLVES AS FOLLOWS:**

WHEREAS, the above-caption draft report having come regularly before the Committee on the agenda for consideration at the Committee’s public meeting on September 13, 2023; and

WHEREAS, the Committee Members received and discussed the report;
and

WHEREAS, an opportunity was provided for public comment on the report.

NOW, THEREFORE, the Diablo Canyon Independent Safety Committee hereby approves that certain report entitled “Report on Fact-Finding Meeting at DCPD on July 13, 26-27, 2023 by Per F. Peterson, Member, and Richard D. McWhorter and R. Ferman Wardell Consultants,” copy on file in the office of the Committee’s Legal Counsel, and a copy of the approved report was made available to the public at the public meeting and is attached to this resolution as Exhibit A.

THE FOREGOING RESOLUTION WAS ADOPTED at a regular meeting of the Diablo Canyon Independent Safety Committee held on the 13th day of September, 2023, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Peter Lam, Chair

ATTEST:

Robert Rathie, Asst. Legal Counsel

RESOLUTION NO. 2023- 13

**RESOLUTION OF THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE
APPROVING REPORT ON FACT-FINDING MEETING
AT DIABLO CANYON POWER PLANT (DCPP)
ON August 9-10, 2023**

**THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE HEREBY
RESOLVES AS FOLLOWS:**

WHEREAS, the above-caption draft report having come regularly before the Committee on the agenda for consideration at the Committee’s public meeting on September 13, 2023; and

WHEREAS, the Committee Members received and discussed the report;
and

WHEREAS, an opportunity was provided for public comment on the report.

NOW, THEREFORE, the Diablo Canyon Independent Safety Committee hereby approves that certain report entitled “Report on Fact-Finding Meeting at DCPD on August 9-10, 2023 and Comprehensive Review of Upgrades Necessary to Address Issues of “Deferred Maintenance” That May Have Arisen Due to the Expectation of the Plant Closing Sooner by Peter Lam, Member, and R. Ferman Wardell and Richard D. McWhorter and Consultants,” copy on file in the office of the Committee’s Legal Counsel, and a copy of the approved report was made available to the public at the public meeting and is attached to this resolution as Exhibit A.

THE FOREGOING RESOLUTION WAS ADOPTED at a regular meeting of the Diablo Canyon Independent Safety Committee held on the 13th day of September, 2023, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Peter Lam, Chair

ATTEST:

Robert Rathie, Asst. Legal Counsel

RESOLUTION NO. 2023- 14

RESOLUTION OF THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

**APPROVING REPORT ON FACT-FINDING MEETING
AT DIABLO CANYON POWER PLANT (DCPP)
ON August 29-30, 2023**

**THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE HEREBY
RESOLVES AS FOLLOWS:**

WHEREAS, the above-caption draft report having come regularly before the Committee on the agenda for consideration at the Committee's public meeting on September 13, 2023; and

WHEREAS, the Committee Members received and discussed the report;
and

WHEREAS, an opportunity was provided for public comment on the report.

NOW, THEREFORE, the Diablo Canyon Independent Safety Committee hereby approves that certain report entitled "Report on Fact-Finding Meeting at DCPD on August 29-30, 2023 by Robert J. Budnitz, Member, and Richard D. McWhorter and R. Ferman Wardell Consultants," copy on file in the office of the Committee's Legal Counsel, and a copy of the approved report was made available to the public at the public meeting and is attached to this resolution as Exhibit A.

THE FOREGOING RESOLUTION WAS ADOPTED at a regular meeting of the Diablo Canyon Independent Safety Committee held on the 13th day of September, 2023, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Peter Lam, Chair

ATTEST:

Robert Rathie, Asst. Legal Counsel

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	September 13, 2023
AGENDA ITEM:	VI-A
AGENDA TITLE:	Update on Public Outreach, Site Visits and Committee Member Activities and Scheduling of DCISC Activities During 2023-2024.

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

Staff Summary: It is expected that the Committee Members will hold a discussion regarding public outreach, Member's activities and will schedule confirm and scheduled future activities of the Committee for 2023 and 2024.

The Actual and Proposed DCISC Fact-Finding and Public Meeting Items, with Key Dates, prepared by Committee Consultant Ferman 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 2023-2024

July 26-27, 2023 Fact-finding Meeting (PFP, RDM) (AR Exhibit D.1)

1. Nuclear Safety Oversight Committee Exit Meeting (Remote)
2. Plant Health Subcommittee Meeting
3. Meet with Nuclear Regulatory Commission (NRC) Resident Inspector
4. Meet with DCPD Officer
5. Control Room and Auxiliary Building Ventilation Systems
6. Inservice Inspection Program
7. Large Transformers
8. Post-earthquake Procedures for Plant Access and the Use of FLEX Equipment
9. Review of Equipment Long-Range Planning and Maintenance

August 9-10, 2023 Fact-finding Meeting (PL, RFW) (AR Exhibit D.2)

1. Meet with NRC Senior Resident Inspector
2. Powerblock WiFi and Electronic Work Packages and Procedures
3. Observe Maintenance Work
4. Rod Control and Indication System
5. Employee Concerns Program
6. Nuclear Safety Culture
7. Meet with DCPD Officer, Maureen Zawalick
8. Boric Acid Leak Root Cause Evaluation
9. Comprehensive Review of Equipment Long-Range Planning and Maintenance
10. Radioactive Effluent Release and Environmental Monitoring Reports
11. Reactor Vessel Pressurized Thermal Shock

August 29-30, 2023 Fact-finding Meeting (RJB, RDM) (AR Exhibit D.3)

1. Spent Fuel Management
2. License Renewal
3. Plant Health Prioritization Committee Meeting
4. Meet with DCPD Officer Adam Peck
5. Staffing Following Tier 2 Retention Program Expiration
6. Plant Tour
7. Meet with Nuclear Regulatory Commission (NRC) Senior Resident Inspector
8. Steam Generators
9. Meet with DCPD Officer Maureen Zawalick
10. Seismic and Geosciences Update
11. Refueling Outage 1R24 Scope and Schedule
12. Review of Equipment Long-Range Planning and Maintenance
13. Intake Cove Sediment Issues

September 13-14, 2023 Public Meeting (AR Exhibit B.3)

1. State of the Plant Update: including Key Events, Highlights, Organizational Changes, Preparations for Refueling Outage 1R24
2. Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Inspection Reports NRC Current Issues, & Current & Future License Amendment Requests
3. Engineering Department Overview, Update on Activities, Staffing, and Excellence Plan
4. Fact-finding Topic; Comprehensive Review of Equipment Long-Range Planning and

- Maintenance (PMO++ Program)
5. Quality Verification Organization's Perspective on Plant Performance, Top Issues, Quality Performance Assessment Report
 6. Overview and Status of Performance Improvement Programs
 7. Consider Approval of a Proposed Third Restatement of the Committee's Charter
 8. Status of Staff Retention Program and Update on Staffing in Support of Extended Operations
 9. Update on Status of Studies Required Under SB846 for Independent Consultants to Catalog and Evaluate Maintenance Plans and for Conducting an Updated Seismic Assessment

November 14-15, 2023 Fact-finding Meeting (RJB, RFW) (AR Exhibit D.4)

December 5-6, 2023 Fact-finding Meeting (PFP, RDM) (AR Exhibit D.5)

January 24-25, 2024 Fact-finding Meeting (PL, RFW) (AR Exhibit D.6)

February 21-22, 2024 Public Meeting (AR Exhibit B.6)

March 19-20, 2024 Fact-finding Meeting (RJB, RDM) (AR Exhibit D.7)

April 17-18, 2024 Fact-finding Meeting (PL, RFW) (AR Exhibit D.8)

May 8-9, 2024 Fact-finding Meeting (PFP, RDM) (AR Exhibit D.9)

June 26-27, 2024 Public Meeting (AR Exhibit B.9)

July 24-25, 2024 Fact-finding Meeting (PFP, RFW)

August 21-22, 2024 Fact-finding Meeting (PL, RDM)

September 4-5, 2024 Fact-finding Meeting (RJB, RFW)

October 9-10, 2024 Public Meeting

DCPP 2023 Key Dates

NSOC Meetings (DCISC invited only to the 2-hour exit meeting on the final days below)

- February 23, 2023
- July 13, 2023
- November 30, 2023

Refueling Outages

1R24 Fall 2023

2R24 Spring 2024

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

AGENDA TRANSMITTAL FORM

MEETING DATE:	September 13, 2023
AGENDA ITEM:	VI-B
AGENDA TITLE:	Documents Provided to the Committee

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

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 June 2023.

RECOMMENDED COMMITTEE ACTION: None, information item only.

June 2023
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
6/16/2023	DCL-23-049	2Q23 Quarterly Report California Public Utilities Commission Submittal
06/29/2023	DCL-23-053	DCL-23-053, Nuclear Material Transaction Report for New Fuel

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
06/01/23	SUMMARY OF THE MAY 3, 2023, PUBLIC MEETING TO DISCUSS THE END OF CYCLE ASSESSMENT AND PRE-SUBMITTAL LICENSE RENEWAL PROCESS OVERVIEW FOR DCP, UNITS 1 AND 2
06/14/2023	Pre-submittal Teleconference with PG&E Regarding a Planned LAR for DCP, U1 U2 (EPID L-2023-LRM-0039)
6/20/2023	Acceptance Review - DCP revision to the U1 reactor vessel material surveillance program withdrawal schedule (EPID_ L-2023-LLL-0012)
6/20/2023	20230620 U1 U2 Review of Post-Shutdown decommissioning activities report

D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
05/16/23	2023-005	PSRC Meeting Minutes 2023-005

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

Type	Doc. No.	Title
06/01/2023		Significance Level 1 and 2 Work Group Evaluations Created 05/01/2023-05/31/2023
06/30/2023		List of DN 5.1 and 5.2 Created 6/1/2023-6/30/2023
06/30/2023		DCP 1 WGE and 2 WGE Notifications Completed 6/1/2023-6/30/2023
06/05/2023		Open LTCA DA Notifications Station Significance 3 as of 6/5/23
06/05/2023		20 Oldest Non-LTCA DA Notifications as of 06/05/2023
06/05/2023		DCP CAP Station Index
	51176162	DA-Incorrect EWS siren location model
	51189337	DA-QAAF - Concrete Documentation
	51191084	DA-Prohibited Item discovered inside the PA

June 2023
List of Documents Transmitted Electronically

	51179044	DA-U2 Sys 23C1 480V HVAC Goal Setting
	50652094	RCE - 50652094 - DA-DEG 2-2 Broken Bolt - Rev 3
06/05/2023		Open RCEs as of 06/05/2023
06/05/2023		Open LTCA DA Notifications Station Significance 1 & 2

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

Date	Doc. No.	Title
06/07/2023		Quality Digest, June Edition 2023
06/05/2023	2023-IA-06	2023 Special Processes and I51/IST Audit 4/10/23-5/8/23
06/13/2023	2023-IA-08	2023 Humboldt Bay Independent Spent Fuel Storage Installation Audit Report

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
06/12/2023	51190616	2023 NAECP Annual Training Trip Report
06/02/2023	51192519	Sec - Benchmark Muscle Conditioning
06/07/2023	51191799	Benchmark - Palo Verde Fire Protection
06/28/2023	51185261	Benchmarking - PMO++ Activities
06/21/2023	51187355	IRIS Report Review Process Benchmark
07/11/2023	51195127	2023 Security FFD NRC Inspection Trk

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

Date	Doc. No.	Title
1/31/2022		Generation Operating Plan 2021 – 2025, No new updates this month.
06/15/2023		June 2023 Emergency Planning Performance Improvement Dashboard
06/12/2023		June 2023 PI Status Summary
06/13/2023		June 2023 Operations Services Performance Improvement Dashboard
06/14/2023		June 2023 Maintenance PI Dashboard
05/15/2023		June 2023 Engineering Services Performance Improvement Dashboard
06/12/2023		June 2023 Security & Emergency Services Performance Improvement Dashboard

June 2023
List of Documents Transmitted Electronically

05/17/2023		June 2023 Industrial Safety Performance Improvement Dashboard
06/01/2023		June 2023 Learning Services Performance Improvement Dashboard
06/2023		May 2023 Station Excellence Plan
06/2023		June 2023 Station Excellence Plan

J. INPO

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

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
		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.

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 202323	T+1 Performance Critique
	Week 202324	T+1 Performance Critique
	Week 202325	T+1 Performance Critique

July 2023
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
7/6/2023	DCL-23-055	Nuclear Material Transaction Report for New Fuel signed
7/13/2023	DCL-23-059	2Q2023 - PI data - Quarterly Submittal
7/12/2023	DCL-23-054	License Amendment Request 23-01 Revision to Technical Specifications to Adopt Risk-Informed Completion Times TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times – RITSTF Initiative 4b"
7/20/2023	DCL-23-061	DCPP Intake Cove Dredging Project Coastal Development Permit Application
7/20/2023	DCL-23-062	Amendment to California State Lands Commission Lease No. PRC 9347.1 - DCPP Intake Cove
7/21/2023	DCL-23-063	DCPP Intake Cove Dredging Project – Section 404 Permit Application
7/26/2023	DCL-23-064	Nuclear Material Transaction Report for New Fuel

C. NRC Incoming Correspondence (including Inspection Reports)

Date	Title
07/17/2023	SUMMARY OF JUNE 26, 2023, PRE-SUBMITTAL TELECONFERENCE WITH PACIFIC GAS AND ELECTRIC COMPANY REGARDING A LAR TO ADOPT TSTF-505 FOR DCPP, UNITS 1 AND 2 (EPID L-2023-LRM-0039)
07/20/2023	DCPP Revision to the Reactor Vessel Material Surveillance Capsule Withdrawal Schedule
7/25/2023	Request for Additional Information for the Technical Review of the Application for Renewal of the DCPP ISFSI (CAC/EPID NOS. 001028/L-2022-RNW-0007)
7/25/2023	DCPP Units 1 and 2 - NRC INITIAL OPERATOR LICENSING EXAMINATION APPROVAL

D. PSRC Documents (PSRC Minutes)

Date	Doc. No.	Title
7/11/2023	2023-007	PSRC Minutes

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

Type	Doc. No.	Title
1 WGE	SAPN	
2 WGE	51167329	DA-DG 2-2 not running smoothly
2 WGE	51191443	DA-QAAF ED File VS Procedure Discrepance

July 2023
List of Documents Transmitted Electronically

2 WGE	51141832	DA-Review Cause Evaluation Effectiveness
2 WGE	51189556	Class I Coating Storage Temp C
Eff. Eval		
06/30/2023		Significance Level 1 and 2 Work Group Evaluations Created 06/01/2023 -6/30/2023
07/31/2023		List of DN 5.1 and 5.2 Created 7/1/2023 - 7/31/2023
07/31/2023		DCPP 1 WGE and 2 WGE Notifications Completed 7/31/2023
06/29/2023		Open LTCA DA Notifications Station Significance 3 as of 6/29/2023
06/29/2023		20 Oldest Non-LTCA DA Notifications as of 06/29/2023
07/03/2023		DCPP CAP Station Index
07/03/2023		Open RCEs as of 07/03/2023
06/29/2023		Open LTCA DA Notifications Station Significance 1 & 2

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

Date	Doc. No.	Title
07/07/2023		Quality Digest, July Edition 2023
07/31/2023		IA-09 IFSFI Fuel Management Audit
07/12/2023		IA-07 Cyber and Physical Security Audit Report

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
	BNHI-51194378	STARS outage working group conference
	BNHI-51194530	Callaway OSSR peer assist
	BNHI-51197464	Benchmark NITSL Cyber Conference 2023
	SAQH-51195836	QHSA Engineering Dept 2023 Reorg
	SAQH-	Perform QHSA NRC IP 71124.04
	BNHI-51196494	ECP Informal Benchmark
	BNHI-51174221	Sec Benchmark
	BNHI-51178657	STARS Benchmark – Fall 2022 Outage Perf
	BNHI-51175826	Palo Verde IER 21-4 Self Assessment
	BNHI-51179970	RCS Leakrate benchmark request

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

Date	Doc. No.	Title
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July 2023
List of Documents Transmitted Electronically

1/31/2022		Generation Operating Plan 2021 – 2025, No new updates this month.
06/30/2023		July 2023 Station Excellence Plan
06/30/2023		July 2023 PI Dashboard Learning Services
07/20/2023		July 2023 Operations Services Performance Improvement Dashboard
07/19/2023		July 2023 Maintenance PI Dashboard
07/24/2023		July 2023 Engineering Services Performance Improvement Dashboard
07/19/2023		July 2023 Security & Emergency Services Performance Improvement Dashboard
07/15/2023		July 2023 Emergency Planning PI Dashboard
07/10/2023		July 2023 PI Status Summary
07/24/2023		July 2023 Industrial Safety PI Dashboard

J. INPO

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

K. Operational Documents (ODM Minutes, POAs)

Date	Doc. No.	Title
7/17/2023		ODM for Circulating Water Pump (CWP) 1-1
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.

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 202326	T+1 Performance Critique
	Week 202327	T+1 Performance Critique

July 2023
List of Documents Transmitted Electronically

	Week 202328	T+1 Performance Critique
	June	T+1 Monthly Performance Critique 2322-2326

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**AGENDA TRANSMITTAL FORM**

MEETING DATE:

September 13, 2023

AGENDA ITEM:

XX-A

AGENDA TITLE:

Minutes of June 28-29, 2023
Public Meeting

CONSENT [X]

ACTION []

INFORMATION []

Staff Summary: Attached are the Minutes which have been prepared from the Committee's one hundred and fifth public meeting held on June 28-29, 2023, in Avila Beach, CA and as a Zoom webinar.

(Each session was also 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 at www.disc.org or at www.slospan.org. Meetings are videotaped for later broadcast on Channel 21 in the San Luis Obispo, CA area, the governmental access television channel.)

RECOMMENDED COMMITTEE ACTION: Accept the Minutes by motion

MINUTES
of the
DIABLO CANYON INDEPENDENT SAFETY COMMITTEE'S
JUNE 28-29, 2023, PUBLIC MEETING
[For Approval at the September 13, 2023, Public Meeting.]

Wednesday & Thursday
June 28-29, 2023
Avila Beach, California
Also conducted as a Zoom Webinar

Notice of Meeting.

A legal notice of the public meeting and a display advertisement were published in the San Luis Obispo Tribune and in the New Times local newspapers and mailed to the media and those persons on the Committee's mailing list. The meeting agenda and the entire agenda packet for the meeting together with the informational presentations made during the meeting were posted on the Committee's website at www.dcisc.org prior to the meeting and the meeting agenda contained information on how to access the webinar using a computer or a telephone. This meeting was also produced as a webinar by AGP Video, Inc. and was webcast live on SLO-SPAN at <http://www.slo-span.org> and through <http://www.dcisc.org> and was subsequently broadcast on San Luis Obispo, California local government access television Channel 21. In response to the coronavirus risk, hand sanitizers and face coverings were available in the meeting room.

I CALL TO ORDER - ROLL CALL

The June 28-29, 2023, public meeting of the Diablo Canyon Independent Safety Committee (DCISC), the one hundred and fifth public meeting of the Committee, was called to order by Committee Chair Dr. Peter Lam at 9:00 a.m. Dr. Lam briefly reviewed the professional backgrounds, experience and appointment to the DCISC for each of his fellow Members and colleagues. Dr. Per F. Peterson, the appointee of the Governor of California, a nuclear engineer and tenured professor and holder of an endowed chair in the Department of Nuclear Engineering at the University of California at Berkeley who also serves as the Chief Nuclear Officer for Kairos Power, a company developing a new advanced nuclear reactor for future deployment, and who previously served on the President's Blue Ribbon Commission on the nation's nuclear future and who serves on the DCISC as the appointee of the Governor of California. Dr. Robert J. Budnitz, a nuclear engineer and internationally recognized expert on reactor seismic safety, retired from the University of California's Lawrence Berkeley National Laboratory, and Dr. Lam reported Dr. Budnitz serves on the DCISC as the appointee of the California Attorney General. Dr. Budnitz briefly reviewed Dr. Lam's professional background as a nuclear engineer with a long career in nuclear safety and his service as former judge on the Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board who serves as the appointee of the Chair of the California Energy Commission.

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 and Assistant Legal Counsel including Technical Consultants Dr. Andrew C. Kadak, Mr. Richard D. McWhorter Jr. and Mr. R. Ferman Wardell, P.E. and Assistant Legal Counsel Robert W. Rathie. Dr. Lam then introduced Mr. Hector Garcia, DCPD Chief Nuclear Officer Support Manager. Dr. Lam remarked Mr. Garcia plays a key role on behalf of PG&E and DCPD in working with the DCISC in efficiently coordinating activities, providing information and facilitating the Committee's public meetings and the frequent fact-finding visits conducted by a single member and one of the technical consultants.

III PUBLIC COMMENTS AND COMMUNICATIONS

The Chair reviewed the procedure and the timing for members of the public to address remarks to the Committee on matters not on the agenda.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman called the Committee's attention to the upcoming filing of opening comments by his client in Phase 1 Track 1 rulemaking proceeding R.23-01-007 [to implement the provisions of California Senate Bill 846¹ (SB846)] now pending before the California Public Utilities Commission (CPUC). Mr. Geesman stated much of the Alliance's filing is based upon confidential exhibits for which a nondisclosure agreement with Pacific Gas & Electric Company (PG&E), the licensee for the Diablo Canyon Plant (DCPD), was required and he encouraged the DCISC to obtain permission to access the confidential portions of the filing and in particular **he called the Committee's attention to a PG&E quality assurance audit from 2018 of the PG&E Geosciences Department and remarked the DCISC may have already received the report of the audit, but if not he encouraged the Committee to gain access to it. Dr. Peterson directed that action be taken to obtain the document.**

IV ACTION ITEMS

A. Update on Administrative and Financial Matters.

The Chair requested Assistant Legal Counsel Rathie report on administrative and financial matters. Mr. Rathie first announced that the AGP Video technicians requested that the

¹ On September 2, 2022, Governor Newsom signed SB846, codified as Public Resources Code Sections 25233, 25233.2 and 25302.7, Public Utilities Code Sections 712.1 and 712.8, and Water Code Section 13193.5, which allows for the potential extension of operations at Diablo Canyon beyond the current retirement date, up to five additional years, under specific conditions as provided by the legislation including approval by the NRC extending the operating licenses for Diablo Canyon.

Committee exercise microphone discipling and turn off microphones when not speaking as doing so will improve the accuracy of the transcript produced by Ms. Denise Righetti of the Legal Counsel's Office. He stated that this meeting was being livestreamed on the internet and also being conducted as a Zoom webinar by AGP technicians Messrs. Fairbanks, Barnes and Forte, and the members of the public attending via Zoom could make comments and interact with the Committee by referencing the information given on the agenda and online at the Committee's website.

Mr. Rathie reported the Committee is now preparing the 33rd Annual Report which will cover the period July 1, 2022 through June 30, 2023 and approval of that report is expected at the September 13-14, 2023 public meeting. This will be the first report issued for a period which follows the passage of SB846. In accordance with direction from SB846 the fact finding reports approved at the September 2022 and February 2023 public meetings are now posted to the DCISC website and the fact finding reports approved at this meeting will be posted after the meeting. He reported rulemaking proceeding R.21.01-007 provides for noticing DCISC fact finding reports and for receipt of comments from the parties to that proceeding. Mr. Rathie stated it was his understanding that the fact finding reports prepared prior to the September 2023 public meeting would also be incorporated into R.21-01-007 in accordance with a process yet to be determined.

Mr. Rathie reported the next appointment of a member of the DCISC is to be made by Governor Newsom for a three-year term commencing on July 1, 2023 through June 30, 2026, and Dr. Peterson is a candidate for reappointment and there are two other candidates for the position.

Mr. Rathie reported with Drs. Peterson and Budnitz, together with the technical consultant, he attended a meeting of the Independent Peer Review Panel for seismic study (IPRP) held remotely on May 5, 2023. At that meeting Dr. Budnitz participated on behalf of the Committee concerning items on the IPRP's agenda.

On May 25, 2023, with Dr. Budnitz, Mr. Rathie participated in a remote conversation with representatives of the California Department of Water Resources.

In concluding his report Mr. Rathie introduced Mr. Martin Mattes, a partner with the Nossaman law firm, who has acted as Special Counsel to the Committee for regulatory matters for approximately 20 years and he announced Mr. Mattes would be retiring soon. Mr. Rathie reported Mr. Willis Hon, a partner at Nossaman, is well qualified to take over the Special Counsel role and Mr. Hon will be taking over that role from Mr. Mattes. Mr. Mattes remarked it has been a privilege to act as Special Counsel for the Committee and he remarked the Committee has never been as much in the public eye as it is today. Mr. Hon remarked he looks forward to assisting the Committee in matters before the CPUC and he commented that prior to entering into his legal career, following graduation from Columbia University School of Law, he obtained an undergraduate degree in chemistry from the University of California at Berkeley.

Mr. Rathie recognized the presence in the audience of several representatives of the Department of Water Resources (DWR) including Mr. Christian Arechavaleta, DWR Manager for Electric Supply & Strategic Reserves.

Concerning DCISC financial matters Mr. Rathie reported the Committee at this time has sufficient funds to continue its activities and no curtailment is planned due to lack of financial resources, but it appears that given the additional scope of work created by SB846 the Committee will exhaust the funds provided by PG&E ratepayers for its operations prior to the end of calendar year 2023. He reported R.22-01-007 provides in Phase 1 Track 1 for a decision concerning the securing adequate funding for the DCISC during the period of transition to extended operations and relicensing given the increased scope of work created by SB846. A decision is expected in Phase 1 Track 1 on that issue by the first part of August 2023. Mr. Rathie reported that after having been denied party status in R.21-07-001 the Committee was advised to provide its input to the proceedings through the CPUC Energy Division. He reported four parties have filed comments on Phase 1 Track 1 issues. He commented if expended operation of DCPD is approved there will likely be different funding arrangements for that period and following when the plant finally moves into its decommissioning phase. He reported these differing funding sources will likely require changes to the Committee's current Second Restated Charter. Mr. Rathie reported as the Committee now moves into the third quarter of 2023 there are funds available for its operation and there is a path forward to ensure the Committee remains adequately funded through the end of 2023 and into the period of transition to extended operations and relicensing. In response to the Chair's inquiry Mr. Rathie replied the provisions of SB846 speak specifically to the Committee having access to funding to continue to attract qualified persons to serve as members.

Mr. Rathie then reported on the activity on the DCISC's website at www.dcisc.org which has seen visitors from around the world, with the majority of those visiting the site coming from the United States, followed by South Korea, India, the United kingdom, France, Germany, Pakistan and Canada. Dr. Budnitz remarked that for many years persons from Ukraine were frequent visitors to the website and he commented he is acquainted with many talented colleagues in the nuclear engineering discipline in Ukraine who are suffering greatly due to the recent events involving Ukraine and the Russian Federation.

The Chair thanked Mr. Rathie for his presentation.

B. Nomination and Election of DCISC Chair and Vice-Chair for the July 1, 2023 - June 30, 2024 Term.

On a motion made by Dr. Budnitz, seconded by Dr. Peterson, the Committee reelected Dr. Lam to the position of DCISC Chair and on a motion made by Dr. Peterson, seconded by Dr. Lam, Dr. Budnitz was elected to the position of DCISC Vice-Chair, both to serve terms of office from July 1, 2023 through June 30, 2024.

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 to follow issues, concerns and information requests identified for subsequent action or receipt during fact-finding and public meetings. Mr. Wardell stated newly added or changed items were shown in *red italics* and items for which action is identified within the next three scheduled fact findings are shown in *yellow* text in the version of the Open Items List included with the agenda packet and certain items are being identified for closure. Mr. Wardell began his remarks by thanking Consultant McWhorter for his assistance in reviewing and providing comment on the Open Items List²:

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

<u>Item</u>	<u>Re:</u>	<u>Action Taken/Next Action</u>
CO-13	Operation in Differing Modes (load follow)	Defer action
CO-14	Operator Retention Project	9/23PM then TBD-post Tier 2
EP-2	Observe Emergency Drills & Exercises	Combine w/EP-3
EP-3	Confidentiality of Exercise/Drill Scenario	Combine w/EP-2
ER-5	Equipment Reliability Process	Close to EN-19
SE-26	Reactor Pressure Vessel Compliance	Strike “needing improvement” Last Action 6/23PM Next Action 4Q23FF after 1R24
SF-4	Orano Spent Fuel System Design	Last Action 6/23PM Next Action 4Q23FF
EO-1	Purchase New Fuel	Monitor as appropriate
EO-6	Preventive & Corrective Maintenance Schedules	Add 9/23PM to Next Action
EO-7	PMO++ Process, Results & Decisions	Add 9/23PM to Next Action
EO-9	Monitor re SB846 Seismic Assessment	Add FF after 4Q23
EO-10	Monitor Independent Maintenance Study	Add FF after 4Q23
9/22PM-26	Continuation of Once-Through Cooling	Close
2/23PM-9	Review of License Renewal Application	Add 11/23FF
2/23PM-15	FF Reports re Vessel In-Service Inspections	Close
2/23PM-27	Ascertain Seismic Sequences of Concern and Application of FLEX ³ and B.5.b Capabilities	Add 7/23FF

² Key to some abbreviations used re action taken/next action: Fact-finding (FF), Public Meeting (PM), Quarter (Q)

³ FLEX is not an acronym but describes a strategy developed by the nuclear industry developed after the September 11 attacks and subsequently further augmented after the accident to the Fukushima Dai-ichi Nuclear Power Plant in Japan and since to provide diverse, additional and flexible coping strategies and equipment to address the loss of safety-related systems due to beyond design basis events. B.5.b refers to a section of an NRC Order, issued in February 2002, describing the strategies that the NRC required nuclear plant licensees to develop after the September 11 attacks to “maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire.”

Dr. Budnitz remarked the Committee has planned its fact-finding activities for July and for the first August 2023 fact-finding visits [July 26-27 and August 9-10, 2023 respectively] to enable the fact finding teams to collect the information necessary by September 1, 2023, for the Committee's review of maintenance and upgrades needed in light of extended operations. The Chair then called for any comments from the public on the Committee's review of the Open Items List.

Mr. Bruce Severance was recognized. Mr. Severance stated he was a member of the Diablo Canyon Decommissioning Panel but was speaking today as an individual. Mr. Severance stated his review of correspondence between PG&E and the Nuclear Regulatory Commission (NRC) since the beginning of 2023 indicates that DCCP had attempted to retrieve Surveillance Capsule B⁴ from Unit 1 as early as 2010, but the capsule has proven immovable and PG&E has requested to be given until spring 2025 to withdraw Capsule B, but now intends to try to remove it during the next refueling outage and if unable to do so its removal could be delayed until spring 2025. He reported the normal time to perform testing on a surveillance capsule is 18 months so it is possible PG&E may not have the results from analysis of Capsule B until early 2027. In the meantime he observed DCCP Unit 1 would be operating on a waiver from the NRC and he stated he remains extremely concerned about [pressure vessel]embrittlement as he stated in 2003 PG&E's analysis of capsule data indicated that Unit 1 would be approaching its fracture toughness limits by September of 2021 and then subsequent revision of data at the time of the submission of DCCP's initial License Renewal Application circa 2009 extended that time. Mr. Severance inquired whether the Committee sees the information he cited as vital to continued operation. Mr. Rathie observed that this time is reserved for comments on the agenda item under consideration and there is an item scheduled for later in this meeting to address Unit 1 reactor pressure vessel integrity.

Mr. David Weisman, representing the Alliance for Nuclear responsibility was recognized. Mr. Weisman inquired why Dr. Kadak was not present at this meeting in person or mentioned as a participant in any of the upcoming fact findings. Dr. Budnitz responded Dr. Kadak was engaged to review issues in connection with DCCP's decommissioning and Dr. Kadak will be participating remotely during this public meeting in discussions and presentations including concerning decommissioning and spent fuel.

Ms. Michelle Cook was recognized. Ms. Cook identified herself as a resident of Los Osos, California, which she described as a community the Committee has apparently forgotten about. She commented she regularly hears the emergency sirens being tested but believes the chances of hearing those sirens [in an emergency] was very minimal. Ms. Cook observed that neither the Yucca Mountain nor the Texas Salt Mine nuclear waste repositories have opened and extended operation of DCCP would expand the need for storage of spent nuclear fuel. She remarked she purchased her house with the understanding DCCP would be shut down. Ms. Cook stated her biggest concern was PG&E is a company with no regard for human life and has allowed the entire nuclear plant to decay to a point where it needed to be shut down and she

⁴ Surveillance capsules contain metal tags known as coupons made from the same material as the reactor pressure vessel the capsules are placed within. For purposes of this report the term "capsule" will be used to refer to both.

would be happy if the state took over Diablo Canyon from PG&E and the condition of the power lines in Avila Beach is indicative of PG&E's regard for safety. She commented PG&E is using questionable storage in an earthquake and tsunami zone and no one including the DCISC has consulted the people of Avila Beach or Los Osos nor have they had the courtesy to notify them of these meetings by letter. She closed her remarks by observing that if the DCISC insists on keeping the plant open it should reach out to the residents in those areas who will die because of PG&E.

Mr. Robert Sarvey, a resident of Los Oso, California, was recognized. Mr. Sarvey stated his concern was with the back-up emergency generators at the plant which are 40 years old. He observed that in every fact finding report over the last ten years the emergency generators are shown to be experiencing continual problems. Mr. Sarvey encouraged the Committee to require that DCPD replace those generators.

A break followed.

Following the break Dr. Lam recognized the presence in the audience of Dr. Tim Dawson, Program Manager for the Seismic Hazards Program at the California Geological Survey, and the presence of Dr. Dawson's colleagues including representative of the California Seismic Safety Commission and the CPUC who serve with Dr. Dawson on the IPRP.

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

A. The Chair introduced the next item which was approval of resolutions ratifying fact finding reports adopted by the Committee Members at the Committee's September 28-29, 2022 public meeting. He remarked that the Committee's fact finding reports are now part of the CPUC rulemaking proceeding to implement the provisions of SB846 and accordingly resolutions of approval were adopted for each fact finding report presented at the February 2023 public meeting and resolutions have been prepared for fact finding reports to be presented at this meeting. Assistant Legal Counsel Rathie remarked the approval of resolutions for fact finding reports presented at the September 2022 public meeting would conform those reports to the Committee's present approval process. On a motion by Dr. Budnitz, seconded by Dr. Lam, resolutions were approved ratifying the approval in September 2022 of the July 14-20 & 21 [Resolution 2023-05], August 16-17 [Resolution 2023-06], and the September 13-14, 2022 [Resolution 2023-07] fact finding reports

B. The Chair requested Consultant Wardell to provide a report on the March 14-15 & 27, 2023 fact-finding visit to DCPD with Dr. Budnitz and Mr. McWhorter. Mr. Wardell then reviewed the topics discussed with PG&E during the March 2023 meeting as follows:

➤ Meet with DCPD Officer, Site Vice President Mr. Adam Peck – Mr. Wardell reported items were discussed from the fact finding meeting agenda and other items of mutual interest. He commented these frequent meetings with senior plant management are useful for PG&E as well as for the Committee's fact-finding teams (FFT).

- September 14, 2022 Emergency Exercise Critique – Mr. Wardell reported that with Dr. Budnitz he attended and observed the September 2022 Emergency Exercise and the fact-finding item was to review the critique of what he described as a successful exercise. Three gaps to excellence were identified which involved procedure adherence and data entry and were entered into the plant's Corrective Action Program and corrected by coaching.
- Equipment Long Range Plan Review (PMO++) – Mr. Wardell reported the PMO++ Program includes items which, per SB846, the Committee is responsible to review and these are separated into categories for preventative maintenance, corrective maintenance, and projects and improvements to the plant. Dr. Budnitz observed this represents the single most important activity for the Committee during the next several months and it presents a complex task for the DCISC. Mr. Wardell reported that during the period prior to the passage of SB846 there were no changes to maintenance of equipment important to safety or to equipment which comes under the NRC's Maintenance Rule. He reported for some non-safety and other equipment there were changes in anticipation of the plant shutting down by 2024/2025, but which have now been reinstated and assessed for an additional five years of operation until 2030. He reported a number of projects were likewise terminated prior to passage of SB846 and these projects are the subject of the Committee's review of the PMO++ Program⁵ and license renewal and he reported these projects have now all been restored for implementation. The FFT concluded DCPD was well along in the PMO++ Program's initiative evaluating projects and plant's maintenance activities to support continued operation after 2024/2025. **Mr. Wardell reported the DCISC will continue its review of the PMO++ Program during fact-finding to be conducted in April, May, July and August 2023.**
- Meet with NRC Senior Resident Inspector – the FFT met with Mr. Mahdi Hayes, NRC Senior Resident Inspector for DCPD, to discuss the upcoming twenty-fourth refueling outage of Unit 1 (1R24) and Mr. Wardell reported that during 1R24 a number of projects necessary for license renewal will be implemented and a surveillance capsule is planned for removal from the Unit 1 reactor pressure vessel during 1R24. Mr. Wardell reported the NRC is planning to send an inspection team to review DCPD's Aging Management Program and PMO++ Program results. He reported a non-cited violation was received related to an incipient fire protection testing protocol which was submitted by a DCPD employee to the NRC as an allegation and subsequently corrected.
- Radiation Monitoring and Eagle-21 Reactor Protection Systems - Mr. Wardell reported the Radiation Monitoring System is an extensive system which utilizes 101 channels and some components of the Radiation Monitoring System are original plant equipment. In context of license extension, DCPD conducted a study which determined parts remain available and the Radiation Monitoring System is operating satisfactorily and a determination was made to continue with the system for the period of extended operation with selected short term upgrades. Concerning the Eagle 21 Reactor Protection System he reported this system is also original plant equipment manufactured by Westinghouse. Mr. Wardell reported Westinghouse has made a commitment to continue to supply parts and service for the Eagle-21 System and DCPD intends

⁵ PMO++ stands for Preventative Maintenance Optimization with the ++ designation standing for projects and life cycle review.

to retain and maintain the current system. The FFT concluded the decisions taken regarding these two systems were proper.

➤ Switchyard DC Control Power – Mr. Wardell reported there are two switchyards serving DCPD with the 500kV Switchyard sending power out from DCPD to the grid and which can also be used for receiving emergency offsite power if necessary, while the 230kV Switchyard provides the usual source of emergency offsite power if needed. He reported the circuit breakers which are controlled to switch current circuits are operated by direct current (DC) power which is provided from the plant's vital busses with battery backup provided which is also charged by vital power. Mr. Wardell reported the FFT found the health of the DC Control Power Systems to be acceptable.

➤ Aging Management Plans for License Renewal – Mr. Wardell reported aging management is a very important aspect of license renewal and DCPD has a team of 40 persons engaged in developing the aging management plans for license renewal. He reported some components of the aging management planning are already in place, such as the National Fire Protection Association 805 (NFPA805) Fire Protection Aging Management Plan and some aging management plans will need to be developed such as a cathodic protection program for the Auxiliary Saltwater System discharge piping to assist in preventing corrosion. **Mr. Wardell reported the FFT found DCPD was proceeding properly in upgrading and adding aging management plans and the DCPD will continue this review in context of its review of the DCPD License Renewal Application.**

➤ Seismic Safety issues – Mr. Wardell stated that as Dr. Budnitz will be presenting on this topic later during the public meeting at this time he would not comment on this topic.

➤ Review of the 2010 Enercon Report on Seismic Vulnerabilities – Mr. Wardell reported this topic was raised by a member of the public and concerned a report [prepared in 2010 in accordance with California Assembly Bill 1632 to assess power plant vulnerabilities] by Enercon, an engineering and environmental services firm, to assess how earthquakes might affect non-safety equipment and six of the buildings on plant site. Mr. Wardell reported the seismic building code used for their construction provides extra margin, with the end point of the building code being life safety and not the ability of the structures or equipment to continue to be capable of performing their function after a seismic event. The FFT found the comparison of these buildings' structures to a "soft story"⁶ building was not accurate. Dr. Peterson observed the six buildings at DCPD were steel framed and therefore were not subject to the types of failure modes of concrete buildings.

Dr. Peterson observed the DCISC's interest in the safety of non-safety related building was prompted by the need for personnel to be available to respond in the event of an earthquake and was also related to the need to implement FLEX capabilities. Dr. Peterson reported the Enercon Report concluded for the six buildings analyzed at DCPD, none of which contain safety-

⁶ A soft story building is one in which the first story has less stiffness than the second story or the stories above it. In practice, this generally means a building that has an open ground level, with fewer walls than the floors above.

related equipment and do not generally house emergency response or Operations personnel, each would have a strong seismic performance due to the building design code used in its construction.

Mr. Wardell reported the Enercon Report also recommended evaluation of the capacity after a seismic event of the main turbine thrust bearings which are important for turbine operation. He reported these bearings are not safety-related but are required in order for the plant to produce electricity. Mr. Wardell reported after issuance of the Enercon Report in 2010, in 2011 DCPD engineers contacted the manufacturer of the thrust bearings and concluded the amount of damage to the thrust bearings expected to be experienced during a seismic event would require approximately one month to repair. Dr. Budnitz observed the size of an earthquake which was postulated to produce the damage to the thrust bearings had a probability of occurring approximately once in one thousand years. Dr. Budnitz stated the DCISC's mandate from the CPUC does not include electrical generation and therefore the decision as to whether the risk to the thrust bearings is too high would need to be made in a different forum. Dr. Peterson observed that with the failure of a radial bearing on a low pressure turbine, turbine blade failure in an overspeed situation could occur and as the turbines are oriented parallel to the reactor building a blade could be flung in the direction of the reactors. Mr. McWhorter observed that with reference to the thrust bearings they could move laterally, but there are other restraints that would limit that motion such that a blade clash would not occur but the turbine glands, the steam sealing glands, and all sealing glands could be affected and this accounts for the thirty-day repair cycle.

The FFT concluded the findings of the Enercon Report did not affect any safety equipment, personnel would be protected by the building code, and the turbine thrust bearings, although not a safety item, could be repaired or replaced in approximately one month.

➤ Review of Proposed Changes to NRC Regulation 10 CFR 50.59 – [Title 10 of the Code of Federal regulations (CFR) 50.59] “Changes, Tests and Experiments.” Mr. Wardell reported this regulation provides guidance for the NRC's review of physical changes to the plant or changes to plant procedures. He stated that while the NRC is now considering changes to 10 CFR 50.59, DCPD has not yet seen the proposed changes and therefore the DCISC's inquiry was premature. Dr. Budnitz remarked the changes have been well received by other nuclear power plants which have participated in pilot projects for the changes to 10 CFR 50.59 and he stated he understood the adoption of a revised, risk-informed, 10 CFR 50.59 regulation would be optional.

➤ Maintenance Department Update – Mr. Wardell reported Maintenance Department performance is currently rated in Green status⁷ indicating good, stable performance. He reported the Maintenance Department is now hiring more personnel for an extended operations period and some retirements will be creating additional opportunities to fill positions.

⁷ On a scale of Green indicating a healthy performance and White indicating that achievable action plans are in place to return performance to healthy status. A Yellow rating would indicate the indicator shows deficient performance and needs improvement and Red would indicate unsatisfactory performance.

➤ Observe DCPM Management Review Meeting (Remote) – Mr. Wardell reported the FFT observed remotely the Management Review meeting which he described as a top level meeting of station management focused on achieving excellence in performance. He described the meeting as having good participation and the participants as demonstrating a willingness to accept new action items resulting in a strong focus on achieving excellence in performance.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman stated he was amazed that the Enercon Report got things wrong in 2010, but thirteen years have passed before PG&E brought this to anyone's attention. He commented in his opinion this was a very long time to wait for a correction to something that was ordered by the state. He emphasized the Enercon Report did not just look at six buildings, but also at 300 Class C systems, structures and components. Mr. Geesman commented that as California has authorized \$1.4 billion going to PG&E to extend operation of DCPM, that it seems logical that some of those funds would be expended to assure these Class C systems, structures and components would cost-effectively be retrofitted to prevent an extended outage caused by a 0.2g earthquake as the Enercon Report indicated. He commented if damage to the thrust bearings were to result in damage to turbine blades that might require one or two years to repair. He remarked that the cost of the loss of power from Unit 2 in 2020 and 2021 was estimated a \$1.2 million dollars per day and therefore an outage of one month would result in excess of \$30 million in lost generation and he wondered if there might be some way to retrofit the Turbine Building to mitigate the risk of such an outage. He reported that the State Lands Commission, which serves as the lessor for some of the land occupied by DCPM facilities, added a special condition to DCPM's lease requiring PG&E within 60 days of the release of the updated seismic assessment it is required to perform under SB846 to provide to the Commission's staff a written analysis of preventive actions, if any, to remediate any newly identified seismic vulnerabilities for those facilities subject to the lease from the Commission. Mr. Geesman commented Dr. Peterson has previously indicated the DCISC's mandate extends to anything that threatens life safety and he commented it is important that the lease of state tidelands be dependent upon attention to these non-safety systems, structure and components and he encouraged the DCISC to encourage PG&E to update and correct the Enercon Report as the threat of forced outages caused by seismicity is a very severe jeopardization of the \$1.4 billion of state general fund resources.

Dr. Peterson stated the DCISC's responsibilities under its Charter are limited to assessing operational safety and the risk associated with the potential for an extended outage following an earthquake are not within the scope of the Committee's responsibilities. He further stated for a number of years the Committee has paid significant attention to the question of seismic safety in the workplace because of the concern that personnel could be injured as a consequence of an earthquake and be unable to respond to safety issues. Therefore, the primary focus of Committee's review of the Enercon Report was to assure that the buildings assessed by the report have an appropriate level of life safety so the occupants can expect not to be injured and the Committee from its review concluded that this is the case. Dr. Budnitz commented the DCISC's review and analysis did provide an added value with respect to the conclusion that an earthquake which could damage the turbine thrust bearings and result in an outage that would compromise the plant's ability to make electricity would have a probability of approximately one in one thousand years but he stated the question of whether that is safe enough is not one for the Committee to address. Mr. McWhorter reported the Enercon Report, in questioning the viability

of the turbine thrust bearings in an earthquake, recommended that PG&E evaluate the issue and perform an upgrade if necessary. The DCISC asked for and received a copy of that evaluation which was done within one or two years of the issuance of the Enercon Report and included review by the thrust bearing manufacturer which included information that the limit stops within the thrust bearings were designed such that the shaft would not move enough to cause blade clash. Other turbine components such as the glands could be damaged, but Mr. McWhorter observed PG&E did not wait thirteen years to address this issue.

Upon a motion made by Dr. Budnitz, seconded by Dr. Peterson, the March 14-15 & 27, 2023 Fact Finding Report was unanimously approved along with Resolution 2023-08 accompanying its approval.

VI ACCEPTANCE OF MINUTES

This item concerned review and acceptance of the Minutes of the Committee's February 15-16, 2023 public meeting conducted in Avila Beach and as a Zoom Webinar. A draft of the February 2023 Minutes was included in the public agenda packet for this meeting. The Members and Consultants reviewed the Minutes and provided corrections and substantive changes to certain wording which will be included in the final version of the February 2023 Minutes. Dr. Peterson observed the items included in **bold** text represent items that were identified as specific commitments and are entered into the Open Items List. He remarked the discussion at the public meetings provides an opportunity for key stakeholders including members of the public to have their comments memorialized as actions to be taken by the Committee. The Members and Technical Consultants also discussed certain of the follow-up actions to be taken, provided clarification concerning typographical errors, and the accuracy of certain statements in the February 2023 Minutes and made editorial comments and changes concerning the draft of those Minutes.

Ms. Nina Babiarz was recognized. Ms. Babiarz stated she was associated with the Public Watchdogs organization and she found it interesting the Committee is discussing probabilities in the context of certain of its conclusions, but she stated the Committee is not considering the certainty that Mother Nature doesn't need permits or approvals from the DCISC for an earthquake or a tsunami that could exceed the design factors discussed by the Committee. She remarked the comment about replacing the generators at Diablo Canyon reminded her of the unanticipated situation encountered at the San Onofre Nuclear Generating Station (SONGS) in Southern California when SONGS replacement steam generators, planned to last for 40 years, failed after only eleven months and the plant was shuttered due to a radiation leak. She commented the decommissioning of SONGS was not going according to all the anticipated scenarios and, concerning earthquakes and tsunamis there could be a number of unanticipated scenarios that exceed design probabilities. She closed by thanking the Committee for the opportunity to make her comments.

The Minutes of the Committee's public meetings in their final accepted form become part of its Annual Reports on Safety of Diablo Canyon Nuclear Power Plant Operations. Upon a motion made by Dr. Budnitz, seconded by Dr. Peterson, the Minutes of the Committee's February 15-16, 2023 public meeting were accepted subject to inclusion of the changes provided

to the Committee's Assistant Legal Counsel. As revised, the February 2023 Minutes will become a part of the Committee's 33rd Annual Report.

VII ADJOURN MORNING MEETING

The Chair adjourned the morning meeting of the DCISC at 11:55 a.m.

VIII RECONVENE FOR AFTERNOON MEETING

The afternoon meeting of the DCISC was convened by the Chair at 1:43 p.m.

IX COMMITTEE MEMBER COMMENTS

At this time there were no comments from the Members.

X PUBLIC COMMENTS AND COMMUNICATIONS

Dr. Gene Nelson, President and Senior Legal Researcher for Californians for Green Nuclear Power, was recognized. Dr. Nelson stated he would now provide a condensed version of the comments filed by Californians for Green Nuclear Power in Phase 1 Track 2 of CPUC rulemaking proceeding R.21-01-007 and stated the state needs DCPD not for the next five years but for the foreseeable future. He stated his view was supported by reference to the performance of the California power grid during the large storm event last year when 51% of the amount of power in excess of 6 terawatt hours was powered by the state's many natural gas-fired units, which have poor reliability, and he reposted huge amounts of fossil-fueled power was imported from out of state, notably 18% during that period from coal-fired plants in Utah and Wyoming. Dr. Nelson stated DCPD provided 6% of the power during that period and performed well and he expressed his appreciation to the staff and employees of DCPD for continuing their efforts to make the plant a reliable generator. He observed wind generation is negatively affected by excessive heat in the four corners area of the southwest and during the storm event wind provided 8% of California's power Dr. Nelson stated in the future California will have a need for more gas-fired units, more production from DCPD and sadly more Wyoming coal.

Mr. Bruce Severance was recognized. Mr. Severance stated he would be providing the DCISC with a report regarding radiological [reactor pressure vessel] embrittlement, a topic with which he is concerned. Mr. Severance stated PG&E's position has been that surveillance Capsules S, Y and V data should be deemed not credible. He stated the report for Capsule Y correctly interpreted the criteria to mean that the scatter or deviation in the value should not exceed twice one sigma and the NRC has raised questions about this matter in correspondence between 2003 and 2016 which he cites in his report. Mr. Severance reported PG&E has consistently stated that this data is not credible even though it does meet the criteria and his opinion is that PG&E misstated criteria in order to invalidate what is credible capsule surveillance information. Mr. Rathie observed there is an item on the agenda concerning reactor vessel integrity later in this public meeting.

VI COMMITTEE MEMBER REPORTS AND DISCUSSION

A. Public Outreach, Site Visits and Other Committee Activities: Dr. Lam reported that he has occasionally had contact with members of the public to discuss nuclear reactor safety issues and he stated during these conversations he is careful to speak as an individual and not as a representative of the Committee.

Assistant Legal Counsel Rathie reviewed the dates previously selected for future public meetings and the dates and the Committee representatives selected for future fact-finding. The Members then confirmed previously scheduled public meetings of the DCISC for September 13-14, 2023, February 21-22, 2024 and June 26-27, 2024, and the Members and Consultants then scheduled a public meeting for October 9-10, 2024.

Fact-finding visits were confirmed and scheduled as follows:⁸

[2023] July 26-27 PFP/RDM/RFW; August 9-10 PL/RFW/RDM; August 29-30 RJB/RDM/RFW; November 14-15 RJB/RFW/RDM; December 6-7 PFP/RDM/RFW; and

[2024] January 24-25 PL/RFW; March 19-20 (RJB/RDM); April 17-18 (PL/RFW). May 8-9 (PFP/RDM); July 24-25 PFP/RFW; August 21-22 PL/RDM, September 4-5 RJB/RFW.

Mr. Garcia stated he would review the dates set and revised at this public meeting for the public meeting in October 2023 and the fact findings and confirm that DCPD can support a public meeting and fact-finding by the DCISC on those dates.

B. Documents Provided to the Committee:

The Chair observed that a list of documents received by the DCISC since its last public meeting in February 2023 was included in the public agenda packet for this meeting. Dr. Lam observed the Committee does business in a transparent manner.

XXIV TECHNICAL CONSULTANT REPORTS & RECEIVE, APPROVE, AND
AUTHORIZE TRANSMITTAL OF FACT FINDING REPORTS TO PG&E (CONT'D.)

The Chair requested Consultant McWhorter to report on the April 18, 19 & 20, 2023, fact-finding visit with Dr. Lam and Mr. Wardell. He reviewed the topics discussed with PG&E during the April 18-10, 2023, visit as follows:

➤ Corrective Action Review Board (CARB) – Mr. McWhorter reported the FFT, including Dr. Kadak, remotely observed a meeting of the CARB which he described as a senior management meeting assigned to review areas of the Corrective Action Program. He reported this meeting was a routine review of program metrics, of different tracking of open root cause evaluations tasks and Corrective Action Program indexes, and of open significant level one items and level two corrective action items including open condition reports. Mr. McWhorter reported

⁸ Robert J. Budnitz (RJB), Peter Lam (PL), Richard D. McWhorter Jr. (RDM), Per F. Peterson (PFP), R. Ferman Wardell (RFW).

the meeting was effective and had good participation. **He recommended the DCISC observe another meeting of the CARB in the near future.**

➤ Trends in Plant Status Control Events – Consultant McWhorter described this as a routine review of issues that arise when an operator or a maintenance technician operates the wrong component or places the correct component in the wrong position. He reported that several years ago DCPD experienced a significant number of these types of issues and corrective actions were undertaken and significant improvement was noted by the FFT. However, in late 2022 the numbers of low-level events increased, primarily in the Operations Department, and action was taken to improve communication and increased field supervision of operators was employed to ensure the effective use of human performance practices to minimize the opportunity for plant status control events. Mr. McWhorter reported the Plant Status Control indicator has returned to normal levels and the corrective actions appear effective.

➤ Equipment Long Range Plan Reviews (PMO++) – Mr. McWhorter reported this topic was also covered in the March and May fact-finding visits to DCPD. He reported that since 2016 when the Joint Proposal⁹ was entered into, DCPD has continued to perform all preventative and corrective maintenance on Priority 1, 2 and 3-type items, that is, for safety significant, safety-related/important to safety, and risk significant equipment. Since CPUC approval of the Joint Proposal in 2018 the scope of some preventative and corrective maintenance activities was reduced or eliminated for non-safety related and non-risk significant equipment. Projects performed at the station were also reduced with only those projects required for regulatory compliance, safety, or reliability-related improvements moving forward. Dr. Budnitz remarked SB846 refers to the DCISC review of deferred maintenance and the legislation also requires PG&E to perform an independent maintenance evaluation and the Committee has struggled somewhat with the meaning of “deferred” as it is used in SB846.

Dr. Budnitz stated the DCISC concluded it would undertake its review focused not just on preventative maintenance but also of different kinds of maintenance activities and, to date, the Committee has not identified any compromise to safety as the plant continued to perform all preventative maintenance as well as corrective maintenance activities on the top three categories of safety-related equipment. Dr. Budnitz stated the projects and life cycle review component of the PMO++ Program will require a more in-depth review by the Committee and Mr. McWhorter observed the Committee is still in the process of completing its validation, but for preventative maintenance for Priority 1, 2 and 3 conditions adverse to quality for safety-related/safety significant equipment and verifying all the details in the reports received, those items were performed as scheduled. Mr. McWhorter observed the DCISC has also been performing its own exhaustive reviews of different systems and issues since 2016 and has not identified the type of maintenance issue called out by SB846 for the Committee’s review. Dr. Budnitz observed the

⁹ The Joint Proposal was entered into by PG&E, together 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 in June 2016 to retire DCPD at the expiration of the current operating licenses for each unit, November 2024 for Unit-1 and August 2025 for Unit-2 and was subsequently approved by the CPUC in its Decision (D) 18-01-022.

idea there is a huge backlog of deferred maintenance items has to date not been borne out by the facts.

Dr Budnitz remarked projects were cancelled during the last six or seven years and these projects have yet to be reviewed by the Committee in context of SB846. Mr. McWhorter reported that over the period of the last six or seven years the Committee has routinely reviewed DCPD projects under consideration and as those numbers have declined the Committee has not identified any specific projects that are of immediate concern. Dr. Budnitz commented the Committee is now reviewing projects from the perspective of a specific five-year plan which could lead to different conclusions and there could be project deferrals that could be quite expensive that the Committee might recommend as important to be done.

Mr. McWhorter observed the Committee review is divided into the areas of preventative maintenance, corrective maintenance and projects. He reported PG&E has reviewed all the preventative maintenance changes made since 2018 and 200 preventative maintenance plans were reinstated, a small number added to a program which covers about 12,000 total preventative maintenance activities. He remarked these are under the category of non-safety equipment and represent a relatively small number of items that were chosen not to be done because of the plant closing. The second category of corrective maintenance activities chosen not to be done involves Priority 4 and 5 maintenance activities, with Priority 1, 2 and 3 being significant conditions adverse to quality (Priority 1) and conditions adverse to quality (Priority 2 and 3) and all corrective maintenance activities for these categories were performed as the activities became due. All Priority 4 and 5 items were reviewed and 300 were chosen to be reinstated out of approximately 3,000 such items open at any one time with about 100 items being worked on each day. For projects and upgrade reviews, which Mr. McWhorter described as the largest portion of PMO++ Program, the FFT learned in April 2023 that DCPD solicited input from its system engineers and other stakeholders and approximately 250 possible projects or upgrades were identified and considered for implementation to support extended operations over a five-year time period.

Mr. McWhorter reported as of the April 2023 fact finding DCPD had completed its preventative maintenance and corrective maintenance reviews and a refinement of the project rankings was in progress. A list of the preventative maintenance and corrective maintenance reviews was provided to the DCISC in May 2023 and the FFT discussed with DCPD the Committee's need to review the entire scope during the July 26-27, 2023 fact-finding visit. Mr. McWhorter reported the key question for which assurance is needed concerns the preventative and corrective maintenance items that were not chosen for reinstatement to ensure there are no items that should be reinstated and the DCISC is working with DCPD to ensure enough information will be supplied for this review. Concerning the project review Mr. McWhorter reported the station is moving toward identifying projects that will need to go into the scope for the next refueling outage scheduled fall 2023 and so far about 12 such projects have been identified and this list was also provided to the Committee in May 2023. He reported the Committee FFT requested to review the entire project list by sometime in May, however, DCPD deferred providing the list to the DCISC pending the conclusion of peer reviews then being

conducted by the STARS¹⁰ Alliance and another independent industry benchmarking organization which peer review was scheduled to conclude in May 2023. He reported the independent review of deferred maintenance required by SB846 is scheduled to be complete by fall 2023. **Mr. McWhorter stated there is also an element of the DCISC's previous reviews of items identified which could improve performance, and he gave as an example the emergency diesel generator governors which were changed for four of the six diesels. Mr. McWhorter stated it will be instructive to learn how DCPD will disposition the replacement of the governors for the two diesels that lack them now.**

Dr. Lam reported the FFT made every effort during the April 2023 fact-finding visit to obtain the information needed for the SB846 review, but DCPD was not prepared at that time to allow an examination.

Dr. Budnitz remarked that while he is interested in the entire list of projects and upgrades identified by DCPD, there may be some projects the DCISC identifies that are not on the list but should be.

Mr. Tom Jones, PG&E Senior Director for Regulatory and Environmental Issues was recognized. Mr. Jones reported there is a presentation later during this public meeting on this topic and DCPD has set a deadline to share the information described and discussed by Mr. McWhorter, including the entire list of PMO++ Program upgrades and lifecycles replacement projects, a list of corrective and preventative maintenance measures and the basis used by PG&E to include or exclude items on these lists, by the July 26-27, 2023 fact-finding visit. Dr. Budnitz observed the DCISC has two fact-findings scheduled to review this information. Mr. Wardell remarked that the criteria used by PG&E to include a project and to prioritize projects will be an important element of interest to the Committee. Dr. Budnitz stated individual projects cannot be judged in isolation as many of their capabilities and functions overlap. Mr. McWhorter observed this is not an easy task and it involves a large volume of information and the Committee has limited resources. He commented the need to quickly narrow down the scope to those items that are important to safety and risk significant will benefit from the DCISC's historical knowledge and the Committee should be guided in this effort by principles of probabilistic risk assessment.

Mr. McWhorter summarized the FFT conclusions from the April fact-finding, which he stated are still valid as of this public meeting, as determining the process appears to be well planned and implemented, the final details are not yet available to the Committee for review, and accordingly the Committee was not be able to complete its SB846 review of the PMO++ Program prior to this public meeting and it was his understanding the CPUC has now given a target date to complete that review by September 1, 2023, and Mr. McWhorter stated his belief that this date was achievable by the Committee by using the July 26-27 and August 9-10, 2023 fact-findings as the vehicles to complete the Committee's review. Mr. Wardell observed these lists are not necessarily static and may change.

¹⁰ STARS is the acronym for the Strategic Teaming and Resource Sharing Alliance among several nuclear power plants.

- Licensed Operator Simulator Continuing Training Class Observation – Mr. McWhorter reported this training session involved operators training on four different operating procedures and the session was well prepared with appropriate objectives for the operators to work through. He remarked the instructors conducted the training session in a professional manner.
- Fire Protection Program and Systems – Consultant Wardell reported the implementation of the NFPA805 Fire Protection Program took place at DCPD five years ago and the program is performing fairly well and is in Green overall health status. The incipient fire detection system is currently in Maintenance Rule (a)(1) status. He described function of this system as drawing samples from different points within the Cable Spreading Room into a common detector to detect elements of a fire. The system had maintenance issues that caused it to function unreliably. The incipient fire detection system was also the subject of an NRC violation due to an issue concerning correctly flow balancing the system so it measures flow from various points rather than the overall flow. Although the vendor has stated this function is not required a DCPD employee was not satisfied and subsequently raised the issue with the NRCs as an allegation. DCPD chose to implement flow testing in 2021 and in 2022 the NRC issued a non-cited violation for not having done the testing prior to 2021.
- Corrective Action Program and Human Performance Update – the FFT reviewed the notification¹¹ process. Mr. McWhorter reported approximately 30,000 notifications are generated at DCPD each year which he described as a high number which is indicative of a low reporting threshold for problems and issues. The FFT reviewed the program metrics that serve to track the notifications within the Corrective Action Program including how long it takes to disposition a notification and how many open items are in the process at any one time and the FFT found the program was generally well managed. Human performance events at DCPD are categorized, in order of severity, as station level events, department level events, and organizational learning opportunities. Mr. McWhorter reported performance in this area has been generally good with the last station level event having occurred in April 2021. There were five low level events during 2022 which Mr. McWhorter described as good performance. He stated the difference between a department level event and an organizational learning opportunity demonstrates DCPD is an organization that tries to learn and correct issues before they occur. Mr. McWhorter reported the FFT reviewed an item regarding erroneous data entry and reporting to the state's Central Coast Regional Water Quality Control Board of the difference in average water temperatures at the plant Outfall Structure as compared to differential water temperature being entered into the computer system. He reported this was identified as an organizational learning opportunity as there was no enforcement action taken by the regulator concerning this data entry error.
- Meet with NRC Senior Resident Inspector – Consultant McWhorter reported the FFT discussed inspection activities with NRC Senior Resident Inspector Mr. Mahdi Hayes. He remarked DCPD will soon be undergoing license renewal inspections, starting this fall and

¹¹ Notifications are electronic documents entered into the Corrective Action Program during daily operation.

continuing during the next refueling outage when some aging management plans are beginning to be implemented prior to submittal of the license renewal application.

- Meet with DCPD Officer– Dr. Lam met with PG&E Vice President for Decommissioning and Technical Services Ms. Maureen Zawalik.
- Reactivity Management Program – Mr. McWhorter described this as a routine review of the program that tracks reactor manipulations to avoid human performance or equipment errors. The indicator showed good performance and no significant reactivity management events were reported.
- Reactor Coolant System – Mr. McWhorter reported the Reactor Coolant System was classified as being in Green health status and the FFT reviewed a number of past issues. Mr. McWhorter observed several items integral to this system are of interest to the Committee for the future, but at this time there are no current operating issues with the Reactor Coolant System.
- Compressed Air System – Consultant McWhorter reported this system is in Green health status and consist of two sub-systems, the instrument air and service air sub-systems. Neither system is safety related and DCPD recently completed a major capital project to replace the plant’s air compressors.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman commented he was disappointed to again hear the semantic discussion on the question of deferred maintenance. He remarked he was not certain of the difference between “deferred” and “delayed and reinstated” maintenance for purposes of SB846. He recalled during an earlier fact-finding report PG&E was quoted as explaining DCPD had optimized maintenance for a particular retirement date and with a new contemplated retirement date would need to optimize maintenance for that date, which he stated appeared sensible and would likely result in some category of maintenance having been either deferred or delayed or reinstated. Mr. Geesman implored the Committee to definitively articulate what is meant by the use of a particular word to address the statutory requirement concerning deferred maintenance and if the Committee believes there is no safety significance to explain the basis for its belief. He also advised the Committee to resist embracing conclusionary statements about the cost or expense of projects, as the CPUC not the DCISC will need to determine what costs or expenses related to extended operations may be too high to justify incurring.

Mr. Martin Mattes, DCISC Special Counsel for regulatory matters was recognized. Mr. Mattes stated he wanted to emphasize how important it is that the Committee receive the full list of PMO++ project items chosen to be done and chosen not to be done in time for the July 2023 fact-finding as the Committee’s assessment, review, and any recommendations need to be in the hands of the assigned Administrative Law Judge in time for distribution to the parties in early September 2023. Dr. Budnitz observed some elements of the PMO++ Program review will be challenging. Mr. Mattes remarked this will be an unusual circumstance where draft fact finding reports will be made public prior to the meeting at which the reports are considered by the Committee. Mr. Wardell reported the Committee has fact-finding scheduled for July 26-27 and

August 9-10, 2023 and he stated he was hopeful a process might be found to have the reports approve prior to the end of August. Mr. Rathie replied that under the Bagley-Keene Act governing open meetings by state bodies that was not likely.

Ms. Linda Seeley was recognized. Ms. Seeley remarked she added up 750 issues not identified as deferred maintenance and she inquired about the cost of the items identified to be done and whether the public would have the opportunity to review the lists the DCISC will review and she questioned how the CPUC will assess the reasonableness of the costs which will necessarily be incurred to keep DPP operating. Mr. Wardell replied the assessment of costs is the responsibility of the CPUC and it was his understanding the lists referred to by Ms. Seeley would not be made public and it was his belief at this time the number of items to be reviewed was approximately 250 and Mr. Wardell confirmed the Committee, with reference to its assignment under SB846, would be reviewing three aspects in the context with continued operations, those being two maintenance lists and a projects list and the project list review will be the most time consuming endeavor of the three. Mr. McWhorter observed that if the Committee should find itself short of time its review would necessarily be prioritized by risk and safety significance. In response to Ms. Seeley's inquiry concerning the 20-year license from the NRC for which PG&E will submit an application, Dr. Budnitz replied the DCISC review of PMO++ Program will be conducted on a case-by-case basis.

Mr. Robert Sarvey was recognized. Mr. Sarvey inquired as to the DCISC's familiarity with the 75 commitments made by PG&E in connection with its earlier relicensing licensing effort and he remarked SB846 requires PG&E to submit a report by an independent consultant on the topic of deferred maintenance and capital projects and he asked whether the DCISC would be considering this report. Dr. Budnitz confirmed the Committee will review that report when it is made available. Mr. Sarvey, in response to an earlier comment by Dr. Nelson, stated the rolling blackouts from August 14-15, 2020, were due to a fear of the failure of DCPD as a result of problems the plant experiencing at that time. He observed in October 2022 DCPD was unavailable during an emergency due to refueling and on many occasions DCPD has been unavailable during the state's Flex Alerts.

Dr. Gene Nelson, representing Californians for Green Nuclear Power was recognized. Dr. Nelson stated he would like people to understand that the largest contingency in the California Independent System Operators (CAISO) portfolio is not DCPD, but the AC Intertie that connects California with Oregon and Washington.

Following public comment, on a motion made by Dr. Budnitz, seconded by Dr. Peterson the April 18, 19 & 20, 2023, Fact Finding Report and its accompanying Resolution 2023-09 certifying its approval was unanimously approved.

A short break followed.

The Chair requested Consultant Wardell to report on the May 2-3, 2023, fact-finding visit he attended with Dr. Peterson together with Mr. McWhorter. Mr. Wardell reviewed the topics discussed with PG&E during the May 2-3, 2023, visit as follows:

➤ Radiation Monitoring System – Mr. Wardell reported the Radiation Monitoring System had a rating of good and improving and is expected to continue to operate in the event DCPD operations are extended. He described the system as dependable, familiar to operators and reported improvements are planned to the Radiation Monitoring System.

➤ Buried Piping and Tanks Program – Consultant Wardell reported this program provides procedures for inspecting and if necessary, repairing these underground systems and components. He reported the Auxiliary Saltwater System for which Mr. Wardell reported cathodic protection is to be added provides access to the plant's ultimate heat sink¹² and is inspected under this program, as are the Condensate Polishing System, the Liquid Radwaste System, the Diesel Fuel Oil and Oily Water, and the Turbine Sumps which contain environmentally hazardous or radioactive materials. The FFT found the Buried Piping and Tanks Program procedures to be satisfactory and Mr. Wardell reported aging management plans are in place and are under development for license renewal. The program health was in White status due to having a new program owner and he reported that Green status can only be achieved when the program owner has three years or more on the job. All other measures for the program were in Green status.

➤ Refueling Outage 1R24 – Mr. Wardell reported this is an important outage because of implementation of various modifications and maintenance and inspections needed to support license renewal and extended operation to 2030, including removal of a surveillance capsule to analyze fracture toughness of the reactor vessel. Other inspection activity includes steam generator primary¹³ and secondary tube and vessel inspection including some buried piping and other piping. Mr. Wardell reported the FFT concluded DCPD was satisfactorily planning for the refueling outage.

➤ Equipment Reliability Program - Consultant Wardell reported equipment is categorized as Class 1, that is, safety-related, with Class 2 and Class 3 not being safety-related but which remain important for power production and environmental purposes together with the equipment included in the NRC Maintenance Rule which he stated is equipment important to safety. The last DCISC review found the system health for Equipment Reliability Program in Yellow status for Unit 1 and in Green status for Unit 2. Mr. Wardell reported that with this visit both Units were in found to be in Green status with a stable trajectory.

¹² The principal functions of the ultimate heat sink are dissipation of heat during normal operation, dissipation of residual heat after reactor shutdown, and dissipation of residual heat after an accident by providing a heat sink for transferring heat from components by utilizing the Pacific Ocean, the Auxiliary Saltwater System (ASW) and the Component Cooling Water (CCW) System. The ultimate heat sink is common to both units and has been defined as the Pacific Ocean.

¹³ Primary and secondary side refer, respectively, to the Reactor Coolant System which is used to remove heat from the nuclear reactor and to the Main Steam and Feedwater Systems which provide cooling to the steam generators and generate and provide steam to the turbines.

- Non-Licensed Operator Training – the FFT observed a non-licensed operator training session and Mr. Wardell observed licensed operators typically work from the Control Room while non-licensed operators work out of the Control Room in the plant. The training was conducted on the Main Generator Hydrogen System which cools the generator's internals, and the Carbon Dioxide System. He reported the Carbon Dioxide System is a fire protection system. Mr. Wardell stated the FFT found the lesson guide to be well thought out and comprehensive and the instructor was knowledgeable and there was a good level of involvement by the participants and the training appeared satisfactory and effective.
- FLEX and Probabilistic Risk Assessment -Mr. Wardell commented as the status of the FLEX Program has been reported earlier during this public meeting and will be the subject of the July 26-27, 2023 fact-finding he would not have any comments at this time.
- Meet with DCPD Officer – the FFT met with PG&E Vice President for Business and Technical Services Ms. Maureen Zawalick to discuss matters reviewed during the fact-finding and regarding SB846.
- PMO++ Process and Results – Consultant Wardell remarked the information presented during Consultant McWhorter's presentation on preventative and corrective maintenance, as well as concerning the PMO++ aspects of project review was slightly updated during the May 2023 fact-finding and he made no further comments at this time.
- License Renewal Application and Aging Management Plans – Consultant Wardell remarked that the information presented during Consultant McWhorter's presentation on license renewal application and aging management plans was slightly updated during the May 2023 fact-finding and he made no further comments at this time.
- Industry Efforts to Evaluate the Radiological Consequences of a Release of Radionuclides from a Crack in a Spent Fuel Storage Cask – Mr. Wardell reported the Electric Power Research Institute (EPRI) is performing a study concerning the effects of a crack in a sealed spent fuel storage cask and the consequences of a radioactive or release of radionuclides as a result. Mr. Wardell reported the release of the study is now planned for 2025, pending receipt of more data from the federal Department of Energy.
- Workplace Seismic Safety – the FFT toured various areas of the plant to look for unsecured items which could come lose and fall in a seismic event and block passage or injure emergency responders. The DCISC team toured the Maintenance Training Building and found the common areas and the classrooms to be in good condition with no issues concerning workplace seismic safety identified. Mr. Wardell reported that PG&E has made information concerning its seismic safety program available to its employees in order that they might employ the same strategies and standards in their homes. Mr. Wardell reported the DCISC's inquiry into seismic safety in the workplace is not limited to the Control Room or to safety-related areas but extends to the entire plant. Dr. Peterson observed stated the DCISC concluded that plant staff are the first responders in an emergency situation and it is important they be protected against injury. He commented this is also the reason the DCISC has significant interest in the FLEX Program in

order to confirm that FLEX equipment remains available after an earthquake and to confirm the access to the plant needed to bring in and deploy FLEX equipment is not impeded.

➤ Local NRC Meeting on DCPD Regulatory Performance and License Renewal – Mr. Wardell reported on the final evening of their visit the DCISC FFT attended an NRC meeting held in the San Luis Obispo area to discuss regulatory performance of DCPD and the regulatory process for evaluating nuclear power plants. Mr. Wardell reported DCPD is at the top of the NRC performance scale and NRC and PG&E representative discussed the plan to submit a license extension application by the end of 2023 for an additional twenty years of operation.

Mr. David Weisman representing the Alliance for nuclear responsibility was recognized. Mr. Weisman commented that as the DCPD Administration Building is certainly not built to the same standards as the two Containment structures enclosing the reactor vessels there could be casualties after an earthquake which might exceed the numbers that on site first responders could deal with and he inquired whether first responders coming from off site would in that situation need to pass through the usual security protocols to reach the Administration Building and he inquired if there was a protocol for outside responders to promptly clear security. Mr. McWhorter replied that while he does not have specific information for DCPD, there are generally contingency plans at any nuclear facility to address the issues raised by Mr. Weisman. **Dr. Peterson remarked a DCISC FFT is scheduled to meet with DCPD in July 2023 including Fire and Security organization personnel and Dr. Peterson remarked Mr. Weisman's question raises an interesting point and the DCISC would follow-up on his inquiry when meeting with DCPD in July.** Mr. Wardell reported personnel with badged access can clear Security rapidly and it is his understanding that contingency plans for the issues described by Mr. Weisman exist. Dr. Budnitz remarked that some off-site County fire department personnel have been pre-cleared for access to DCPD. Dr. Peterson observed Mr. Weisman's inquiry is a question that falls within in the context of the security-safety interface which has been of interest to the Committee for some time.

Dr. Gene Nelson representing Californian for Green Nuclear Power remarked that the DCISC during its future fact-finding visits should review the training given to regular DCPD employees to enable them to act as first responders.

On a motion made by Dr. Budnitz, seconded by Dr. Lam, the May 2-3, 2023, Fact Finding Report together with Resolution 2023-10 certifying its approval was unanimously approved.

XIV INFORMATION ITEMS BEFORE THE COMMITTEE

Mr. Garcia stated Mr. Jones would introduce the first PG&E presenter for this public meeting. Mr. Jones, Senior Director of Regulatory, Environmental and Repurposing, then introduced the Director of Strategic Initiatives Mr. Phillippe Soenen and Mr. Jones stated Mr. Soenen's principal responsibilities include preparation of the license renewal package for the 10 CFR Part 50 licenses for both units and Mr. Soenen also has oversight of many of the license renewal amendments submitted for decommissioning as well as the ongoing license renewal

process for the Part 50 license. Mr. Soenen is a graduate of the University of California at San Diego.

Update on the Status of License Renewal Application Preparation, Submission, Interactions with NRC, and Preparation/Initiation of Aging Management Plans and Inspections.

Mr. Soenen reported in October 2022 PG&E submitted a two-part request to the NRC. The first part was a request to resume the license renewal application as it existed in 2016, and the second part requested in the event the first request was not granted, that the NRC would consider an exemption to 10 CFR 2.109(b), the time limit requirement for a license renewal application, to ensure DCPD could continue to operate while the license renewal application was under review. In January 2023 the NRC denied the first request and determined that a new license application was required, but in doing so the NRC did not preclude PG&E's ability to rely on previously submitted information. In March 2023, the second request was granted to waive the otherwise five-year requirement for initiation of a license renewal request. PG&E is required to submit a license renewal request for DCPD by the end of 2023.

Mr. Soenen stated the new license renewal application will use the latest NRC guidance, specifically NUREG¹⁴ 1801 Revision 2 Generic Aging Lessons Learned (GALL), a guidance document he commented was developed for an initial license renewal application. He reported there is also a guidance document for GALL for subsequent license renewal which DCPD is also using to update the safety portions of its license renewal application such as the aging management portion which guidance captures new information. Mr. Soenen reported part of the application includes an update of the environmental report which will incorporate work that was done as part of preparation for decommissioning, specifically information concerning endangered species and sensitive coastal resources. The license renewal effort includes independent oversight by the Nuclear Safety Oversight Committee (NSOC) and the Quality Assurance Program together with industry experts. Mr. Soenen remarked while developing the license renewal application DCPD is proactively implementing aging management programs and commitments that are not in place now but are expected to be commitments under the license renewal application.

Mr. Soenen reported inspections and procedures are being proactively put into place and an NRC inspection is planned in connection with refueling outage 1R24 during fall 2023. In response to Mr. McWhorter's reference to a question from a member of the public earlier during this public meeting concerning 75 commitments from the 2016 license renewal effort Mr. Soenen reported those commitments, of which there were a total of 76, are now null and void and the new license application will provide for new commitments, but he reported at present there are no commitments associated with DCPD license renewal.

Mr. Soenen stated license renewal is in addition to all ongoing requirements to meet the same design bases, all maintenance requirements, and for aging management license renewal creates additional requirements. He stated aging conditions are being appropriately identified and

¹⁴ NUREG is an acronym for US Nuclear Regulatory Commission Regulation.

managed before there is a loss of intended function. He reported the NRC is reviewing DCP's activities to ensure public health and safety are being maintained.

Mr. Soenen reported similar commitments to those from the license renewal application withdrawn by PG&E in 2016 are anticipated and it is planned to have 82% of those commitments implemented prior to the current license expiration date for Unit 1, and 93% completed by the current expiration date of the license for Unit 2 including all programmatic implementation. He stated 7% of the new commitments are expected to require additional time for implementation and he gave as an example the cathodic protection planned for the Auxiliary Saltwater System, he described as a risk-significant system. Mr. Soenen stated there is a need to ensure all the planning is correct and all contingencies are addressed.

Mr. Soenen stated PG&E engaged in pre-submittal dialogue with the NRC and in February 2023 there were requests for information from the NRC concerning the aging management inspections planned for 1R24 and for an update on the previous license renewal commitments. He reported updates were provided by DCP on March 17, 2023, regarding license renewal implementation efforts including aging management programs planned for 1R24 so the NRC can plan its inspection activities. Regarding the schedule for implementation of commitments on safety-significant systems prior to and after the current license expiration dates Mr. Soenen reported this information was presented to the NRC at two public meetings. He reported many of the aging management programs are already being addressed by other existing programs and therefore there is reasonable assurance the intended functions will be maintained should the plant enter into a period of extended operation, while a small subset of commitments are already incorporated. He reported the NRC has not expressed concern or objection to the proposed implementation schedule.

In response to Consultant McWhorter's query Mr. Soenen confirmed during 1R24 the NRC would be inspecting in accordance with Inspection Procedure 71013, which is expected to be reissued in July 2023 and is focused upon the plant's ability to identify appropriate aging at a time prior to the loss of intended function and to demonstrate that there is no unexpected aging. Mr. Soenen reported that when the license amendment application is submitted the NRC will use the data from the inspections conducted during 1R24. Mr. Soenen remarked there is an understanding of what the aging management programs will contain and the inspection results will be trued up after 1R24 and any exceptions identified. Mr. McWhorter remarked the NRC would in this instance be inspecting Unit 1 to generic guidelines during 1R24. Mr. Soenen concurred and remarked with Unit 1's current license expiration date being in November 2024, between the time of the license renewal application submission in December 2023 and November 2024 there is a period of almost one year in which to complete a determination to ensure there is reasonable assurance that Unit 1 can continue operating into a period of extended operation. In response to Dr. Budnitz' question Mr. Soenen confirmed there is little difference between the scope of the former GALL NUREG 1801 and that of NUREG 1801 GALL Revision 2, and interim staff guidance documents have been issued and incorporated in NUREG 1801 Revision 2. He reported a number of these changes are to the aging management programs and are based upon operating experience. He reported that more significant changes in the development of the license renewal process stem from making sure all information concerning plant modifications made since withdrawal of the 2016 license application is updated.

Mr. Soenen reported two pre-submittal meetings have been held with the NRC and he has had recurring discussions with the NRC's project manager and data requests have been received by DCPD in support of the upcoming inspections. He identified key takeaways on the status of license renewal as the exemption granted by the NRC to support submittal of a new license renewal application by DCPD by December 31, 2023, and reported PG&E is on track in developing the application using the current guidance documents. PG&E continues to engage in dialogue with the NRC through correspondence and during public meetings and during what he described as a unique timeframe is taking proactive steps to ensure safe, continued operations.

In response to Consultant Wardell's inquiry, Mr. Soenen replied that the aging management program is separated into separate elements under NUREG 1801 that identify and capture the material types, aging effects, operating experience, and inspection frequency and the qualifications of the inspectors and the threshold for entering issues into the Corrective Action Program are within the program's scope. In response to Dr. Lam's query Mr. Soenen confirmed PG&E's license renewal application will be for a 20-year license. In response to Consultant Wardell's question Mr. Soenen replied that the aging management program for an individual system is owned by an engineering on the dedicated license renewal team and as projects become implemented the program ownership will transition to the system engineer and the inspection activity will be performed by Maintenance Department sub-departments or by Engineering Department personnel, depending upon the nature of the inspection. Mr. Soenen reported paper inspection work package procedures remain the norm. In response to Consultant McWhorter's inquiry Mr. Soenen reported the aging management programs do allow for the use of increased technology and advancements such as performing robotic inspections of the Condensate Storage and Refueling Water Storage Tanks.

Mr. Jones referred to a previous request by Dr. Budnitz concerning whether the DCISC might commence its review of certain components of the license renewal application prior to December 31, 2023, and Mr. Jones reported it appears that this is possible and could begin sometime between September and November 2023 during DCISC fact-finding visits. Mr. Soenen confirmed Consultant Wardell's observation that PMO++ Program does not include license renewal.

XV ADJOURN AFTERNOON MEETING

Dr. Lam observed the evening meeting of the Committee would be convened at 5:30 p.m. and he adjourned the afternoon meeting of the Committee at 4:25 p.m.

XVI RECONVENE FOR EVENING MEETING

Dr. Lam reconvened the evening meeting of the DCISC at 5:30 p.m. on June 28, 2023.

XVII COMMITTEE MEMBER COMMENTS

There were no comments by Committee Members at this time.

XVIII PUBLIC COMMENTS AND COMMUNICATIONS

Dr. Gene Nelson representing Californians for Green Nuclear Power was recognized. Dr. Nelson stated it is a common misunderstanding that DCPD is the largest contingency that California Independent System Operator (CAISO) planners must plan for in terms of power outages. In reality, Dr. Nelson stated the AC Intertie, with three 500kV lines with 5,000 megawatts coming from Oregon, and the DC Intertie, with 3,900 megawatts which ends near Sylmar, California, are larger in comparison to DCPD at 2,256 megawatts. The Chair thanked Dr. Nelson for his remarks.

Assistant Legal Counsel Rathie reported an email was received earlier from Mr. Tom Marré concerning reactor vessel embrittlement and modeling software.

XIV INFORMATION ITEMS BEFORE THE COMMITTEE

The Chair requested Mr. Jones to introduce the next informational presentations for this public meeting. Mr. Jones introduced the Director of Nuclear Project Services at DCPD, Mr. Michael Jackson, and stated Mr. Jackson has 15 years' experience in design engineering in nuclear power. Mr. Jackson previously served in the Operations, Maintenance and Decommissioning organizations at DCPD, holds a Senior Reactor Operator License and is a registered Professional Engineer. Mr. Jackson holds a Bachelor of Science Degree from California Polytechnic State University at San Luis Obispo (Cal Poly).

Update on Activities for Reviewing, Approving and Implementing Extended Operations Corrective Maintenance Plans, Preventative Maintenance Plans, and Projects Needed to Support Extended Operations.

Mr. Jackson reported DCPD, as affirmed by the NRC, continues to be one of the top performing nuclear power plants and DCPD has continued to invest in safety and reliability projects which is borne out by its operating history and how well the plant is maintained. Mr. Jackson reported he has met with DCISC representatives during past reviews.

Mr. Jackson reported life cycle management plans at DCPD have always correlated with end-of-license dates of 2024/2025 and with the announcement of the prospect of continued operation beyond those dates, cross-disciplined teams were assembled of subject matter experts and key stakeholders to perform comprehensive system health holistic reviews to ensure appropriate maintenance plans were in place and issues such as obsolescence would be appropriately addressed. The teams also review prioritizing potential projects for safety, efficiency, and to enhance reliability.

Mr. Jackson reported that during fall 2023, for refueling outage 1R24, eleven projects have been identified which he described as largely secondary-type projects such as condenser water tank coatings, condenser lagging strap replacement, traveling screen frame replacement, and transformer refurbishment. Projects for refueling outage 2R24, scheduled for spring 2024, are now being reviewed for approval and inclusion into the outage scoping phase. In response to Consultant McWhorter's inquiry Mr. Jackson replied these holistic reviews represent a significant effort over a period of three and one-half months and involved the cross-discipline teams, industry peers, vendors and suppliers and technical experts with meetings taking place

two to four times per week with 30-40 participants. In response to Dr. Lam's inquiry, he reported the holistic concept was intended to break-up the review and to identify any changes to preventative maintenance plans to ensure that maintenance was performed on an appropriate timeline for the equipment. Corrective maintenance was reviewed for every backlog and priorities were determined. Open evaluations were reviewed for their engineering aspects. If something was determined to be obsolete in the period shortly after the end of the current licenses, the engineering effort for those items was prioritized in order that replacements can be provided in a timely manner to support reliability. Consultant Wardell remarked that the DCISC will need to review the information discussed by Mr. Jackson in connection with its obligations under SB846.

Following the reviews he described, Mr. Jackson reported the outcomes were reviewed by the Institute of Nuclear Power Operations (INPO), the Strategic Teaming and Resource Sharing (STARS) joint utility initiative, and by representatives from two peer nuclear power plants, the Perry Nuclear Power Plant in Ohio and the Byron Nuclear Generating Station in Illinois as those representatives have experience with plants that were trending toward shutdown. Mr. Jackson stated the peer review group had no recommendations and found no gaps but did provide suggestions that include taking the information and working it into processes, while INPO provided suggestions to take the information and compile it in system health reviews. Mr. Jackson confirmed in response to Mr. Wardell's query that the peer groups reviewed the comprehensive outcomes from both the maintenance aspects and for projects. In response to Dr. Peterson's query as to a similar experience with the Eagle 21 Reactor Protection System by either of the two peer plants Mr. Jackson stated there is generic momentum in the nuclear power industry by its suppliers to assist with aging issues such as with Eagle 21, but he could not provide specific examples. Mr. Jackson reported SB846 mandates PG&E to engage in an independent review of DCPD maintenance practices and two individuals with experience on both the industry and the regulatory side have been selected for that review. At this point he reported no deficiencies have been identified. **The independent review is now scheduled to be complete in September 2023 and Mr. Jackson stated DCPD would share information with the DCISC during fact-finding in a manner that ensures the independent nature of the reviewer as is required by SB846. Dr. Peterson observed the DCISC should also assess the independence of the review process and possibly provide the DCISC's independent input to the reviewers.**

Mr. Jackson closed his remarks with the observation DCPD will continue to maintain the plant to the highest standards and continue to meet all regulatory requirements during a transition into extended operation. In response to Consultant McWhorter's inquiry as to the time horizon based on an extended operation period of five years or longer Mr. Jackson replied DCPD has been given the date of 2030 to assess what the plant's long-term needs are going to be and to ensure reliability to 2030 and therefore PG&E needs to take those actions that are reasonable and prudent for operating to 2030. With reference to projects which would be reasonable and prudent to perform for operations after 2030, Mr. Jackson stated bridging and mitigation strategies would be considered as well as replacements and he confirmed in response to Dr. Peterson's observation that the long range plans being developed are dynamic plans with the goal of continuing to provide a reliable power source for the state.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman inquired whether refueling outages 1R24 and 2R24 were likely to be of longer duration than usual to accommodate the relicensing projects. Dr. Budnitz responded the DCISC has been informed that both outages are expected to be of longer duration than recent refueling outages, but the schedules for both are still being developed. Mr. Jones stated PG&E does not release detailed schedule details because there can be an impact on the electrical market and he commented the duration for each outage is not going to be a statistical outlier in a significant way. Dr. Peterson remarked that outage duration can affect the cost for ratepayers and maintaining confidentiality in the interim is appropriate.

XXIV TECHNICAL CONSULTANT REPORTS & RECEIVE, APPROVE, AND AUTHORIZE TRANSMITTAL OF FACT FINDING REPORT TO PG&E (CONT'D.)

The Chair requested Dr. Budnitz to provide a report on the May 5, 2023, fact-finding concerning comments and recommendations received from the Independent Peer Review Panel¹⁵ and to provide for consideration of a comprehensive seismic safety update by the Committee. Dr. Budnitz reviewed the topics from the fact-finding as follows.

Dr. Budnitz stated his presentation would be presented in two parts, the first being a report concerning the State of California's Independent Peer Review Panel's (IPRP) meeting held on May 5, 2023, and the second being the comprehensive seismic safety update which SB846 required of the DCISC.

Dr. Budnitz reported the IPRP is comprised of a panel of experts on seismicity, seismic hazard and the general geological and geophysical side of seismic and hazard risk. The DCISC has followed the work of the IPRP and attended its meetings for more than ten years. Dr. Budnitz reported the May 5, 2023, meeting had a special status as SB846 calls on the IPRP to review and interact with the DCISC and for the DCISC to take into account the recommendations of the IPRP.

Dr. Budnitz reported the November 2022 DCISC Fact Finding Report approved at the Committee's February 2023 public meeting was forwarded to the IPRP for its review. On May 4, 2023, one day prior to the May 5 IPRP meeting, the IPRP provided the DCISC with a document with comments and questions on the November 2022 Fact Finding Report and those comments were a subject of the May 5, 2023 meeting. During that meeting Dr. Budnitz represented and provided responses on behalf of the Committee. Dr. Budnitz stated the comments and questions posed were not adopted by the IPRP rather they were the comments and questions of individual panel members and were not represented as being the consensus of the IPRP. One important issue which was addressed involved the scope of the DCISC seismic review. Dr. Budnitz emphasized the DCISC's scope of review in this context includes the safety of the plant against the risk of radiological releases, radiological hazards to the workers and the offsite population

¹⁵ The Independent Peer Review Panel was created in 2005 by the adoption of CA Public Utilities Code Section 712 and is comprised of technical experts from the California Energy Commission, California Geological Survey, California Coastal Commission, California Seismic Safety Commission, and the County of San Luis Obispo. PG&E submits its seismic studies to the Panel for review.

and to property, and nuclear radiation radiological accidents. He stated the DCISC's scope does not extend to other events that have no radiological impact but which might cause DCPD to be unable to produce electricity. He provided as an example the kelp blooms which occasionally take place in the Intake Cove which do impact the ability of the plant to make electricity but which do not otherwise represent a nuclear safety issue.

Dr. Budnitz commented the IPRP inquired whether the DCISC uses the NRC's safety criteria for seismic safety as the Committee's figure of merit and received the response that while the Committee is cognizant of the NRC's review it does not use the NRC safety criteria as its figure of merit. The IPRP also inquired as to whether the DCISC uses the original seismic design criteria as its criteria for assessing the adequacy of plant systems, structures or components (SSC). Dr. Budnitz observed that while these items are designed to seismic design criteria per various codes, the DCISC is not interested *per se* in their design but rather the DCISC's interest lies in how SSCs will perform during a seismic event in the place and manner in which they are located at the plant and he described this as an important distinction.

With the background as described, Dr. Budnitz stated he responded to many of the comments and questions which the IPRP members based on the DCISC November 2022 Fact Finding Report. He stated during the May 5, 2023 meeting the DCISC committed to supplementing or modify its November 2022 Fact Finding Report to provide additional detail, more references and further explanations. Dr. Budnitz commented that commitment, together with the commitment imposed by SB846, has produced the May 5, 2023 Fact Finding Report that the Committee will consider this evening which will supersede the November 2022 Fact Finding Report as the Committee's seismic evaluation as called for by SB846.

During the IPRP meeting there was also discussion of a recent generic project by the Electric Power Research Institute regarding seismic performance of equipment not covered by NRC regulations which Dr. Budnitz stated the Committee would review when it is issued. There was also an update provided by PG&E, which is a usual feature of any IPRP meeting, as to the DCPD Long Term Seismic Project (LTSP) which has been ongoing as a license condition since the plant commenced operation. Dr. Budnitz remarked the LTSP is a crucial input to the DCISC as the Committee makes its own independent judgments about the adequacy of the seismic capacity of the plant. He remarked absent the LTSP it is likely that enough information would not be available or understood for the DCISC to make its judgments. The IPRP also received a report on the recent earthquake which occurred in the area of the Turkish-Syrian border where PG&E has sent a team of experts to assess lessons learned which Dr. Budnitz described as a work in progress towards obtaining crucial information on the performance of the local grid and other equipment.

Dr. Budnitz reported that the group San Luis Obispo Mothers for Peace have filed a Declaration with the NRC in a relicensing proceeding concerning the Generic Environmental Impact Statement which includes a Declaration by Dr. Peter Bird, an acknowledged seismologist, which sets forth Dr. Bird's belief that the basis for PG&E's understanding of the seismic hazard at DCPD is erroneous and understated. As Dr. Bird's Declaration was received the day prior to the IPRP meeting there has been insufficient for a detailed review. Dr. Budnitz commented he expects PG&E would need to evaluate and respond to Dr. Bird's Declaration in

the context of relicensing proceedings and the DCISC would review PG&E's response when it is filed.

Dr. Peterson stated he attended a subset of IPRP meetings and he appreciated Dr. Budnitz devoting a substantial amount of time and effort to reviewing material and to develop the Committee's overall technical seismic assessment. Dr. Peterson remarked society's ability to characterize, engineer, and mitigate seismic hazards is very impressive and accordingly the consequences of a major earthquake have dropped dramatically as better engineering is introduced into civil infrastructure. He remarked those methods have been applied extensively at DCPD. Dr. Lam concurred and he remarked the Committee is a primary beneficiary of Dr. Budnitz' efforts. Dr. Budnitz stated the IPRP's membership is comprised of acknowledged seismologists from various agencies including the state's Department of Water Resources, the California Energy Commission, the Geological Survey and CalTrans and San Luis Obispo County Supervisor Mr. Bruce Gibson, an accomplished and recognized seismologist, is a member of the IPRP. In concluding his presentation on part one Dr. Budnitz remarked the documents with comments did not represent the consensus of the IPRP and while the discussion was collegial he was disappointed that the DCISC will not have the benefit of a report by the IPRP as a panel.

Mr. Bob Anderson representing the CPUC was recognized. Mr. Anderson stated when the IPRP receives the DCISC May 5, 2023 Fact Finding Report the IPRP will review the report and may hold a meeting sooner than it would otherwise do. Mr. Anderson commented the IPRP was concerned with the report produced in 2010 by the Enercon firm and would like to see the report updated and he inquired if the DCISC could be the venue for such an update. Mr. Anderson stated the IPRP was also looking at the seismic hazard update that PG&E is required by SB846 to undertake and whether this effort was being considered by the DCISC as involving a Senior Seismic Hazard Analysis Committee (SSHAC) Level 1 or a SSHAC Level 2 review. Dr. Budnitz replied the DCISC would not be making a determination on the SSHAC process but would review the results and also the PG&E seismic assessment and while the DCISC has been briefed by DCPD on the schedule for the review in response to SB846, that review is not expected to be complete for some months.

Ms. Jill Zam Ek was recognized. Ms. Zam Ek stated as the public has not seen the DCISC May 5, 2023 Fact Finding Report she could not comment on it. Dr. Budnitz replied the DCISC's November 2022 Fact Finding Report has been in the public domain since February 2023 and the May 5, 2023 report, while it represents a modification of the November 2022 report it is only a modest modification. Ms. Zam Ek observed as there are several pending analyses including that by Dr. Bird in the Bird Declaration and the analyses to follow the Turkey-Syrian earthquake, it seems the Committee's seismic safety decision is premature. Dr. Budnitz responded and thanked Ms. Zam Ek for her comments and reported the DCISC was charged by SB846 with doing a seismic evaluation with the information it has at hand and as new information is received, including the PG&E seismic assessment and the license renewal application to the NRC, which will have a chapter on the seismic hazard the Committee will reevaluate its conclusions as appropriate. Dr. Lam remarked the Committee has very limited resources and was constrained by a tight schedule in undertaking this review. Dr. Lam then requested Dr. Budnitz to proceed with the second part of his presentation.

Dr. Budnitz stated the May 5, 2023 Fact Finding Report is intended as the Committee's comprehensive response to and discharge of its mandate under SB846 to deliver a report and any recommendations regarding upgrades that would be needed to address seismic safety, with the caveat that the Committee remains open to new information. He reported his presentation and the May 5, 2023 Fact Finding Report would update the November 2022 Fact Finding Report which was adopted in February 2023. Dr. Budnitz observed these DCISC reports address seismic safety in terms of safety against radiological releases that could contaminate the countryside or the offsite property or harm workers or the public.

Dr. Budnitz reported the DCISC evaluation was based on multiple sources of information and he described and discussed each of the three principal sources of information as follows:

- The 2015 Probabilistic Seismic Hazard Analysis (PHSA) - a comprehensive review and evaluation of the seismic hazard at the site, that is, the size, characteristics including the sources and propagation from the sources, duration, ground motion including attenuation and amplification, effect on structures and equipment and the frequency of occurrence of earthquakes of significance. The methodology used for the 2015 PHSA was the SSHAC standard methodology and the NRC and the DCISC previously both endorsed the 2015 PHSA.
- The 2018 Seismic Probabilistic Risk Assessment (SPRA) - the 2018 SPRA is the result of several years of work and was peer reviewed broadly by experts. The SPRA follows a standard methodology published by the American Nuclear Society (ANS) and the American Society of Mechanical Engineers (ASME). Dr. Budnitz stated the SPRA identifies every important accident sequence that would be caused by an earthquake and for each sequence it identifies the likelihood that that the accident sequence will occur, which differs depending upon the size of the earthquake, and the probability of occurrence per year of each sequence. For each of those sequences the SPRA then determines the damage resulting from and the consequences of the damage. Dr. Budnitz commented PG&E previously developed a SPRA in the 1980s that was considered to be the "gold standard" in the industry and the 2018 SPRA is an update of that effort.
- The Long-Term Seismic Program (LTSP) - Dr. Budnitz reported PG&E has been conducting the LTSP over a period of 40 years and the LTSP employs networks of seismic instrumentation in the area of DCPD and the LTSP provides an important basis for PG&E's understanding of the local seismic environment.

Dr. Budnitz commented there is no other nuclear power plant in the world that employs anything as comprehensive as the 2018 PHSA, the 2015 SPRA, and the LTSP but despite this he remarked there is still a significant amount of uncertainty concerning in the understanding of the seismic conditions.

Dr. Budnitz stated the 2015 PHSA characterized the seismic hazard posed by the Hosgri, the Los Osos, and other local seismic faults and the site ground motion from the propagation of the motion from the fault to DCPD. PG&E continues to develop new information relative refining the understanding and narrowing the uncertainties relative to the seismic hazard and site

ground motion. Dr. Budnitz stated while there has been new information received since 2015, nothing in any of that new information changes the broader understandings of the previous seismic studies or provides any new safety insights as to both the hazard sources and the propagation from those sources to the site. The new information either confirms or narrows the uncertainties of prior understanding.

Dr. Budnitz commented it is important to also understand in context of the seismic safety of the plant the seismic motion characteristics that arrive at the site from an earthquake and the resulting in-structure energy propagation as it relates to the seismic fragility of components. He reported PG&E has developed analyses, methods, and complex models it considers valid for each of the plant structures which consider, with some uncertainty, the in-structure energy propagation and whether the structure will attenuate or amplify or in any way change the frequency spectrum. Dr. Budnitz reported the fact-finding report's conclusion was that the 2018 SPRA remains valid and there is nothing new that would modify the previous insights of that most recent SPRA with regards to in-structure energy propagation or the fragilities of structures and components.

Dr. Budnitz reported PG&E has developed as part of its SPRA a model, using shaker table data and data from earthquakes, to assess the fragility of plant components and structures and the point at which a component would be expected to fail such that the component would be unable to perform its safety function. He remarked the likelihood of failure is a function of the seismic motion and in between a component's ability to continue to perform its safety function and the point at which it is likely to fail, there is some probability that is developed in the analysis. He stated PG&E considers that these models for seismic fragility of components and structures remains valid and Dr. Budnitz reported the methodology used by PG&E for analyzing seismic fragilities is well defined, peer reviewed, mature and widely used and it follows ANS/ASME PRA standards. Dr. Budnitz reported the May 5, 2023 Fact Finding Report concludes there is nothing new with regards to system modeling that would modify the insights of the 2018 SPRA.

Relative to the seismic PRA model for accident sequences, Dr. Budnitz stated there are approximately several dozen such accident sequences all of which Dr. Budnitz stated have been analyzed using a mature standard ANS/ASME methodology which is widely used worldwide. He commented there is nothing new with regard to modeling that would modify the insights. DCPD continues to use new information to refine uncertainties. Dr. Budnitz reported the seismic environment of DCPD is very uncertain due to the irreducible paucity of recent data from earthquakes of significant magnitude, as records only go back approximately 100 years and instrument records are only 50 years old. He reported the typical uncertainty of the likelihood of a very large earthquake could be off by as much as a factor of ten and he remarked there is no way to reduce that uncertainty except by waiting for more data. He remarked the consensus in the community of seismic experts is the uncertainties analyses are well understood and consistently performed but we are stuck with them. Dr. Budnitz stated this means that in judging the adequacy of seismic safety it must be judged on the high side event with those uncertainties and if still adequate it will remain adequate for the rest of the lower distribution.

Dr. Budnitz reported DCP, through the B. John Garrick Institute for the Risk Sciences at UCLA, performed a seismic analysis of the DCP spent fuel pools which concluded the seismic risk to the spent fuel pools was very low and the DCISC's review of that analysis has convinced the Committee it remains valid. Dr. Budnitz remarked Dr. Garrick was considered to be a giant in the field of risk assessment and the study Dr. Garrick performed with his colleague is first class. Dr. Budnitz reported in 2018 the NRC-required Mitigating Strategies Assessment which reviewed whether there were any updates or improvements to improve the safety of the plant also found no upgrades were needed.

Dr. Budnitz reviewed the conclusions of the May 5, 2023 Fact Finding Report as follows:

➤ The 2015 PHSA and the 2018 SPRA were previously reviewed by the DCISC, at which time the Committee concluded that the seismic safety achieved by DCP was acceptable. The NRC also reviewed the 2015 PHSA and the 2018 SPRA and came to the same conclusion. Each had a separate peer review by experts.

➤ After reviewing the new and update information the DCISC concludes that the seismic safety of the DCP reactors is fully adequate now and requires to additional upgrades or other changes to bring it up-to-date or to improve it.

➤ The DCISC concludes that no upgrades or improvements to seismic safety are necessary to assure adequate safety for extended operations beyond 2025. Dr. Budnitz reported he did not use a specific time horizon in this review, but there is no question that there is anything on the seismic side where aging and degradation are an issue in the near or the medium term.

Concerning recommendations for future action by the Committee, Dr. Budnitz identified the following:

➤ **The DCISC should review any new seismic-related information that could be forthcoming when PG&E submits a new (undated) License Renewal Application to the NRC at the end of 2023.**

➤ **The DCISC should review the seismic-safety review that PG&E will conduct as required by California legislation SB846.**

➤ **The DCISC should review any analyses that may be performed by the NRC or other entities in response to the May 2, 2023, SLOMFP filing with the NRC claiming that PG&E has underestimated the seismic hazard at DCP.**

Dr. Budnitz observed there are caveats concerning the DCISC's conclusions in that SB846 calls upon PG&E to support a seismic evaluation which the DCISC will review, and prior to the end of 2023 PG&E will be submitting its application to the NRC for license renewal which will have a chapter concerning the seismic hazard which the DCISC will also review, and the new Declaration by Dr. Bird submitted in the NRC license renewal application docket and if something significant emerges from any of these the Committee could reevaluate its conclusions.

Dr. Budnitz observed the field of seismic inquiry is never static and it is important to be humble and to keep an open mind. He remarked relative to adequacy as opposed to validity for a seismic judgment to be adequate one has to accept that even if the pessimistic interpretations are correct, it is still adequate. He remarked, in anticipation of an inquiry from Dr. Lam, that the worldwide knowledge of seismologists is still not adequate to predict when, where or how big the next seismic event will be.

Dr. Peterson stated he concurs with Dr. Budnitz' conclusions and he has reviewed the technical analyses related particularly to fragility and potential damage following an earthquake and commented the key residual risk comes from the fact there may be unanticipated things that can still occur and the best strategy for managing these residual risks is to enable plant staff to have the resources and capabilities to assess the state of the damage and determine whether additional actions are needed to address unanticipated consequence. He remarked this is a major element of the DCISC's ongoing review to examine and ensure both the FLEX equipment that is available to the plant staff is adequate and to understand the procedures, training and the responsibilities of the plant staff that will follow an earthquake. Dr. Peterson commented in the United States we do remarkably well in developing provisions to mitigate the consequences of events and he has confidence the plant is appropriately and adequately safe from seismic events based on its capability to perform post-earthquake inspections and develop responses. Dr. Budnitz remarked the 2018 SPRA identifies several dozen sequences of events, with about one-third of those sequences involving human error and he remarked the probabilities of human error are not very well understood and he commented that without procedures and training this situation would be much worse. Therefore, analysts pessimistically assign a high likelihood of human error in their analyses and this is the case with the 2018 SPRA.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman commended Dr. Budnitz for Dr. Budnitz' comment concerning the need to be humble concerning the field of seismic inquiry and Mr. Geesman observed confirmation bias can affect conclusions. Dr. Budnitz agreed and stated it is very difficult to collect data on human error because of confirmation bias as reporting tends to be asymmetrical where sometimes successes are reported where failures are not or sometimes vice-versa which increases uncertainty.

Mr. Geesman remarked in his opinion the Committee is making a very serious error in judgment and misinterpreting its role in the seismic component of SB846 by rendering its report before PG&E has made its contribution and the DCISC has reviewed PG&E's contribution to the evidence in the record. Mr. Geesman strongly encouraged the Committee to review the PG&E Quality Assurance organization audit of the PG&E Geosciences Department and he remarked if it had the legal authority to do so his client would mail a copy of every local resident so they could each form an opinion as to the level of trust PG&E is entitled to in this area. Mr. Geesman observed the DCISC has reiterated the established NRC methodology that evaluates effects as a function of the contribution to core damage frequency or large radiation releases. He believes the DCISC when it states it is concerned with workplace and worker safety, but the DCISC review is limited to the subset of incidents that would trigger a contribution to core damage or a large radiation release while the California Energy Commission in its 2008 California Assembly Bill 1632 Report strongly indicated it was earthquakes that did not cause that type of safety risk, but rather affected non-safety systems structure and components that posed a safety risk to the

workforce and to visitors. He stated this is what motivated PG&E to commission the Enercon Report.

Mr. Geesman remarked that using PG&E's calculation for 2020-2021 an outage for one DCCP unit costs approximately \$1.2 million each day which must be made up by procuring replacement power and he observed some of that amount arguably could be spent in mitigating the risks described by Dr. Budnitz and he stated his belief that the DCISC had not properly understood its assignment in the context of SB846, in that the question is how to rationally best spend that investment on retrofits and risk mitigation that are rationally connected to a five-year extension of operations and he stated his view the Committee simplistically dismissed all that as not within its remit which it may not be, but the Committee should acknowledge that it has said that the risk does not exist and if it does the Committee is by implication suggesting that someone else is going to have to evaluate it which he remarked undercuts significantly the entire reliability rationale for extended operations. Dr. Budnitz replied and confirmed the risk described by Mr. Geesman does exist, but a review of the hazard curves for a significant earthquake event that would not damage safety equipment or result in radiological damage at the plant have a frequency of approximately one in one thousand years or in a given year one part in a thousand. If it is credited that such an event could nevertheless result in a shutdown and termination of generation of electricity there are many other events that are much more probable that could lead to that same result. Therefore, Dr. Budnitz concluded if one were to spend financial resources to ensure the plant can continue to make electricity one would almost surely not spend those resources on seismic improvements, but instead on those events with a higher probability of impacting the plant's ability to generate electricity. Mr. Geesman remarked PG&E has shut down the hydro-electric operation of a plant on California's north coast based on an announced risk factor of one in nine hundred per year and he suggested that was a relevant threshold and he suggested a prudent lender would demand that analysis of mitigating its investments be done.

In response to Dr. Lam's query Mr. Geesman commented that in his view it is unwise for the DCISC to get in front of PG&E's seismic update with any official pronouncement concerning the seismic component of SB846 without having first had the opportunity to review PG&E's update. Mr. Geesman stated in his opinion the Legislature wanted PG&E to do a comprehensive seismic update and not conduct a narrow replication of past studies using past criteria. He stated he agreed with Dr. Budnitz as to the DCISC's remit being radiological safety, but if the DCISC were to identify a significant deficiency in PG&E's seismic update the DCISC should point that out whether or not within its remit. Dr. Budnitz observed it was for this reason the DCISC reviewed the Enercon Report and the Committee will review the PG&E updated seismic assessment in that light as well. Mr. Geesman stated NUREG 2213 specifically prescribes the level of formality required to assess whether an update is needed and the Legislature has already made that determination, so the only question is the dimension of that update and he observed Mr. Anderson, on behalf of the IPRP, has expressed concern about a SSHAC Level 1 versus a Level 2 study. He stated the impression he received from PG&E's presentation at the IPRP meeting on May 5, 2023, was that PG&E intends to employ an incremental approach before determining whether a SSHAC Level 1 review is necessary. Mr. Geesman remarked that approach is *per se* contrary to NUREG 2213 and the IPRP has already registered its concern. Mr. Geesman remarked that he believes the document provided to the DCISC by the IPRP was in fact approved by the IPRP, which would give it the same stature as a

DCISC fact-finding report and as such it should not be denigrated. Dr. Budnitz replied the IPRP's comments did not have the benefit of the full panel which he stated is a huge benefit rather than having multiple individual comments, as the latter lacks the discussion and public benefit of discussion and feedback. The comments were endorsed by the IPRP but in the form presented to the DCISC they represented merely a collection of its member's comments.

DCISC Special Counsel for regulatory matters Mr. Martin Mattes was recognized. Mr. Mattes stated the Committee in developing its seismic assessment was operating under the time constraints imposed by SB846 and the ongoing CPUC proceedings pursuant to which the CPUC is looking to hear from the Committee on the seismic safety issue almost immediately and in time for its consideration in the pending proceeding. He remarked there may be some value in expressly noting that the Committee is awaiting review of PG&E's report and the possibility the DCISC will need to have further consideration based upon that report.

Mr. Bruce Severance was recognized. Mr. Severance stated although he is a member of the DCDEP he is speaking this evening as an individual. Mr. Severance stated in his conversations with another person who worked at PG&E when what he termed the "leak before you break" standard was adopted under NUREG 1801, DCPD removed a number of horizontal supports or a sizeable amount of the piping and cooling system components and this was based upon the redundancy provided by the plant's leak detection systems. He remarked the person he spoke with stated there was a licensee event report (LER) sometime in 2006-2009 in which all five of the leak detection systems failed at the same time or had not been maintained and there was a significant leak of radioactive material which occurred without a citation being issued by the NRC. Dr. Budnitz remarked that the events described by Mr. Severance did not occur at DCPD and Dr. Peterson observed leaks in the reactor coolant boundary and the goal of the "leak before you break" philosophy is to identify the point at which a crack is so small that it cannot catastrophically fail and leaks are detected by monitoring the inventory in the volume control tank. A leak in the coolant boundary itself due to a flaw or a crack requires an immediate shutdown per technical specifications. Mr. Severance then posed the question of what happens in a design basis event if cross members are removed [from a piping system] and he stated from a conversation with a Dr. Miranda, formerly with the NRC, that the Emergency Core Cooling System (ECCS) is not designed for multiple break failure modes but rather for a specific level of leakage. Dr. Budnitz responded the ECCS is designed for a certain amount of flow however it arises. Mr. Severance stated it is his hope that recent correspondence with the NRC which deals with corrosion in the coolant system is prominent on the Committee's list of priorities. Dr. Budnitz commented any change in cooling system configuration would be required to be done per code and would be reviewed. Mr. Severance remarked the scenario he described could, for example, be the threshold of a design basis event that would create a larger problem and he stated he was thinking of the pressurized thermal shock phenomenon. **Dr. Budnitz commented the issue raised by Mr. Severance as to any compromise due to corrosion might be a worthwhile inquiry for the DCISC to assess if it were accounted for in the margin needed.** In response to Mr. Severance statement that despite a diligent search he had been unable to locate the LER he mentioned Dr. Budnitz commented this may be because the event never occurred, but rather the scenario described by Mr. Severance could be documented in another manner. The Chair then thanked Mr. Severance for his comments.

Ms. Jane Swanson was recognized. Ms. Swanson commented she supported the DCISC's review of any analysis that might be performed by the NRC or other entities in response to San Luis Obispo Mothers for Peace' filing with the NRC claiming PG&E has underestimated the seismic hazard of DCP. She stated she also supported Mr. Geesman's remarks concerning the DCISC not approving its seismic report in advance of PG&E's SB846 study. She observed, in her view, Dr. Peter Bird is a giant in the field of earth sciences and the DCISC has yet to review Dr. Bird's Declaration and among Dr. Bird's statements in the Declaration is the statement that PG&E's seismic reports are based on generic environmental reviews not on site specific criteria and she observed DCP is not a typical or a generic site and therefore any conclusions drawn from a generic environmental impact statement are illogical and cannot be justified. Ms. Swanson stated Dr. Budnitz reference to the size of the 2015 PHSA does not mean it is correct and complete. Ms. Swanson stated her opinion that the use of the word "adequate," as a standard used by the NRC, PG&E or SB846 regarding safety is a very imprecise term and she does not trust and she suspects its use, as it allows an escape from a section of the National Environmental Policy Act (NEPA) which requires all federal agencies to take into account low probability consequence events and she observed such low probability events may create a public health hazard due to a major radioactive release by DCP for which the consequences would be absolutely catastrophic and therefore she stated she strongly believes any approved seismic study must adhere to NEPA standards and not governed by merely by considerations of its adequacy and no seismic study can possibly be of any use beyond the distance you might be able to throw a printed copy. Dr. Budnitz thanked Ms. Swanson for her comments and stated the DCISC does not use the NRC's standard but the standard used by the NRC to license a power plant is for adequate protection and that language is in the NRC's Charter and in its mission statement "to assure adequate protection of public health and safety and the environment." He remarked Congress purposefully included the standard to allow the NRC Commissioners to decide what constitutes adequate protection and that concept has evolved over the year. Dr. Budnitz further observed there is no such thing as a perfect seismic hazard study but conservatisms are embedded against uncertainties in these studies and extra margin is added to provide assurance they are adequate and the fact that something isn't perfect does not mean it is not useful. Dr. Budnitz observed that Ms. Swanson in her remarks misjudges the methods used by engineers to perform seismic analysis and societies make safety decisions all the time in the face of uncertainty and asking that these decisions be based upon an unachievable standard is an inappropriate application of logic.

Upon a motion made by Dr. Peterson, seconded by Dr. Lam, the May 5, 2023 Fact Finding Report, together with accompanying Resolution 2023-11 certifying as to its approval was unanimously approved by the Committee.

XX ADJOURN EVENING MEETING

The June 28, 2023, evening meeting of the Diablo Canyon Independent Safety Committee was adjourned by its Chair, Dr. Peter Lam, at 7:50 p.m. Dr. Lam announced the Committee would reconvene for tomorrow, June 29, 2023, at 9:00 a.m.

XXI RECONVENE FOR MORNING MEETING

The second day of the June 28-29, 2023, public meeting of the Diablo Canyon Independent Safety Committee was called to order by its Chair, Dr. Peter Lam at 9:00 a.m. on June 29, 2023. Dr. Lam welcomed those persons attending in person and by Zoom Webinar and watching the proceedings on live streaming video. He introduced the Committee members and staff present for this meeting.

XXII COMMITTEE MEMBER COMMENTS

The Chair invited comments from his fellow members. There was no response to his invitation..

XXIII PUBLIC COMMENTS AND COMMUNICATION

The Chair requested members of the public who wished to comment on matters not on the agenda to do so at this time.

Ms. Carole Hisasue was recognized. Ms. Hisasue stated that in the fall of 2021 she loaned a radiation monitor to Ms. Linda Seeley, a Member of the PG&E Diablo Canyon Decommissioning Engagement Panel (DCDEP) when Ms. Seeley was invited by PG&E to observe operations at the Independent Spent Fuel Storage Installation (ISFSI). Ms. Hisasue displayed slides for the Committee and she reported she found the radiation levels as reported by her radiation monitor to be quite high. She identified on a diagram of the ISFSI where she found her monitor indicated high levels of radiation, which was the area of the spent fuel storage casks located in the lower middle section of the ISFSI. She reported the levels ranges from 0.14 microsieverts¹⁶ per hour to almost 2 microsieverts per hour which she stated she found to be high. She inquired whether the Committee was aware of the radiation levels at the ISFSI and in particular at the location she identified and reported she uploaded the data to Safecast [a volunteer organization devoted to environmental monitoring]. Ms. Hisasue remarked she did not believe the issue was one of public safety but rather of worker safety. Dr. Peterson responded and stated the radiation levels around the storage casks are higher than background radiation levels due to the presence of the radioactive materials inside the casks but for visitors and workers the dose rates and total dose exposure are both well below limits. Dr. Peterson remarked the maximum dose he received from walking around the ISFSI was less than 1 millirem and typical background radiation levels, which vary from place to place, are around 300 millirem per year and are greater in areas located at higher altitudes such as areas in Colorado. Ms. Hisasue speculated that because some areas around the casks are much higher than others there may be a defect in a cask. Dr. Peterson remarked that readings taken at the air vents on the lower portion of a cask will produce a higher reading and it is more likely the differences identified by Ms. Hisasue are associated with casks which are closer to the west end of the ISFSI where younger fuel, which is more radioactive than older fuel as radiation levels drop over time, is stored. Dr. Budnitz observed his children live in Boulder, Colorado and receive twice as much radiation exposure than he does living in Berkeley, California, but no studies have revealed that anyone living in Boulder, Colorado is somehow less healthy than people living at sea level and because

¹⁶ For conversion purposes 1 Microsievert = 0.1 Millirem

something is twice as great that does not make it dangerous. Ms. Hisasue agreed but she commented the radiation levels in Denver, likely the highest in the country, are not at the level she found at the ISFSI.

Dr. Lam stated he was sympathetic to Ms. Hisasue's concern but there are elements of voluntary exposure to background radiation and worker protection to be considered. He reported there are two theories, one being the linear dose theory which finds any radiation is bad and the other the hormesis theory which hold that below certain thresholds radiation may be beneficial.

PG&E Director Tom Jones reported he escorted Ms. Seeley the day she visited the ISFSI and he allowed her to bring and use the device. He reported a radiation protection briefing was provided and everyone was issued a thermos luminescent dosimeter. He confirmed Dr. Peterson's observation about the location of the older fuel at the ISFSI. Mr. Jones commented DCPD has complete the information on radiation levels at the ISFSI on the day in question and would share that information with the DCISC. He stated all workers were protected and the radiation levels were well below licensed dose rates. Mr. Jones reported regulatory limits for members of the public are 5 rem or 5,000 millirem per year and DCPD employs an administrative standard that is 40% of the regulatory limit at 2 rem or 2,000 millirem per year. Mr. Jones remarked he was present for the entire visit and received 2 millirem. Dr. Budnitz offered to make the annual report DCPD submits each year on dose available to Ms. Hisasue. **Mr. Jones replied he will report back to the Committee on the actual measured dose rate on the day of Ms. Seeley's visit.**

Dr. Peterson remarked the assumption is often made that the effects of radiation exposure are linear in the background range which is known not to be accurate as adjustment needs to be made for dose rate. He commented that completely removing exposure to background radiation is presently being studied and effects have been observed on the cells of smaller organisms. He remarked ultraviolet ionizing radiation, which has sufficient energy to break chemical bonds, has a low penetrating power and is only absorbed by the skin and produces a sunburn and increases the risk of skin cancer with prolonged exposure. However, he remarked completely eliminating exposure to sunlight has negative health effects including the production of vitamin D. For other forms of ionizing radiation which are more penetrating Dr. Peterson remarked less is known but research is ongoing. With respect to workers in nuclear power plants their incremental exposure is modest compared to natural background radiation although a subset of workers do get larger exposures which is accepted and regulated. Ms. Hisasue closed her comments by remarking the radiation levels in Denver are nowhere near what they are around the ISFSI.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman remarked that this client has recommended that PG&E adopt the standard of 40% of the regulatory dose limits established by the NRC as the decommissioning radiation clean-up standard for decommissioning of the power plant concerning which he observed the DCISC will have an ongoing role. He stated the Alliance for Nuclear Responsibility has recommended PG&E commit publicly to matching the level of remediation that is required by law and has been approved by the NRC in the states of New York, Massachusetts, Vermont and Maine and the question is currently before the CPUC. Mr. Geesman remarked PG&E has established that when PG&E tries hard it can accomplish things and PG&E has done that with respect to their DCPD

workforce and his client is hopeful they will do the same with the license termination plan when it is submitted.

Assistant Legal Counsel Rathie stated he located a fact-finding report prepared in February 2022 which followed Ms. Seeley having made comments concerning her visit to the ISFSI with Ms. Hisasue's radiation monitor and he reported the February 2022 Fact Finding Report is available on the Committee's website at www.dcisc.org.

Ms. Sheila Baker was recognized. Ms. Baker stated she wonders as to the status of the embrittlement issue for Unit 1 and whether Unit 1 is safe. [A presentation on that topic was on the agenda for later during this public meeting.]

The Chair called upon the Committee's Counsel to present the next item.

Status of Governmental Agency Interactions, Response to California Senate Bill 846 Directives, a Third Restatement of the Committee's Charter and other Regulatory Matters Including Committee Funding Issues Addressed in Phase 1 Track 1 of Proceeding R.23-01-007, an Order Instituting Rulemaking Before the California Public Utilities Commission.

Assistant Legal Counsel Mr. Rathie reported the item was scheduled for this public meeting to give the Committee and the public an opportunity to hear about the regulatory process that has been ongoing since the passage of SB846 in September 2022. He reported the Committee met in September 2022 in a public meeting shortly after the passage of SB846 and met again in February 2023. He reported he would cover some of the regulatory events that have involved the Committee and remarked the Order Instituting Rulemaking (CPUC Proceeding R.23-01-007) is a very complex proceeding with several different phases and several different tracks within those phases. Mr. Rathie reported as follows:

➤ On January 2023 the CPUC issued the Order Instituting Rulemaking (OIR) to implement SB846 to consider the potential extension of DCCP operations. The OIR identified the issues and established a framework to address those issues. A preliminary schedule was provided for Phase 1 which provided for DCISC fact finding reports to be noticed in the OIR with particular reference to the matters identified in SB846 concerning seismic safety and issues of deferred maintenance due to the expectation that DCCP would be closing earlier. The fact finding reports approved at the September 2022 and June and September 2023 DCISC public meetings were to be noticed in the OIR.

➤ At the February 2023 public meeting the DCISC Members approved the filing of Comments by counsel in the OIR on behalf of the Committee and the Committee's Comments were accordingly filed on February 17, 2023.

➤ The assigned Administrative Law Judge, Hon. Ehren Seybert, directed PG&E to convene a meet and confer session with all the parties in furtherance of developing a pre-hearing conference statement and accordingly comments were submitted on behalf of the DCISC on March 13, 2023. However, on March 15, 2023, ALJ Seybert issued a ruling denying party status in the OIR to the DCISC and directing the Committee to work with the CPUC Energy Division

to maintain open communication and to use the communication with the Energy Division to inform the proceedings. In response to Dr. Lam's query Special Counsel Mr. Mattes responded the DCISC sought party status in order to have direct input into Committee funding issues and with respect to its response to SB846. Mr. Mattes remarked the arrangement the ALJ provided to work with the Energy Division has proven to be a satisfactory alternative.

➤ On March 16, 2023, ALJ Seybert issued an email ruling with a preliminary scope and on March 17, 2023, the pre-hearing conference was held. Counsel for the DCISC at the invitation of the Energy Division submitted written comments to the Energy Division and listened to the hearing but did not participate.

➤ On April 6, 2023, Assigned Commissioner Hon. Karen Douglas issued her Scoping Memo which established two phases for the proceeding, with Phase 1 being divided into two tracks with Track 1 addressing issues relating to funding for the DCISC. Mr. Rathie remarked, as he reported on the previous day, that it is expected due to the increased workload for the Committee it may run a shortfall regarding funding sometime in the third quarter of 2023. He reported the funding for the Committee is presently provided by PG&E's ratepayers under the terms of a CPUC decision which bases funding for the Committee on the 1996 level with a 1.5% increase each year which is allocated under the terms of successive General Rate Cases filed by PG&E. Mr. Rathie reported Phase 1 Track 2 will be the process established to determine new retirement dates for DCPD if extended operations are approved. Mr. Rathie reported a decision on Phase 1 Track 1 DCISC funding matters is expected to issue sometime in August 2023, with a decision in the Phase 1 Track 2 expected to issue before the end of 2023. Phase 2 will follow Phase 1 Track 2 is extended operations are approved to make determinations regarding a reasonable manager showing, cost review, and a true-up of an annual compensation report.

➤ On April 20, 2023, ALJ Seybert invited parties to submit comments as testimony and at that time issued a notice incorporating the fact-finding reports for November, December 2022 and January-February 2023, as approved at the February 2023 public meeting, into the proceeding. Mr. Rathie reported all these reports are presently available on the Committee's website and fact finding reports approved at this public meeting will soon be so available.

➤ On April 21, 2023, the Energy Division requested that the Committee's Counsel submit informal comments addressing the increased workload imposed upon the Committee by the passage of SB846 which formed the basis for the anticipated funding shortfall in the third or fourth quarter of 2023 and those comments were submitted as requested. Mr. Rathie reported they may inform some of the anticipated revisions to the Second Restatement of the Charter for the DCISC.

➤ On April 28, 2023, ALJ Seybert requested parties' comments on Phase 1 Track 1 issues.

➤ On May 5, 2023, the representatives of the DCISC attended a meeting of the IPRP.

➤ On May 22, 2023, four parties including PG&E, the Alliance for Nuclear Responsibility, Women's Energy Matters', and the Small Business Utility Advocates file comments on Phase 1

Track 1 issues. Reply comments were filed and the Committee's Counsel was requested by the Energy Division to provide informational comments on the Phase 1 Track 1 issues which were provided as requested. A proposed decision in Phase 1 Track 1 concerning continued funding for the Committee's activities is expected to issue in July 2023, prior to its consideration by the full Commission in August 2023.

➤ On June 13, 2023, an all parties workshop was held for Phase 1 Track 2 issues.

Mr. Rathie next reported the Second Restated Charter, the present charter from the CPUC governing the Committee's responsibilities, was adopted as part of the 2018 Nuclear Decommissioning Cost Triennial Proceeding (2018 NDCTP) and the present Charter provides for a role for the Committee until such time that the plant ceases to generate electricity and all spent fuel has been safely transferred to the ISFSI. He reported the adoption of a Third Restatement of the Charter may be one of the results of a decision in the Phase 1 Track 1 proceedings pending now before the CPUC to address revisions made to the funding for the Committee's operations. Mr. Rathie reported that although tentative, pending the decision, it is expected the Committee will continue receiving funding from PG&E through PG&E's general rate cases during the time it continues its regular review of DCPD operations, but as the Committee enters the period of a possible transition to extended operations and relicensing of the plant it is expected funding to support related extended operation and license renewal review activities by the Committee during 2023 and 2024 will come from the Diablo Canyon Transition and Relicensing Memorandum Account (DCTRMA) which PG&E has been ordered to and has now established. If operations of the plant are extended, it is anticipated all funding for the Committee's activities will come from all load-serving entities within the CPUC's jurisdiction and come to the Committee through the Diablo Canyon Extended Operations and Balancing Account (DCEOBA). Once the plant ceases to generate electricity and moves to decommission, it is expected the Committee's funding will again come entirely from PG&E's ratepayers through PG&E's general rate cases. He reiterated that any changes to the Second Restated Charter will be further directed and informed by the decision in the Phase 1 Track 1 portion of the OIR and that may be a matter that would come before the Committee at its September 2023 public meeting for approval by the CPUC in a subsequent proceeding. Mr. Rathie remarked in response to Consultant McWhorter's inquiry that a revised Charter, which was in the public agenda packet for this meeting, has been provided to the Energy Division for its review and is a draft for discussion purposes only and not offered for approval by the Committee. In response to Dr. Lam's inquiry Mr. Rathie stated SB846 provides assurance that appropriate funding will be provided in order to attract the best qualified individuals to serve on the DCISC.

Ms. Nina Babiarz was recognized. Ms. Babiarz identified herself as the Director of Development with Public Watchdogs, a non-profit organization located in San Diego California. She remarked as Californians her group is paying attention to events involving DCPD as all Californians will be paying for the \$1.4 billion forgivable loan to PG&E and California has the highest utility rates in the country so this additional charge is quite burdensome. Ms. Babiarz remarked she found Mr. Jones and Drs. Lam and Peterson's response to Ms. Hisasue's comments to be appropriate. She remarked her organization partners with Safecast as it was a radiation leak that resulting in the San Onofre Nuclear Generating Station (SONGS) being shut down. She stated through the Surfrider organization her organization has been receiving

notifications of dilute and discharge releases by Unit 1. She commented Public Watchdogs is pressing for independent radiation monitoring as the radiation leak which occurred at SONGS was initially kept from the public and she found Dr. Budnitz response to Ms. Hisasue to be more than a little disconcerting.

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

Mr. Jones introduced DCPD Senior Director and Station Director Mr. Dennis Petersen. Mr. Jones reported Mr. Petersen holds a Bachelor of Science Degree in aeronautical engineering from California Polytechnic University at San Luis Obispo and has been employed at DCPD for more than 35 years. Mr. Petersen has previously held leadership positions as Director of Operations Services, Director of Nuclear Work Management, Director of Learning Services, Director of Quality Verification and as outage manager. Mr. Petersen spent the earlier part of his career in Operations and held a Senior Reactor Operator License and led an operating crew on shift prior to assuming senior leadership roles.

Presentation on the State of the Plant including Key Events, Outages, Highlights, Organizational Changes and Other Station Activities since the DCISC's February 2023 Public Meeting.

Mr. Petersen stated in his presentation he would provide an update on station performance. He reported both units are presently operating at 100% power with a probabilistic risk assessment (PRA) of Green. Dr. Budnitz remarked and Mr. Petersen agreed that a probabilistic risk assessment of Green means there is no equipment out of service or some other compromise to safety that would make the relative risk assumed higher than the probabilistic risk assessment baseline for normal operation and maintenance activity and accordingly trigger a classification as White, Yellow or Red. Mr. Petersen reported that each week during the morning standard briefing the proportion of relative risk of planned maintenance is reviewed with plant staff.

Mr. Petersen reported all the NRC Performance Indicators for both units are also in Green status¹⁷.

Mr. Petersen reported maintenance windows for the emergency diesel generators (EDGs) are scheduled during 2023 with maintenance on EDG 1-3 having been completed and maintenance for EDG 1-1 and EDG 1-2 scheduled respectively for June, and is ongoing now, and then in August 2023. Mr. Petersen stated this major maintenance activity is undertaken once during each operational cycle and includes preventative and corrective items. During these inspections there will be some inspections conducted in preparation for license renewal. Dr. Budnitz observed and Mr. Petersen confirmed the maintenance activities on the EDGs are all accounted for in the probabilistic risk assessment. Mr. Petersen reported the EDGs are the back-up power sources for start-up power and the EDGs support the plant in the event of loss of the

¹⁷ The safety significance characterizations used for the performance indicators as either Green (very low), White (low to moderate) Yellow (substantial) or Red (high). A Green non-cited violation indicates very low safety significance, with no impact to public health and safety.

500kV system. In response to Consultant McWhorter's inquiry concerning the inspections for license renewal being added to the scope of the maintenance windows Mr. Petersen replied the license renewal activities include inspecting a number of the more passive systems and components that are part of the scope of the overall license renewal application and to get a baseline understanding of the condition of tanks, valves, and other items that would not normally require disassembly and would otherwise be part of a preventative maintenance program. He stated a visual inspection is required by the license renewal process and many of these inspections have been completed.

In response to Dr. Lam's query Mr. Petersen commented that sometimes during maintenance activities a gasket or a valve seals might be replaced and there may be a leak following which is remedied by minor maintenance without removing the component from service. He commented the intent of a preventative maintenance program, and in establishing an interval of maintenance, is an overall assumption that the vast majority of activities performed are successful and if a preventative maintenance program is operating properly there should not be in-service failures of components or systems. Dr. Budnitz commented there are industry-wide databases on component failures and the data shows that when something fails the chances are about equal that it failed because of an inherent defect or because of a failure to restore the component to its correct configuration. Mr. Petersen stated human performance or, on occasion, a procedural or guidance deficiency can result in a work package that is not fully adequate to restore a component to service in premium conditions. Mr. Petersen reported one of the advantages in the context of nuclear power is that every deficiency is entered into the Corrective Action Program and receives some level of cause evaluation to prevent recurrence.

Mr. Petersen reported the twenty-fourth refueling outage for Unit 1 (1R24) is scheduled to being in the fall of 2023, in October, and he reported the outage duration will be somewhat lengthier as a result of the license renewal process as there are a number of added items for inspection.

Mr. Petersen reported on some recent activities including, on June 1, 2023, an employee safety fair entitled "Keys to Life," on June 6-8, 2023, he reported the NRC conducted an operator requalification inspection. On June 8, 2023, the plant held an outage hiring and information fair. On June 21-22, 2023 PG&E completed a pre-assessment evaluation of the Safety Excellence Management System for which he reported the reviewers were favorably impressed by the performance, standards, and behaviors demonstrated by the PG&E nuclear generation organization.

Mr. Petersen displayed the power production history for both units from June 2022 through May 2023 showing their current and past performance and reported in January 2023 both units were curtailed due to significant ocean swell activity that deposited debris in the Intake Cove and tunnel cleaning was performed for Unit 1 in March 2023 and the unit curtailed, and a brief curtailment for Unit 2 also occurred in March 2023 due to a saltwater line break.

Concerning upcoming station activities Mr. Petersen reported as follows:

- Nuclear Safety Oversight Committee (NSOC) visit – July 10-13.
- NRC Fitness for Duty Inspection – July 2023.
- NRC Class Exam – August 2023.
- NRC Emergency Preparedness – September 2023
- License Renewal Inspections (1R24 Refueling Outage) – October 2023.
- NRC Radiation Protection Inspection - October 2023.
- NRC Cyber Security Inspection – November 2023.

Mr. Robert Sarvey from Los Osos, California was recognized. Mr. Sarvey stated he was not surprised to hear about issues with the emergency diesel generators concerning which he addressed the Committee on the previous day. He commented he believes the diesels have continued to have problems including as recently as March 2023. He stated a fact-finding team found the Unit 1 and Unit 2 emergency diesel generators to be in Red health status. He asked the DCISC to consider directing that these 40 year old diesel generators, on which the entire state is dependent, be replaced. Mr. Petersen replied and explained the activities he described concerning the emergency diesel generators during his presentation are in context of maintenance performed during periods set aside for preventative activities that are required once per refueling cycle and there are no particular problems to be addressed during these maintenance windows and the generators have been highly reliable. Mr. McWhorter commented he reviewed the last DCISC fact finding reports addressing the emergency diesel generators and one year the Unit 1 generators were rated in Green status while one diesel generator on Unit 2 was rated in White status.

Ms. Carole Hisasue of San Luis Obispo Mothers for Peace was recognized. Ms. Hisasue inquired concerning the exact steps to be taken during the cyber security inspection to which Mr. Petersen replied DCPD has a group of dedicated cyber security experts who conduct a continuing station program to ensure plant cyber systems remain healthy and are appropriately isolated and protected. In response to Dr. Lam's query Mr. Petersen reported the NRC cyber security inspection is scheduled to have a duration of one week.

The Committee Members thanked Mr. Petersen for a most informative presentation.

A short break followed.

Mr. Garcia then introduced the Director of Risk and Compliance, Mr. Jordan Tyman, to make the next presentation concerning the NRC's assessment of plant performance. Mr. Garcia reported Mr. Tyman is responsible for oversight of the Risk Management Program for PG&E's generation facilities and he also has responsibility for Regulatory Services, Cyber Security and Emergency Planning. Mr. Garcia reported Mr. Tyman has been employed by PG&E for seven years and spent ten years before coming to PG&E at Westinghouse Electric Corporation leading major projects on the design and construction of the AP 1000 reactors and managing up-rates at nuclear power plants across the country. Mr. Tyman is a member of the Cal Poly Cyber Security Program Advisory Board and holds a Degree in Mechanical Engineering from the University of Massachusetts.

Update on the Status of NRC Performance Indicators, Licensee Event Reports, NRC Inspection Reports and NRC Current Issues and Current and Future License Amendment Requests. Issues/Requests.

Mr. Tyman commented independent oversight together with the use of the Corrective Action Program are key tenets to ensure DCPD continues to provide clean, safe and reliable power. Continuous learning, continuous improvement and self-awareness and self-correcting principles are foundational in DCPD's programs and processes.

Mr. Tyman stated his report would cover a period of approximately four months from February to June 2023 which includes approximately 2,000 hours of NRC inspection time including by the two resident onsite inspectors. During this period no violations of greater than low safety significance were received and DCPD has continued to meet and remain in the highest performance category, Column 1, for the performance expectations for all NRC Performance Indicators. Dr. Lam observed that DCPD reimburses the NRC in full for the cost of all inspections and therefore there is no disincentive for the NRC not to perform inspections.

Mr. Tyman reported DCPD is assessed under the NRC's Reactor Oversight Process in accordance with 16 separate performance indicators and he reported DCPD met the NRC's expected performance level, that is, maintaining the highest status, defined as Green status, for both units for all 16 performance indicators. He reported the NRC's annual assessment End-of-Cycle Report for 2022 reaffirmed DCPD's performance continued to preserve public health and safety.

Dr. Peterson observed the frequency of references to findings of low safety significance can raise concern about problems being mischaracterized as being of low safety significance when perhaps they are not. He remarked nuclear power plants are encouraged to report many different problems even if they have a low safety significance and having a regulator that concurs with that philosophy is important. Mr. Tyman replied the DCPD Corrective Action Program has a very low reporting threshold and the NRC has the ability to review and question any item entered into the Corrective Action Program. The NRC also reviews this process as part of its Problem Identification & Resolution inspection program to ensure a licensee is not mischaracterizing problems. Mr. Tyman remarked the NRC Reactor Oversight Process and federal regulations have clearly defined thresholds and evaluation processes for issues which exceed a low safety significance. Dr. Lam remarked he is unsure whether the NRC Performance Indicators work to provide predictive or a backward looking indications and Dr. Lam stated Dr. Peterson's concern was well placed. Mr. Tyman remarked the performance indicators can be lacking metrics and plant performance is also evaluated through the Corrective Action Program and through trending low level thresholds which are established and assessed by the DCPD Performance Improvement Team and addressed through preventative and corrective maintenance programs.

Mr. Tyman again reported there have been no violations of more than low safety significance and no licensee event reports (LERs) were issued by PG&E since the last DCISC public meeting in February 2023, and he commented this was not by chance but rather the result of the programs and processes he described. Dr. Budnitz remarked that a decrease in the number

of LERs is reflected throughout the industry.

Mr. Tyman stated relative to upcoming inspections these remain as reported in Mr. Petersen's report. He concluded his presentation with the comment that DCPD continues to embrace the independent external oversight provided by the NRC inspection, Reactor Oversight Process and the use of the Corrective Action and Performance Improvement Programs is key to sustained performance.

In response to Consultant Wardell's inquiry Mr. Tyman reported an emergency preparedness exercise is not scheduled during 2023 and the NRC Emergency Preparedness Inspection scheduled for September 2023 will not include the observation of an exercise.

Mr. Garcia then introduced the Director of the Outage Management Department at DCPD Mr. Erik Werner and reported Mr. Werner has more than 23 years' experience in nuclear plant engineering including in the Operations, Training, Decommissioning Planning and Outage Management organizations. Mr. Werner has been employed at DCPD for 18 years as a licensed senior reactor operator and holds a Bachelor of Science Degree from Cal Poly at San Luis Obispo.

Plans, Scope and Schedule for Refueling Outage 1R24.

Mr. Werner commented his presentation would cover the scope of upcoming refueling outage 1R24, or the twenty-fourth refueling outage for Unit 1, which is scheduled to take place in the fall of 2023. He reported a fifty-day outage is now planned based on the scope associated with required inspections related to license renewal, planned maintenance and refueling activities. For 1R24 there will be approximately 1,000 temporary additional workers expected to be available to support the outage. In response to Consultant McWhorter's query Mr. Werner reported for 1R23, the previous outage, approximately 600-650 temporary additional workers were required and he stated the increase for 1R24 was primarily driven by and directly related to the scope for license renewal inspections. In response to Consultant Wardell's inquiry Mr. Werner stated 1R24 does include some project work in support of the PMO++ Program and both license renewal and PMO++ efforts are in support of extended operations. Mr. Werner reviewed and discussed with the Committee each of the 1R24 outage performance goals:

<u>Performance Area</u>	<u>Goal</u>
Safety	Zero Serious Injury or Fatality Events
	Zero Nuclear Safety – No Loss of Decay Heat Removal
Human Performance	Zero Site Clock Resets
	Zero Significant Foreign Material Exclusion Events
Outage Duration	≤50 Days
Dose Goal	TBD (As Low As Reasonably Achievable)
Reliability	Power Ascension ≤5 Days
	Reliability ≥90 Days Max Capable Power

Mr. Werner then discussed with the Committee the scope of work during 1R24 for the primary and secondary systems and the electrical system, as well as license renewal inspection activity and project work during 1R24. He confirmed Dr. Budnitz observation that 1R24 will not include mid-loop operations and will include a complete reactor coolant system drain-down following offload of all fuel. He described and discussed with the Committee these activities as follows:

➤ Primary Base Scope -

- Reactor Coolant System Drain Down.
- Two Reactor Coolant Pump Seal Replacements. In response to Dr. Lam's query Mr. Werner reported the seals are replaced on a normal preventative maintenance frequency of up to every four years and he confirmed these are the new type of seals that essentially seal-up on shutdown and the seals have been working as designed.
- Motor Operated and Air Operated Valve Maintenance.
- Steam Generator Eddy Current Testing, Steam Drum and secondary side inspection. In response to Consultant McWhorter's observation Mr. Werner confirmed but for the prospect of extended operations the inspections and testing of the steam generators would not be performed.

➤ Secondary Side Inspection Activities -

- Two Containment Fan Cooler Unit (CFCU) Motor Overhauls. In response to Consultant McWhorter's inquiry Mr. Werner replied the CFCU motor overhauls and maintenance would have been evaluated and likely scheduled during 1R24 regardless of the prospect of extended operation.

➤ Primary License Renewal Inspection Activities -

- Refueling Water Storage Tank Inspection. In response to Dr. Budnitz' inquiry Mr. Werner confirmed this was a routine inspection.
- Containment Building Inspection.
- Reactor Vessel Surveillance Capsule B Removal.

➤ Primary Project Scope -

- Replace Reactor Vessel Level Instrumentation System Bellows and O-Rings

➤ Secondary Base Scope -

- High Pressure Main Turbine Inspection and Valve Maintenance.
- One Main Feedwater Pump Inspection.
- Feedwater Heater and Moisture Separator Reheater Internal Inspections.
- One Auxiliary Saltwater Pump Motor and Pump Replacement.
- One Circulating Water Pump Motor Overhaul.
- One Condensate Booster Pump Motor Overhaul.

- Secondary License Renewal Inspection Activities -
 - Condensate Storage Tank Internal Inspection.
 - Condensate Polisher Demineralizer Vessel Internal Inspections.
 - Diesel Fuel Oil Storage Tank Internal Inspections.
 - Intake and Discharge Structure/Conduit Inspections.
- Secondary Project Scope -
 - Intake Travelling Screen Frame Replacements. In response to Dr. Lam's query Mr. Werner stated the traveling screens and attached baskets are all now functioning and the replacement of the traveling screen frames is a part of the PMO++ Program project reviews.
 - Main Condenser Maintenance Activities.
 - One Condensate Booster Pump Pedestal Replacement.
 - One Diesel Fuel Oil Storage Tank Overfill Protection Device Replacement. Mr. Werner replied in response to Dr. Peterson's question that the overfill protection device functions to maintain the integrity of the two underground fuel oil tanks and is required for code compliance. These underground fuel tanks feed the smaller diesel fuel oil day tanks for each unit.
- Electrical Base Scope -
 - Vital Bus 4kV and 480v Bus Maintenance.
 - 12kV Bus Breaker Racking Mechanism Overhauls.
 - Startup Transformer Load-Tap Changer Overhaul.
 - Electrical Bus Duct Inspections.
 - Main and Auxiliary Transformer Power Factor Testing.
- Electrical License Renewal Inspection Activities -
 - 4kV Vital Bus Power Supply to Loads Cable Testing, which Mr. Werner stated represents the largest electrical scope for 1R24 with a series of 19 loads, with 3 cables per load to be tested.
 - 480V Cable Testing.
 - Cable Pull Box Inspections.
- Electrical Project Scope -
 - Circulating Water Pump Neutral Winding Relocation.
 - Transformer Refurbishment.

In response to Consultant Wardell's inquiry Mr. Werner reported DCPD received relief from the NRC concerning the installation of cathodic protection for the Auxiliary Saltwater System discharge piping and this work will be performed outside of the current license and as

part of the license renewal application and has been accordingly removed from 1R24. In response to Consultant McWhorter's question concerning the drivers for the critical outage path Mr. Werner confirmed the principal driver at the commencement of 1R24 will be the license renewal inspections based upon the 4kV vital load cable inspections and then at the end of the outage the completion of the Refueling Water Storage Tank inspections will be the principal driver on the critical path. He confirmed Mr. McWhorter's observation that robotics will be used to inspect the Refueling Water Storage Tank. In response to Dr. Budnitz inquiry Mr. Werner replied supply chain problems are not expected to be an impactful issue for 1R24 as DCPD plans its outage activities and tracks metrics for a period three outages in advance of the current upcoming outage although he acknowledged there are now issues in the nuclear industry with the supply chain. **In response to Consultant Wardell's question as to when the DCISC might have the opportunity to review the outage safety plan Mr. Werner stated a preliminary version of the outage safety shutdown defense-in-depth planning for 1R24 should be available for review by the time of the August 29-30, 2023 DCISC fact-finding.** Mr. Werner, in response to Dr. Budnitz' inquiry, replied the metrics for tracking the availability of supplemental labor for 1R24 have not indicated any immediate challenges in obtaining qualified specialists or supplemental workers to support the outage. He reported DCPD started recruiting for this outage earlier than for past outages and has contacted supplemental personnel who formerly worked at the plant, as well as holding a local job fair and using various forms of media outreach. Dr. Budnitz remarked the need to keep the schedule for 1R24 confidential for proprietary, business related reasons appears to him to be an odd strategy. Ms. Suzanne Hosn, PG&E Senior Manager for Marketing and Communications, replied that workers are brought into DCPD several weeks prior to the outage for processing and during the job fair applicants were provided with a range of dates for the outage. She commented many workers do not work the entire duration of the outage and DCPD is intentionally vague on providing those dates.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. In response to Mr. Geesman's inquiry as to the planned duration of 1R24 prior to the matter of relicensing and extended operation having arisen Mr. Werner replied the outage in the absence of license renewal and extended operation would have had a duration of approximately 35 days.

Mr. Bruce Severance was recognized. Mr. Severance remarked that he did not understand the contingency plans he reviewed in the NRC docket concerning the removal of Surveillance Capsule B. It was pointed out that the matter was on the agenda for later during the afternoon presentation and his questions could be better addressed at that time.

XXVI ADJOURN MORNING MEETING

The Chair adjourned the morning meeting of the Committee at 11:20 a.m.

XXVII RECONVENE FOR AFTERNOON MEETING

The June 29, 2023, afternoon session of the Diablo Canyon Independent Safety Committee was called to order by its Chair, Dr. Peter Lam at 1:30 p.m..

XXVIII COMMITTEE MEMBER COMMENTS

Dr. Lam requested any of the Members who wished to make remarks to do so at this time. There were no comments or remarks by Committee Members.

XXIX 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 were no comments from members of the public at this time.

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

Dr. Budnitz requested Mr. Garcia to introduce PG&E Senior Director Tom Jones. Mr. Garcia reported Mr. Jones previously served as Director of Strategic Initiatives for Pacific Gas and Electric Company. Mr. Jones received a Bachelor's Degree from the University of California, Santa Barbara. Mr. Jones has 22 years of experience with PG&E and prior to coming to PG&E he served in corporate affairs and local government relations.

Update on Plans for Future Spent Fuel Management, Transfers from Spent Fuel Pools to Dry Storage, and Decommissioning Planning.

Mr. Jones stated in his presentation would provide an update on DCP's spent fuel strategies and on planning for decommissioning.

Mr. Jones reported the passage of SB846 and the prospect of continued operations at DCP required a change in direction concerning spent fuel management. In 2022 PG&E entered into contract with Orano, a nuclear industry supplier of spent fuel storage systems, for Orano to supply its NUHOMS horizontal spent fuel storage system (Orano System) to DCP at the ISFSI. Prior to passage of SB846, PG&E was planning to load fuel from the two spent fuel pools during 2025 and 2026 and complete the transfer of all fuel in 2027. However, Mr. Jones reported continued operations will require adequate space is provided within the spent fuel pools to support the ability for a full core offload and this changes the previous loading strategy. Mr. Jones reported DCP also has the ability to continue to use the vertical spent fuel storage system manufactured by the Holtec firm which has previously been in use at the ISFSI (Holtec System), as well as the Orano System. He remarked the present plan is to use the Holtec System in the short term as no modifications are necessary and both systems could be used in the future to address contingencies which may arise in the context of continued operation. In response to Dr. Lam's inquiry Mr. Jones reported the ISFSI now contains 58 loaded Holtec System casks and the current plan is to add more Holtec System casks, estimated at six additional casks per unit, to ensure sufficient space remains available in the spent fuel pools for future refueling outages. **In response to Consultant McWhorter's query Mr. Jones reported the next spent fuel loading campaign will take place after the next refueling outage. Mr. McWhorter recommended the DCISC observe that loading campaign as it has been seven years since a loading campaign was undertaken by DCP.**

Mr. Jones reported prior to being able to use the Orano System DCPD requires receipt of a Coastal Development Permit from the California Coastal Commission to modify the surface of the ISFSI, by removal of the retaining rings and leveling of concrete, to accommodate the horizontal configuration of the Orano System and he displayed a short video of the plans for the modifications. Mr. Jones confirmed that adding more Holtec System vertical casks will change the final number of Holtec System and Orano System casks to be located at the ISFSI. Mr. Jones reported DCPD intends to continue to support the transfer of fuel to the ISFSI regardless of when DCPD may shut down permanently and now has a strategy to employ either Orano or Holtec technology to do so. In response to Dr. Kadak's question Mr. Jones reported there are presently no empty Holtec System casks on site at DCPD and the casks to be used will need to be fabricated and delivered prior to the next loading campaign.

Mr. Jones reported DCPD filed a license renewal application with the NRC for the ISFSI which is still in the review process. He reported DCPD recently received from the NRC the first of requests for additional information concerning the application. Mr. Jones reported he now believes the NRC's review of the license renewal for the ISFSI will take up to two years to conclude and although the 10 CFR Part 72 license for the ISFSI expires in 2024, as the NRC is in the process of evaluating DCPD's license renewal application the ISFSI can continue to operate. In response to Dr. Kadak's inquiry Mr. Jones reported Orano has applied for Amendment No. 4 to its License for the NUHOMS spent fuel storage system and a decision is expected by the fourth quarter of 2023 or the first quarter of 2024. He remarked the amendment is still a contingency for DCPD, but the plan now is to conduct a modest loading campaign using the Holtec System and the system to be used for subsequent loading campaigns will be subsequently determined. He reported in response to Dr. Kadak's inquiry the existing ISFSI pad can accommodate 40 full years of discharged fuel. Mr. Jones remarked that should availability for offsite storage be presented by a consolidated interim storage facility DCPD is ready to transport fuel to such a facility. He reported the DCPD spent fuel pools have a capacity of greater than 20 years and by having use of two systems Mr. Jones reported DCPD has a greater opportunity to utilize consolidated offsite storage if that option should become available in the future. In response to Consultant McWhorter's query Mr. Jones confirmed PG&E previously reviewed a spent fuel storage system which provided an ability to place more than 40 years' of spent fuel on the existing ISFSI pad, but it was not the system PG&E selected and it was a more complex system and Mr. Jones remarked any further consideration at this time would be premature.

Mr. Jones turned in his presentation to issues of decommissioning planning which he stated still continues as DCPD does not have certainty as to the regulatory outcome for extended operations. He reported the Diablo Canyon Decommissioning Engagement Panel has made several recommendations which have been included in the license amendment which is required from the NRC prior to commencing decommissioning as well as concerning the land use application process. He reported the land use application process in California is quite complex and DCPD, given its location, is subject to multiple jurisdictions including the County of San Luis Obispo, the California Coastal Commission and the State Lands Commission and a Memorandum of Understanding is included in the Environmental Impact Report (EIR) for decommissioning. Mr. Jones confirmed, in response to Dr. Peterson's comment, that SB846 directed the baseline condition for extended operation is to be the operating power plant with reference to once through cooling and the state increased the mitigation fee paid by PG&E for

the continued use of once through cooling from \$5 million to \$10 million per year.

Mr. Jones presented a graph which showed each discrete regulatory action and its status and the major milestones for the decommissioning process and he reported DCPD is approximately two-thirds complete with the process, with the next major milestone being the release by San Luis Obispo County of the draft EIR for public review and comment for a 60 day period. He reported the County in that process is obligated to address in the final EIR each concern raised, which will then be considered for certification by the County's Planning Commission, with the possibility of an appeal to the Board of Supervisors and ultimately to the Coastal Commission. In response to Dr. Lam's statement concerning the NRC requirement to complete decommissioning within 60 years of shutdown, Mr. Jones replied PG&E's goal is still to go directly into decommissioning when generation operations terminate and PG&E is planning to take actions during the time the plant continues to operate to prepare for decommissioning.

Mr. Jones reported in the 2018 Nuclear Decommissioning Cost Triennial Proceeding (NDCTP) conducted before the CPUC, PG&E did not request an additional collection of funds for decommissioning, but there are regulatory variables which will be required and PG&E plans to update future estimates based on any additional requirements. At this time the decommissioning trust fund created to finance the decommissioning of DCPD has a balance of approximately \$3.96 billion [in 2017 dollars]. In response to Dr. Kadak's inquiry Mr. Jones reported approximately twenty persons are working now primarily on the Coastal Development Permit process and he reported some of the environmental information developed for decommissioning can be used to meet the National Environmental Protection Act (NEPA) requirements for license renewal and he observed there will be an increase in the workload with the public release of the EIR. In response to Dr. Kadak's query Mr. Jones reported PG&E has filed its current plans for conducting decommissioning, which provide for near-term dismantlement, in the currently pending 2021 NDCTP. He stated PG&E is not at this time considering the use of safe-store or entombment prior to decommissioning the power plant. Mr. Jones observed, in response to Dr. Lam's observation, that extended operations do not significantly change the physical nature of much of the decommissioning work except for the storage of spent nuclear fuel and he stated PG&E has no plans pending which would provide for commencement of decommissioning following a 20-year period of extended operation. He remarked there is no reason at present to relax decommissioning planning as extended operations have not been approved and active permits for which PG&E is seeking discretionary action are pending before regulators. He confirmed Dr. Budnitz observation that if operations are extended much of the work being done now to advance decommissioning will still be applicable when the plant does cease generating electricity and the license amendment request for decommissioning before the NRC will not need to be changed, as it was designed to be evergreen based on defined milestones rather than dates certain. In response to Dr. Kadak's question Mr. Jones replied PG&E did consider the option of selling the power plant to another entity which would then undertake its decommissioning, but instead has opted to adopt a process whereby PG&E would oversee the work of various contractors and retain some and contract out other portions of the work which he stated was similar but not precisely the same as undertaken for the decommissioning of SONGS and he reported this is the process which is now under review in the 2021 NDCTP. Dr. Budnitz expressed his opinion that the solution described by Mr. Jones

appears to be one with a very high promise that it will deliver the appropriate level of safety due to involvement of the same people and institutions and this is especially true if some of the decommissioning work is going on while the plant continues in operation.

Using a graphic Mr. Jones reviewed the progress on the Coastal Development Permit process and commented the EIR could go to the County Planning Commission in 2024, depending of the volume and disparity of public comment. He remarked the license renewal application for the ISFSI is for a 40-year license while the license extension request for the power plant is for a 20-year term. Mr. Jones stated it is within the NDCTP process that the estimates and approvals for funding will be determined and will ultimately inform the scope of the permits sought and the scope that PG&E is allowed to do, and DCPD is now awaiting a CPUC decision on the 2021 NDCTP in order to prepare for the 2024 NDCTP, for which an application is due in December 2024 which will commence an approximately 18-month regulatory process. Mr. Jones reported the CPUC has instituted a rulemaking to address and distinguish decommissioning costs from the license renewal costs that will ultimately be passed on in the extended period of operations to some forty load serving entities.

In response to Dr. Kadak's question Mr. Jones stated he does not see any obstacle to Orano obtaining the fourth amendment to its license to their Certificate of Compliance for its NUHOMS system.

Mr. John Geesman representing the Alliance for Nuclear Responsibility was recognized. Mr. Geesman commented it was his understanding from Mr. Jones' presentation that the combination of using both vendors for spent fuel storage casks at some point in time based on the length of extended operation will approach the capacity of the existing ISFSI pad and the spent fuel pools have a capacity of twenty years for operation of the two reactors. He inquired what role if any would state policy, as articulated by the California Energy Commission in its AB 1632 Report encouraging a reduced density of fuel in the spent fuel pools, play in PG&E planning for an additional pad. Mr. Jones replied that the issue identified by Mr. Geesman is one of the contingencies PG&E is beginning to evaluate, but there are several variables to be considered including the possibility of the future availability of consolidated interim storage. He reported the Orano System can accept a higher thermal load and an increased number of assemblies than the Holtec System and that factor should work to drive volumes down sooner than previously possible. In response to Dr. Lam's comment Mr. Jones observed the NRC-imposed requirements of Regulation B.5.b¹⁸ sets the baseline for spent fuel pool inventory at 772 assemblies in each pool. Mr. Jones stated that if PG&E needs to build another pad for dry cask storage it will do so. Mr. Jones remarked the risk profile goes to zero the sooner the entire facility is unloaded, but as the plant remains operational there remains a need to accumulate older fuel and to maintain 772 assemblies in each pool. In response to Dr. Kadak's inquiry, Mr. Jones reported the spent fuel pools were re-racked very early in DCPD's operation, in 1986 or 1987, and after having been re-racked the two spent fuel pools have a capacity of 1,300 assemblies per pool.

¹⁸ B.5.b refers to a section of an NRC Order, issued in February 2002, describing the strategies that the NRC required nuclear plant licensees to develop after the September 11 attacks to "maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire."

The Chair thanked Mr. Jones for a very informative presentation.

Mr. Garcia again introduced PG&E Director of Strategic Initiatives Mr. Philippe Soenen to make the final informational presentation requested by the Committee for this public meeting.

Update on Unit 1 Reactor Vessel Integrity, Coupon Withdrawal Plans, Integrity Analyses, and Associated Regulatory Submittals.

Mr. Soenen stated he would provide an update on reactor vessel integrity analyses and the information which will go forward in PG&E's license renewal application for DCPD and the plans for withdrawal of a surveillance capsule from Unit 1. [The surveillance capsules contain metal tags known as coupons which are made from the same material as the reactor pressure vessel. For purposes of these Minutes the term "capsule" will be used to refer to both]. He reported federal regulations require all operating reactors to have a Reactor Vessel Material Surveillance Program to monitor vessel material changes over time through periodic withdrawal and testing of surveillance capsules installed in reactor vessels in locations selected to serve as leading indicators of the pressure vessel material condition to ensure safe operation. Mr. Soenen reported the requirements for the Reactor Vessel Material Surveillance Program for the current 40-year operating licenses for both units have been satisfied. Coupon withdrawal and testing has to-date has demonstrated that the reactor vessels for both Unit 1 and Unit 2 currently meet the NRC's acceptance criteria under 10 CFR 50.61.

Mr. Soenen reported that to renew the operating licenses PG&E is required to continue the Reactor Vessel Material Surveillance Program and to confirm reactor vessel surveillance data meets acceptance criteria for 60 years of operation. He commented part of that effort is a commitment by DCPD through its aging management programs to confirm to the NRC that reactor vessel surveillance data continues to meet the criteria for 60 years of operation. In 2009 PG&E provided the necessary information in its original license renewal application, but the application was withdrawn in 2018. Mr. Soenen reported the DCISC previously independently reviewed the information from PG&E's previous license extension application and included its conclusions in the DCISC's 21st Annual Report in Section 4.23.2.

Mr. Soenen reported all Unit 2 reactor vessel capsules have been withdrawn and the data was used in the 2009 license renewal application to demonstrate Unit 2's acceptability through 60 years of operation. He stated Unit 1 reactor vessel capsule data was also used in the 2009 license renewal application to demonstrate Unit 1's acceptability through 60 years of operation. Mr. Soenen reported the 2009 license renewal application credited the withdrawal of one final capsule from Unit 1 to support relicensing for up to 60 years of operation. He reported PG&E now plans to retrieve that capsule from Unit 1 in the fall 2023 refueling outage (1R24) or if unable to do so in the Spring of 2025 outage (1R25) and on May 15, 2023, PG&E submitted a request to NRC to approve the Unit 1 capsule withdrawal schedule and has received confirmation from the NRC that adequate information was provided by that letter. In response to Consultant McWhorter's inquiry Mr. Soenen stated the data submitted in the 2011 license renewal application updated analysis was submitted to the NRC in accordance with 10 CFR 50.61 and not the later, alternate, rule under 10 CFR 50.61a.

Mr. Soenen reported as part of the capsule withdrawal plans as required by 10 CFR 50 Appendix H the withdrawn Unit 1 capsule will be tested and analyzed by Westinghouse Electric Corporation (Westinghouse) and results will be submitted to NRC within eighteen months following its withdrawal. In response to Dr. Lam's query as to the existence of some original material from the Unit 2 pressure vessel Mr. Soenen replied that as this material was not placed in the vessel within a capsule, even if placed in a capsule in the most conservative location there would be insufficient time for it to provide useful data on fluence dose for 60 years of operation and accordingly PG&E has no plans to reinsert a capsule into Unit 2. Mr. Soenen reported data from the capsules are not the only source of information on the neutron environment within the reactor pressure vessel and PG&E will continue to use separate ex-vessel monitoring dosimetry to characterize the vessel's neutron environment. He stated this data will be used to demonstrate that the analyses based on the capsules that have been withdrawn are conservative as confirmed through the ex-vessel dosimetry monitoring.

Dr. Lam remarked before 10 CFR 50.61a was issued by the NRC there was a great deal of information in the media concerning 40 or 50 reactor vessels as being too brittle, including DCP Unit 1 and the fact 10 CFR 50.61a provided a less conservative alternative analysis was labeled by some as being politically motivated. In response to Dr. Budnitz' query Dr. Lam stated he was neither dismissing nor endorsing this characterization. Dr. Budnitz observed the embrittlement characteristics of the 40 or 50 reactor vessels mentioned by Dr. Lam did not change with the adoption of 10 CFR 50.61a. The alternative analysis established they were not too brittle prior to the adoption of 10 CFR 50.61a and it was the extra conservatism of 10 CFR 50.61 that supported a conclusion they were more brittle than they actually were. Dr. Budnitz reported when he served as Director of the NRC Office of Nuclear Regulatory Research he was involved in initiating the research program which subsequently resulted in the issuance of 10 CFR 50.61a which he described as an effort of the metallurgy community to develop the most realistic analyses possible. Mr. McWhorter inquired as to the purpose of the difference between DCP having met the criteria for 60 years of operation in 2011 through the application of 10 CFR 50.61 and its current plan for withdrawal of an additional capsule from Unit 1 under 10 CFR 50 Appendix H, to which Mr. Soenen reported that the purpose was twofold: one as further validation for greater reasonable assurance; and two as a benefit to the industry and for those licensees going through a license renewal process by withdrawing a capsule later in a reactor's operational lifetime.

Dr. Budnitz questioned why Westinghouse takes a year or more to produce a report on the withdrawn capsule and Dr. Peterson observed that time is likely required by the capsule's activation and the challenges of handling the material in a hot cell. Dr. Peterson reported Professor Peter Horstman at U.C. Berkeley has done very sophisticated micro-mechanical testing on micron-scale samples, loading and deflecting micro-mechanical beams and columns to measure force over distance, which testing permits direct handling of samples as they are not radioactive from the perspective of the need to treat them as waste. Dr. Peterson observed at some point more definitive analyses will become available concerning embrittlement. In response to Dr. Kadak's inquiry Mr. Soenen stated the ex-vessel dosimetry data is not related to the testing of the capsule, but rather provides another method to determine the neutron environment and he confirmed one of the purposes of the ex-vessel monitoring is to qualify the

calculation of vessel fluence provided by data obtained from the withdrawn capsule. Dr. Budnitz remarked there is a scaling ratio between in-vessel and ex-vessel data which can serve as a check. Dr. Kadak replied when the Active Role Reactor Vessel Embrittlement Study was conducted there was a concern expressed about fluence and the stress on the vessel and the uncertainties were sometimes 10% or more greater and he stated he understood the function of the ex-core dosimetry data as being the effort to reduce those uncertainties which can directly affect the lifetime of a pressure vessel. Dr. Kadak observed and Mr. Soenen confirmed that relative to Unit 1 it appears the analysis submitted in 2009 for license renewal met two of the three criteria for credibility and Mr. Soenen reported that in 2011 when the analysis was redone DCPD was able to use data from the Palisades Nuclear Power Plant in Michigan, which has a reactor vessel comprised of the same weld material as DCPD Unit 1, and with that information from the Palisades plant, in combination with the information from the capsules which had been withdrawn at that time from Unit 1, DCPD as able to meet the criteria required by 10 CFR 50.61. Mr. Soenen confirmed for the Unit 2 reactor pressure vessel significantly different material was used in terms of raw material and base metal than was used for Unit 1.

Mr. Soenen stated data was used in the 2009-2011 license amendment application to demonstrate the acceptability of both Unit 1 and Unit 2 for 60 years of operation. As part of NRC's review of the license amendment request for extended operation to be submitted to the NRC by the end of 2023, PG&E will provide updated analyses for both units for the following:

- Radiation exposure projections for 60 years.
- Pressurized thermal shock (PTS)/adjusted reference temperature (ART) evaluation.
- Pressure-temperature (P-T) limit curve evaluation.
- Low temperature overpressure (LTOP) setpoint evaluation;
- Upper shelf energy (USE) evaluation.

Mr. Soenen reported the NRC will independently review these new analyses.

Mr. Soenen stated PG&E is planning to obtain NRC approval to withdrawal one surveillance capsule from Unit 1 for testing to support 60 years of operation and is expected to have a decision from the NRC in September 2023 on its withdrawal request. PG&E will be conducting new reactor vessel integrity analyses to support review of the new license amendment application for extended operation. The NRC will independently review the data and the reports to determine whether both DCPD reactor vessels are safe for 60 years of operation.

In response to Consultant McWhorter's inquiry as to an expected change to the reference temperature, given additional information, and whether the analysis is in the nature of a confirmatory fact analysis, Mr. Soenen stated he would need to review the matter and provide a subsequent response to the Committee. Dr. Budnitz replied if the current models and understanding are reliable the reference temperature measurement should be as predicted. In response to Dr. Lam's inquiry concerning the uncertainty in any forecast that a vessel is safe for 60 years of operation Mr. Soenen replied such forecasts are based upon effective full power years (EFPY) and therefore they are dependent upon operational history. Dr. Lam stated that in his opinion the measurement of fluence and the mechanical strength tests may have some uncertainties and he questioned a determination to extend the operating licenses for

an additional 20 years given those uncertainties. Dr. Budnitz replied there are analyses and models for the pressurized thermal shock phenomenon that have some uncertainty, however, he stated he was sure these uncertainties are larger than the measurement of uncertainties mentioned by Dr. Lam which he commented is likely very small. Dr. Budnitz observed 10 CFR 50.61 and 10 CFR 50.61a were developed in light of those uncertainties in analysis methodology to assure conservatism and the analysis hinges on the nil-ductility transition temperature, that is at the point the vessel material goes from being ductile to being brittle and that is not understood to the nearest 0.1 degree, but Dr. Budnitz commented the uncertainty of that measurement is bigger than the measurement of uncertainty for which one has the conservatism of the regulations and Dr. Budnitz confirmed Dr. Lam's comment that the scenario for thermal rupture has more uncertainty than that for the capsule analysis.

Dr. Kadak observed that the pressure vessel for the Yankee Row Nuclear Power Plant in Massachusetts was determined to have been at its limit and he commented one way to address pressurized thermal shock is to raise the temperature of the Emergency Core Cooling System inventory so if injection occurs the water is injected at a higher temperature which reduces the chance for vessel rupture. Consultant Wardell observed that with the Low Temperature Over Pressurization System (LTOP) installed at DCPP when the set-point is reached for a certain temperature above the critical temperature for vessel fracture, the LTOP System operates such that a pressurized relief valve opens and if there is an injection of cold water the pressure is relieved before the reactor vessel could experience a pressure event which would cause an embrittled fracture of the vessel.

Mr. Bruce Severance was recognized. Mr. Severance stated there are a number of important details that should be touched on from Mr. Soenen's presentation. First of all he commented that if you take a close look at the Capsule V report, PG&E discredits the results because it asserts the scatter deviation is not compliant with NUREG 1.99 criterion 3, and Mr. Severance stated PG&E misinterprets that to mean the scatter is only allowed to be one sigma, and the regulation clearly say twice that value. He stated in his view PG&E interpreted that criterion correctly and if one goes back to the 1992 Capsule Y report, it's very clear that PG&E states exactly the way the criteria reads. So, he reported this was questioned by the NRC in a series of correspondence. Mr. Severance stated he would later be providing a report to the DCISC that goes into a great deal of detail about that matter specifically. But he stated that repeatedly between 2003 and 2016 there is a solidifying position that the surveillance data does not meet criterion 3 of NUREG 1.99 and Mr. Severance stated that is simply not true. He commented that in order to get compliant numbers if you look at the Capsule V data the limiting component is weld material 27204 and it's shown to be non-conforming, and in the cover letter to that document dated 2003, he commented he believes it to be DCL 03053, PG&E admits that it projects Unit 1 will reach it's fracture toughness limits by 2021. Mr. Severance observed that date has now passed.

Mr. Severance observed that on the basis of discrediting their own capsule data, PG&E went forward by, instead of using position 2.2 and NUREG 1.99, to switch to position 1.2. He remarked PG&E had actually expressed its intent in the 2009 license renewal application to qualify under 10 CFR 50.61a. He stated that it is his belief PG&E did not meet that requirement because the criterion to qualify requires that the metallurgy meet the American Society Testing

and Materials (ASTM) minimum requirements that he does not believe PG&E met because of known metallurgical flaws that exist in Unit 1 that predispose it to embrittlement. So, Mr. Severance stated, PG&E could not qualify under 10 CFR 50.61a and had to go back to 10 CFR 50.61. He stated it is his belief that PG&E could not qualify under position 2.2, and had to go back to position 1.2. He remarked the only way PG&E could qualify under position 1.2 was to continue to take the position that the surveillance data, all of it, had to be invalidated by nonconformance with criterion 3. He observed PG&E had permission from the NRC, but he remarked the NRC continues to question all of this, but it's not clear to Mr. Severance from the correspondence that the NRC's questions were resolved or that it approved of this specific methodology in its final analysis. He observed PG&E proceeded with creating a completely new fluence calculation by invalidating the original Capsule D report, which is WCAP 15 958, and there is important data in that report. In Table 510 there is a comparison of Capsule S, Y and V and there is a comparison between predicted values and the measured values and Mr. Severance stated the correlation between those values is actually quite high and the uncertainty factor is defined by NUREG 1.190 as plus or minus 20.

Mr. Severance stated after invalidating their criterion, using Criterion 3, and after invalidating the capsule data PG&E created a completely new fluence calculation. He stated he has asked PG&E to provide a copy but has been told repeatedly the calculations are confidential and proprietary and that Westinghouse does not want to release the information. He stated he has asked repeatedly for the title of the paper so that he could confirm that the DCISC has received that fluence calculation. He reported on the basis of that fluence calculation in PG&E's annual update to the 2009 license renewal application submitted in 2011, document DCL 11 136, PG&E states it is rewriting the capsule data on the basis of the fluence calculation. He reported PG&E now cites the new fluence Westinghouse report by number, but not by name, as WCAP 17299 and WCAP 17315. He observed PG&E offered no justification to the NRC on how it is that they are able to use a fluence calculation to change physical evidence of what temperature these materials are reaching concerning the nil-ductility transient temperature. Mr. Severance stated he believes this to be highly questionable. Mr. Severance commented he has spoken with four different physicists who specialize in fluence calculations and they also think it questionable. He remarked if one looks at the record it appears that in another annual update document, PG&E reports to the NRC that it changed the fluence calculation and almost everything looks good under this new fluence calculation. This is, Mr. Severance observed, after PG&E revised the data. He remarked it is in the extended beltline area where PG&E was running into trouble on Unit 1 and Unit 2 for a 20-year relicensing and PG&E acknowledged a problem with the nozzle shell welds but made a statement in September 2015 in the same report that all requirements to preclude pressurized thermal shock were met, hence contradicting itself in the same document.

Mr. Severance reported his last correspondence and series of requests for additional information from the NRC addressed the questions he described including how the new fluence calculation are consistent with WCAP 14010 and a number of other regulations, and the response was a two sentence response that it is all consistent and conforming to regulations. Mr. Severance commented this response does not offer any specific justification for how the analysis allows PG&E to rewrite the material stress test data by crossing out the old numbers and entering new numbers based on new fluence calculations and PG&E includes a footnote referring to WCAP 17 315 and states that the justification for the new fluence calculations is "based on

credible surveillance data.” Mr. Severance reported he only recently learned that was based upon PG&E substituting data from a sister plant that had similar metallurgical properties. He commented PG&E is allowed to do that only if the original surveillance data doesn’t meet Criterion 3. But he observed it does meet Criterion 3 so PG&E has invalidated the data in order to adopt data from a sister plant that looks better.

Mr. Severance commented that the NRC questioned PG&E’s response and there’s no reply in the record in response to the NRC’s questions. He observed the NRC has acknowledged there are a few plants that use that same heat number weld material, 272 04, but it is necessary to use that data to prove to the NRC that the operating conditions are the same. Mr. Severance stated he has spoken with an NRC inspector who told him the Palisades Nuclear Power Plant is completely different from DCP.

Mr. Severance stated his request to the DCISC is for a serious questioning of the facts and the details he described. He stated the last correspondence from the NRC to PG&E, dated February of 2016 prior to PG&E’s withdrawal of its license application, clearly questions the validity of PG&E’s approach. He reported he has been told by PG&E staff that there is no subsequent correspondence and he is curious to see what PG&E’s approach is and how it will try to meet the fracture toughness requirements in its renewed license renewal application for extended operation to be filed later this year and he again expressed his view that there are things that are seriously questionable.

Mr. Severance stated he was not particularly an anti-nuclear person and his interests are more about climate change mitigation and climate policy. He reported he is a policy analyst and has worked in that capacity for some time. He remarked he believes both the anti-nuclear and the pro-nuclear people should have a more open perspective about how we approach reasonable solutions to that dilemma and he believes a reasonable solution that makes sense from a grid management standpoint is to take Unit 1 offline, as it was flawed on the day it was installed. He stated Westinghouse admitted that the metallurgy was wrong immediately after the unit was delivered and Westinghouse changed the metallurgy before Unit 2 was delivered and the surveillance data for Unit 2 does not resemble that for Unit 1 and Unit 2 looks much better on paper, so he questioned why not let Unit 2 run for ten years while Unit 1 is shut down immediately.

Mr. Severance remarked it seems to him to be fairly clear that there are a number of cross-checks in the calculations that reduce uncertainties and one of the key variables is, if you look at the Capsule B data, PG&E’s predictions were too conservative so the fluence calculation was off by perhaps ten to fifteen percent. He stated when PG&E re-wrote that data it was changed by more than two orders of magnitude and he stated he saw no justification for that change which took capsule data that was barely complying at 32 EFPY in the 2009 license renewal application and extrapolated it to extend to 43 EFPY and he stated he further questions how PG&E got from 43 EFPY to meeting 54 EFPY with margin to spare.

Mr. Severance stated another important detail is that when one looks at the revised data in 11 136, all the numbers change but only the limiting components change by fifteen to seventeen percent with everything else changing by one percent. He questioned how only the limiting

welds that are of the greatest concern are suddenly the ones where the values shift based on a new fluence calculation as a fluence calculation is global in nature and would shift all the numbers. Mr. Severance stated he finds this to be highly suspicious and he is very concerned about the details.

Mr. Severance remarked he appreciated the Committee's time and he has a number of questions for Mr. Soenen regarding pulling Capsule B and whether or not it is possible to retest Capsule V. He commented there was one capsule that tested at 43% beyond its predicted value or below the predicted value and he observed there was higher scatter in that capsule test than there was in the previous test. He question whether retesting could be done of Capsule V using the new methodology described by Dr. Peterson to obtain additional data that is more credible and that everyone can agree on, even though that was within the credibility criterion.

Mr. Severance stated his second question concerns removing Capsule B, as he stated what he has read is that only three of the capsules that are in Unit 1 had heat weld material 272 04, but he commented the reports do not indicate which capsules and he observed it is his belief this information needs to be known as to which capsules had that limiting material. He reported he knows it was in Capsules V and Y, but he has not read the Capsule S report. So he inquired does Capsule B have that material in it and if it does not perhaps it may not be pertinent because it lacks the limiting material. He remarked if one reviews the data it is weld heat number 272 04 that is of concern and as Mr. Severance understands it that material is used throughout the Unit 1 pressure vessel. Mr. Severance reported the critical weld is 3-442C as it is the weld that appears to have reached its embrittlement limits by 2021 and he reported there is no data to demonstrate that weld 3-442C did not already meet its fractured toughness limit two years ago.

In concluding his remarks Mr. Severance posed a final question as to why, as reports indicate that there are two capsules that were pulled some time ago from Unit 1 that are in storage, tests are not being run on those capsules as they were not tested. He reported his understanding is there were a total of eight capsules placed in Unit 1, of which five have been pulled and three of those five have been tested and Mr. Severance stated he questions the whereabouts of the other two capsules.

Dr. Lam, Chair, thanked Mr. Severance for what Dr. Lam described as his tremendous effort on this matter. Dr. Lam inquired of Mr. Jones whether PG&E would care to respond to Mr. Severance's remarks. Mr. Jones replied the issues described by Mr. Severance are foundational to PG&E's application for an extension of the operating licenses for DCPD and accordingly they will be addressed in PG&E's pending license renewal application which will be submitted by the end of 2023. Mr. Jones observed that as Mr. Severance cited data with which Mr. Jones is unfamiliar he was not prepared to publicly comment on Mr. Severance's remarks but would work with the DCISC to address them in due course. **In response to Dr. Lam's request concerning the factual inquiries raised by Mr. Severance regarding certain capsules not being tested Mr. Jones replied DCPD would provide a response to the Committee during its next fact-finding visit.** Dr. Budnitz expressed his view that this inquiry will review of whether or not nil-ductility temperature is approached with adequate margin in the scenarios of interest and he remarked the probabilities of the pressurized thermal shock phenomenon are low but they are not

zero. Dr. Budnitz advised Mr. Severance to direct the report he stated he would be providing to the Committee to the Office of the Committee's Legal Counsel.

The Chair thanked Mr. Soenen for an outstanding and informative presentation.

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

Dr. Lam reported that all matters on the Committee's agenda for this public meeting have now been addressed and he expressed the thanks of the Committee to Senior Director Tom Jones, to Mr. Garcia, and to the DCPD management team and all PGE presenters for their assistance and participation in this public meeting, to the members of the public who participated in person or by Zoom or watched the livestream broadcast, and to the AGP Video team for supporting this Zoom webinar and livestream internet format. Dr. Lam closed the meeting with the hope of seeing everyone again in September 2023.

XXXI ADJOURNMENT OF ONE HUNDRED AND FIFTH PUBLIC MEETING

There being no further business the one hundred and second public meeting of the Diablo Canyon Independent Safety Committee was then adjourned by its Chair, Dr. Peter Lam at 3:25 P.M. on June 29, 2023.

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**AGENDA TRANSMITTAL FORM**

MEETING DATE:	September 14, 2023
AGENDA ITEM:	XXV-C
AGENDA TITLE:	Consider the Engagement of Dr. Mark Kirk as a Technical Consultant on an <i>ad hoc</i> Basis to Perform Analysis of Unit 1 Pressure Vessel Integrity.

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

Staff Summary: The Second Restatement of the Charter for the Committee, Section II.D.(2), provides the Committee may contract for services, including the services of consultants and experts, to assist the Committee in its safety review.

The License Amendment Request PG&E is directed to file with the NRC to provide for extended operation of both reactors following the expiration of their current operating licenses from the NRC includes review of effect of the neutron fluence on the reactor vessels. Following the June 2023 public meeting the DCISC received written comments from Mr. Severance alleging discrepancies in reported fracture toughness tests results for Unit 1. Following receipt of those comments the Committee Members reviewed and approved a scope of services to govern the engagement of a consultant, on an *ad hoc* basis, to assist them in the review of Unit 1 pressure vessel integrity.

A resume and for Dr. Mark Kirk and an Agreement for his services as a consultant are provided.

RECOMMENDED COMMITTEE ACTION: Motion to approve the Agreement with Dr. Mark Kirk.

Key Skills & Competencies

Reactor pressure vessel (RPV) embrittlement & structural integrity
Probabilistic fracture mechanics (PFM)
Mechanical property model development and validation
Mechanical property testing
Regulatory implementation
Clear communication

Mark Kirk

Employment

Dates	Company Name & Location	Concluding Position Title
2018-date	Central Research Institute of Electric Power Industry (CRIEPI) <i>Yokosuka, Kanagawa, Japan</i>	Guest Research Fellow
2018-date	Phoenix Engineering Associates, Inc. (PEAI) <i>Unity, New Hampshire, USA</i>	Principal Engineer
1999-2018	Nuclear Regulatory Commission <i>Rockville Maryland</i>	Senior Materials Engineer
1997-1999	Westinghouse Electric Corporation <i>Pittsburgh, Pennsylvania, USA</i>	Senior Engineer
1992-1997	Edison Welding Institute <i>Columbus, Ohio, USA</i>	Energy & Chemical Industry Team Leader
1981-1992	David Taylor Research Center (U.S. Navy) <i>Annapolis, Maryland, USA</i>	Senior Project Engineer

Nuclear Power Skills and Experience

I began my work in nuclear power in 1997 with two years at the Westinghouse hot cells followed by nearly 20 years with the Nuclear Regulatory Commission (NRC). Since 2018 I have held an appointment as a Guest Research Fellow at the Central Research Institute of Electric Power Industry (CRIEPI) and I serve as a Principal Engineer at Phoenix Engineering Associates, Inc (PEAI).

At Westinghouse I participated in the initial deployment of industry plans for Master Curve implementation. Elements completed while at Westinghouse included development of ASME Code cases, and their technical basis, which allowed use of Master Curve to estimate the index temperature (RT_{Ts}) for the K_{Ic} and K_{IR} curves, and also development of the Kewaunee lead plant submittal.

At the NRC I continued to focus on RPV integrity issues, including the following:

- Led the government and industry team responsible for developing of technical basis for the alternate pressurized thermal shock rule (10 CFR 50.61a). Also worked as part of a team to develop guidance for application of 10 CFR 50.61a (Regulatory Guide 1.230).
- Led the team responsible for structural assessment and residual life prediction of the corroded head at the Davis-Besse nuclear power plant.
- Led and oversaw the contract that developed the PFM Code called FAVOR (Fracture Analysis of Vessels, Oak Ridge) and an on-line database of nuclear RPV surveillance data called REAP (Reactor Embrittlement Archive Project).
- Identified the need to re-assess the NRC's procedures to estimate RT_{NDT} for early-construction plant steels (Branch Technical Position 5.3).
- Led the NRC's on-going assessment of the continued adequacy of regulatory guidance on embrittlement prediction (Regulatory Guide 1.99).
- Addressed citizens' concerns of embrittlement and vessel failure risk at the Palisades nuclear plant via a webinar and a series of public meetings.

- Provided NRC support to several international partners in the aftermath of unusual findings during made during inspections (Doel and Tihange in Belgium from 2012-2015, Beznau in Switzerland from 2015-2017), in response to significant public interest (Kori in South Korea), and as part of educational or development missions (taught a PFM course for IAEA in China, gave invited speech at a PFM symposium in Japan).

On non-RPV topics I worked on assessment of external hazards (postulated pipeline explosions near nuclear plants) and worked as part of a team developing regulatory guidance on the use of PFM in licensing actions (Regulatory Guide 1.254).

At CRIEPI I am working on projects focused on RPV integrity issues, including the following:

- Development of embrittlement trend curves and ETC modeling procedures, including machine learning techniques such as k-nearest neighbor (kNN). Application of the kNN method to develop advanced methods for surveillance during long term operation is now being evaluated.
- Development of justification to eliminate the need for HAZ testing as part of RPV surveillance monitoring.
- Support of various other CRIEPI projects including efforts to gain acceptance for using mini compact tension specimens to determine T_0 and efforts to develop and gain acceptance of PFM techniques in Japan.
- Participating in the European Commission project ENTENTE, which concerns embrittlement modeling and database development.

At PEAI I am working on projects focused on RPV integrity issues, including the following:

- Development of an ASME Code case designated N-830 that allows the use of Master Curve and extended Master Curve models in ASME Code assessments.
- Development of an ASME Code case designated N-914 that provides a comprehensive methodology to account for neutron irradiation embrittlement in ASME Code assessments and includes parallel paths for both traditional (meaning Charpy and NDT-based) as well as Master Curve approaches.
- Removal of HAZ requirements for RPV beltline materials from the ASME Code.
- Assessed the impact of potential changes to US Regulatory Guide 1.99 on operating plants in the USA.
- Development of practical plant guidelines for addressing RPV integrity issues.
- Development of embrittlement prediction models applicable at the low reactor operating temperatures anticipated for small modular reactors (SMRs).

Education

Degree	Year Granted	University	Discipline
Ph.D.	1992	University of Illinois at Urbana-Champaign	Civil Engineering
M.S.	1989	University of Maryland at College Park	Mechanical Engineering
B.S.	1984	Virginia Polytechnic Institute	Engineering Science and Mechanics

Professional Organizations

American Society for Testing and Materials (ASTM)

I have been active in ASTM since the beginning of my career. My early activities focused on Committee E08 on Fatigue and Fracture where I contributed to the development of standards E1820 (J-R and J_{Ic} testing) and E1921 (Master Curve T_0 testing). Upon joining the nuclear industry my focus shifted to Subcommittee E10.02 on the Behavior and Use of Nuclear Structural Materials. Within E10.02 I led a five-year effort that produced the first consensus embrittlement trend curve (E900-15) applicable to all

western-grade light water reactor steels. I am currently responsible for coordinating the continued evaluation of the adequacy of the E900-15 predictive model as new data becomes available.

American Society of Mechanical Engineers (ASME)

I am also active in the ASME Working Group on Flaw Evaluation (WGFE) and in the Working Group on Operating Plant Criteria (WGOPC), which I have chaired since 2023. While with Westinghouse I supported efforts that produced the first Code Cases to use Master Curve (N-629, N-631). More recently I have worked as part of a team to develop a Code Case revision (N-830) and technical basis demonstrating the applicability of direct fracture toughness models for use in Section XI Appendices A, G, and K. In 2021 this revision to N-830 was adopted as part of the ASME Code. Since 2019 I have been developing a Code Case designated N-914 that provides a comprehensive methodology to account for neutron irradiation embrittlement in ASME Code assessments and includes parallel paths for both traditional (meaning Charpy and NDT-based) as well as Master Curve approaches. This Code Case is currently in the balloting process. On-going activities also focus on removal of HAZ analysis requirements from Section XI of the Code

Publications

I have authored or co-authored over 120 refereed journal articles, technical papers in conference proceedings, and technical reports, and have also served as editor for four ASTM Special Technical Publications. A full list of publications can be provided upon request; key publications relevant to my work in nuclear structural integrity includes the following:

- Lott, R.G., Kirk, M.T., and Kim, C.C., "Master Curve Strategies for RPV Assessment," Westinghouse Electric Corporation, WCAP-15075, November 1998.
- Application of Master Curve Fracture Toughness Methodology for Ferric Steels (PWRMRP-01): PWR Materials Reliability Project (PWRMRP); EPRI, Palo Alto, CA: 1999. TR-108390, Revision 1.
- Kirk, M.T., et al., "Technical Basis for Revision of the Pressurized Thermal Shock (PTS) Screening Limit in the PTS Rule (10 CFR 50.61)," NRC, NUREG-1806, August 2007, <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1806/v1/index.html>
- Kirk, M.T., and Dickson, T.L., "Recommended Screening Limits for Pressurized Thermal Shock (PTS)," NRC, NUREG-1874, March 2010, <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1874/index.html>
- Kirk, M., "Development of the Alternate Pressurized Thermal Shock Rule (10 CFR 50.61a) in the United States," *Nuclear Engineering and Technology*, Vol 45, No 3, June 2013.
- "Adjunct for ASTM E900-15: Technical Basis for the Equation used to Predict Radiation-Induced Transition Temperature Shift in Reactor Vessel Materials," ASTM Subcommittee E10.02 Work Package WK34875, ASTM International, September 2015, <https://www.astm.org/adj090015-ea.html>.
- Kirk, M., Hardies, R., and Gordon, M., "Historical Review of the Development of ASTM Standard Practices E185 and E2215 from the 1960s to 2015," International Review of Nuclear Reactor Pressure Vessel Surveillance Programs, ASTM STP1603, W. L. Server and M. Brumovsky, Eds., ASTM International, West Conshohocken, PA, 2018, pp. 9–53, <http://dx.doi.org/10.1520/STP160320170006>
- Kirk, M., "Summary of Work to Develop the Transition Temperature Shift Equation Used in ASTM Standard Guide E900-15," International Review of Nuclear Reactor Pressure Vessel Surveillance Programs, ASTM STP1603, W. L. Server and M. Brumovsky, Eds., ASTM International, West Conshohocken, PA, 2018, pp. 432–456, <http://dx.doi.org/10.1520/STP160320170009>
- *Technical Basis for ASME Code Case N-830, Revision 1 (MRP-418): Direct Use of Master Curve Fracture Toughness Curve for Pressure-Retaining Materials of Class 1 Vessels, Section XI*. EPRI, Palo Alto, CA: 2017. 3002010332.

- *Methods to Address the Effects of Irradiation Embrittlement in Section XI of the ASME Code (MRP-462): Estimation of an Irradiated Reference Temperature using either Traditional Charpy Approaches or Master Curve Data*. EPRI, Palo Alto, CA: 2021. 3002020911.
- *Materials Reliability Program: Assessment of the Need to Consider Heat Affected Zone (HAZ) Properties in RPV Integrity Assessments (MRP-475)*. EPRI, Palo Alto, CA: 2022. 3002023870.
- Yoshinori Hashimoto, Akiyoshi Nomoto, Mark Kirk, Kenji Nishida, "Development of new embrittlement trend curve based on Japanese surveillance and atom probe tomography data," *Journal of Nuclear Materials*, Volume 553, 2021, 153007, ISSN 0022-3115, <https://doi.org/10.1016/j.jnucmat.2021.153007>.
- M. Kirk, Y. Hashimoto, and A. Nomoto, "Application of a Machine Learning Approach Based on Nearest Neighbors to Extract Embrittlement Trends from RPV Surveillance Data," *Journal of Nuclear Materials* 568 (2022) 153886, <https://www.sciencedirect.com/science/article/abs/pii/S0022311522003725?via%3Dihub>.
- Diego Ferreño, Marta Serrano, Mark Kirk, and José A. Sainz-Aja. 2022. "Prediction of the Transition-Temperature Shift Using Machine Learning Algorithms and the Plotter Database" *Metals* 12, no. 2: 186. <https://doi.org/10.3390/met12020186>
- Ferreño, Diego, Mark Kirk, Marta Serrano, and José A. Sainz-Aja. 2022. "Assessment of the Generalization Ability of the ASTM E900-15 Embrittlement Trend Curve by Means of Monte Carlo Cross-Validation" *Metals* 12, no. 3: 481. <https://doi.org/10.3390/met12030481>
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- *Materials Reliability Program: Guidance on Timing for Technical Specification Revision Following Surveillance Capsule Testing (MRP-484)*, EPRI, Palo Alto, CA: 2023. 3002026457. *In publication*

A more complete list can be found on GOOGLE Scholar at this link:

<https://scholar.google.com/citations?user=tVIFcrsAAAAJ&hl=en>

AGREEMENT FOR CONSULTING SERVICES

THIS AGREEMENT is made and entered into on September 13, 2023, by and between the DIABLO CANYON INDEPENDENT SAFETY COMMITTEE (hereinafter referred to as the "Committee") and MARK KIRK, Ph.D. ("Consultant"), as follows:

Recitals

1. In December 1988 the California Public Commission ("CPUC") approved and adopted a settlement agreement between Pacific Gas & Electric Company ("PG&E"), the Division of Ratepayer Advocates of the CPUC, and the Attorney General of the State of California relating to Diablo Canyon Nuclear Power Plant ("DCPP"). The settlement agreement, among other things, established the three-member Committee to review PG&E's adherence to safety standards at Diablo Canyon, conduct site visits, review DCPP operations, and prepare reports and suggest any recommendations for safe operations. In its Decisions D.88-12-083, D.97-05-088, D.04-05-055 and D.07-01-028 the CPUC provided for continuing operations by the Committee in order that it might fulfill its responsibilities.

2. On September 2, 2022, Governor Newsom signed Senate Bill (SB)846 which allows for the potential extension of operations at Diablo Canyon beyond the current retirement date, up to five additional years, under specific conditions as provided by the legislation including approval by the U.S. Nuclear Regulatory Commission (NRC) extending the operating licenses for Diablo Canyon.

3. SB846 requires the CPUC to direct and authorize PG&E to take all actions by no later than December 31, 2023, that would be necessary to operate the powerplant beyond the current license expiration dates so as to preserve the option of extended operations until October 31, 2029 for Unit 1 and October 31, 2030 for Unit 2, conditioned on continued authorization from the NRC.

4. On October 31, 2022, Pacific Gas and Electric submitted a letter to the NRC entitled "Request to Resume Review of the Diablo Canyon Power Plant License Renewal Application or, Alternatively, for an Exemption from 10 CFR 2.109(b), Concerning a Timely Renewal Application." PG&E has informed the Committee it intends to apply to the NRC for a twenty-year license extension of the operating licenses for DCPP which are now scheduled to expires on November 2, 2024 for Unit 1 and August 26, 2025 for Unit 2.

5. On July 11, 2023, the Committee received a written report from Mr. G. Bruce Severance, a member of the public, entitled "Comment to the Diablo Canyon Independent Safety Committee Regarding Discrepancies in Reported Fracture Toughness Test Results for DCPP Unit 1" Mr. Severance on previous occasions during the Committee's public meetings delivered oral remarks concerning the Unit 1 Reactor Pressure Vessel and the potential for that pressure vessel to experience the phenomenon known as pressurized thermal shock.

6. The Committee now requires and wishes to engage the Consultant in the performance of consulting services in order to provide to the Committee: 1) the Consultant's review and comments on Mr. Severance's Report responding to Mr. Severance's concerns and to provide a written report to the DCISC; (2) the Consultant review of the current status of DCP's assessment of the status of embrittlement of the Unit 1 Pressure Vessel based on DCP's reports, NRC analysis, regulatory criteria and future plans for assuring adequate pressure vessel integrity of DCP Unit 1 and to provide a written report to the DCISC; and (3) a presentation to the DCISC and the public on the findings of both reports at the Committee's February 21-22, 2024 public meeting. These tasks are more fully described in **Exhibit "A"** (the "Scope of Services") attached hereto and by this reference made a part hereof.

7. Consultant is qualified to perform and wishes to provide those services requested by the Committee.

8 The Committee wishes to engage the services of Consultant for this *ad hoc* assignment and Consultant consents to provide such services upon the terms and conditions hereinafter set forth.

Terms and Conditions

In consideration of the mutual promises contained herein, the Committee and Consultant hereby agree to the following terms and conditions:

1. Scope of Services. Consultant shall provide to the Committee those services set forth in the Scope of Services, which is attached as Exhibit "A" to this agreement. Such services may be modified, from time to time, as required, by a written amendment to **Exhibit "A"** which shall be signed by both parties to this agreement.

2. Compensation. For the services to be provided by Consultant under this agreement, Consultant shall be compensated at the hourly rate of \$200.00 per hour, not to exceed \$34,000.00 without the written consent of the Committee's Chair. Time spent by Consultant for the services hereunder shall be recorded under generally accepted accounting practices and shall be itemized on any billings to the Committee. In addition to compensation for the Consultant's time above, the Committee shall also reimburse Consultant directly for all out-of-pocket expenses reasonably incurred by Consultant in connection with providing services to the Committee including, but not necessarily limited to, printing of any reports, photocopies, facsimile, postage, long-distance telephone and internet charges and for any travel specifically requested by the Committee and for lodging and subsistence (meals and incidental expenses) incurred during such travel. Time and expense reporting shall be in accordance with Committee Policy No. 6 "Consultant Guidelines" attached hereto as **Exhibit "B"** hereto.

3. Ownership of Work Product. Ownership of any reports, data, studies, surveys, charts, maps, figures, photographs, memoranda and any other documents which are developed, compiled or produced pursuant to this agreement, whether or not completed, shall be vested in the Committee. If the Consultant's working papers or deliverables include computer generated

statistical material, the Consultant shall provide the material to the Committee in a mutually agreed upon computer-readable format and media. Any evaluation, assessment or report by Consultant shall be made in accordance with the Consultant Guidelines, **Exhibit "B"** hereto.

4. Delegation of Work. Consultant's professional qualifications and experience constitute a principal consideration for the Committee in entering into this agreement, therefore Consultant may not delegate the services to be performed by Consultant or utilize any sub-consultant, person or firm having applicable expertise to assist Consultant in performing the work authorized by this agreement without the prior written consent of the Committee Chair which may be withheld in the Chair's sole discretion.

5. Independent Contractor. The parties agree that Consultant, any sub-consultants and agents shall be independent contractors with regard to the providing of services under this agreement, and that Consultant and its employees, sub-consultants or agents shall not be considered to be employees or agents of the Committee for any purpose. The Committee shall make no deductions for payroll taxes or Social Security from amounts due Consultant for services provided under this agreement.

6. Conflict of Interest. Consultant covenants that he does not have and shall not acquire any interest directly or indirectly which would conflict in any manner with the interests of the Committee or which would in any way hinder or affect Consultant's performance of services under this agreement. The Committee understands and acknowledges that Consultant may have in the past and is as of commencement of services under this agreement continuing to perform services unrelated to the Scope of Services herein for Central Research Institute of Electric Power Industry (Japan), and for Phoenix Engineering Associates, Inc.,(PEAI) an engineering and scientific consulting firm. Prior to his association with PEA, Consultant previously performed services unrelated to the Scope of Services herein for the Nuclear Regulatory Commission and Westinghouse Electric Corporation.

7. Liability Insurance. Consultant shall, at its sole cost and expense, at all times during which services are performed under this agreement, maintain in force automobile liability insurance covering all vehicles used during such performance of services. Such insurance policy or policies shall be maintained on the minimum basis of \$100,000.00 for damage to property and \$500,000.00 for bodily injury or death in any one accident.

8. Indemnification. Consultant agrees to defend, indemnify and hold harmless the Committee, its officers, agents and employees from and against all claims, demands, damages or costs arising from Consultant's negligence with respect to services performed pursuant to this agreement. The Committee agrees to defend, indemnify and hold harmless Consultant and its employees and agents from and against all claims, demands, damages or costs arising from the Committee's negligence with respect to its duties pursuant to this agreement. .

9. Workers' Compensation Insurance. Consultant shall, at its sole cost and expense, at all times during the performance of services under this agreement, maintain in force and effect workers' compensation insurance on any employee of Consultant working pursuant to this agreement in an amount not less than the statutory required minimum.

10. Compliance with Laws. Consultant and any employees and agents shall comply with all applicable state, federal and local laws and safety regulations while performing services pursuant to this agreement.

11. Termination or Suspension. The Committee may terminate or suspend this agreement at any time and for any reason. Should the Committee elect to terminate or suspend this agreement, it shall be obligated to Consultant for any charges for services rendered by Consultant and properly substantiated by Consultant up to the date of termination or suspension.

Consultant may terminate this agreement upon giving Committee thirty (30) days' written notice in advance thereof. Should Consultant elect to terminate this agreement, Consultant shall give Committee all data, memoranda, reports, and other documents prepared in performance of this agreement.

12. Assignment. This agreement may not be assigned or otherwise transferred by Consultant without the prior written consent of the Committee.

13. Draft Documents Confidential. Consultant agrees that until final approval by the Committee all data, memoranda, reports and other documents are confidential drafts and will not be released to third parties without the prior written consent of the Committee Chair.

14. Notice. Unless otherwise mutually agreed upon in writing by the parties, all notifications, notices, demands, requests and other communications herein provided for or made pursuant hereto shall be in writing and shall be sent by (i) registered or certified mail, return receipt requested, and the giving of such communication shall be deemed complete on the third (3rd) Business Day after the same is deposited in a United States Post Office with postage charges prepaid, or (ii) reputable overnight delivery service, and the giving of such communication shall be deemed complete on the immediately succeeding Business Day after the same is deposited with such delivery service.

If to Consultant, addressed to the address set forth below, or at such other address in the continental United States as Consultant may furnish to the Committee in writing:

Dr. Mark Kirk

Telephone: _____

If to the Committee, addressed to the Committee, at the address set forth below, or at such other address in the continental United States as the Committee may furnish to Consultant in writing:

Diablo Canyon Independent Safety Committee
c/o Office of the Legal Counsel
SW 4th & Mission, Suite 2, P.O. Box 4523,
Carmel-by-the-Sea, CA 93921-4523
Telephone: (831) 647-1044; (800) 439-4688 (In CA only).

15. Attorney's Fees. In the event of any controversy, claim or dispute relating to this agreement, or the breach thereof, the prevailing party shall be entitled to recover from the other party reasonable expenses, attorney's fees and costs.

16. Amendment or Modification. This agreement is not subject to amendment, change or modification except by a writing signed by Consultant and the authorized representative of the Committee.

17. Counterparts. This agreement may be executed in two counterparts, each of which shall be deemed an original but both of which shall constitute one and the same instrument.

18. Effective Date. This agreement is effective on the date first shown above and shall continue until the scope of services provided for herein are completed unless terminated earlier as provided herein.

DIABLO CANYON INDEPENDENT
SAFETY COMMITTEE

MARK KIRK

By _____
Peter Lam, Chair
Date: September 13, 2023

Dr. Mark Kirk
Date: September __, 2023

EXHIBIT "A"

SCOPE OF SERVICES

Unit 1 Reactor Vessel Embrittlement Study

Work to be performed for the Diablo Canyon Independent Safety Committee ("DCISC") in accordance with the Second Restatement of the Charter for the DCISC approved by the California Public Utilities Commission.

1. Provide support to the Committee from time to time as requested by a Committee Member. This includes, but is not necessarily limited to, participating either remotely or in person in Committee public meetings and fact-finding visits to Diablo Canyon Power Plant or other Pacific Gas & Electric Company facilities; reviewing DCISC, Nuclear Regulatory Commission, Institute of Nuclear Power Operations, and PG&E's documents, as well as any other relevant documents, as a basis for recommending potential issues or concerns that the Committee may wish to pursue; identifying additional supporting specialists; developing background material on specific issues; and providing written material in support of Committee reports.

2. Review the status of Unit 1's reactor pressure vessel embrittlement which has come under question. Mr. Bruce Severance, a member of the public, has raised concerns in a document provided to the DCISC and to Diablo Canyon staff by the DCISC which alleges the Unit 1's reactor vessel has exceeded its lifetime based on his review of licensing documents. In its recent Safety Evaluation Report issued in 2011 as part of Diablo Canyon's original license renewal application, the Nuclear Regulatory Commission accepted Diablo Canyon's assessment of Unit 1's reactor vessel indicating that it was acceptable for the additional 20 year license extension under its aging management program. This issue will be revisited with NRC upon a re-filing of the License Renewal application in 2024.

3. The purpose of this study for the Diablo Canyon Independent Safety Committee is to provide assessments and conduct activities in accordance with the following:

- Review, comment and respond in a written report to the DCISC to the documents entitled: (1) "Comment to the Diablo Canyon Independent Safety Committee Regarding Discrepancies in Reported Fracture Toughness Test Results for DCP Unit 1 A Joint Public Comment by Bruce Severance, Regulatory Compliance Engineer, Member of the Diablo Canyon Decommissioning Engagement Panel (Commenting Individually) and Dr. Digby Macdonald," and (2) Supplemental Opening Testimony of Dr. Digby Macdonald on Behalf of San Luis Obispo Mothers for Peace on Phase 1 Track 2 Issues" on file in CPUC Docket No.: R.23-01-007.

- Review the current status of Diablo Canyon's assessment of the status of embrittlement of Unit 1 based on Diablo Canyon's reports, selected relevant NRC documents and analyses, regulatory criteria, and future plans for assuring adequate pressure vessel integrity and provide a written report to the DCISC.
- Prepare a presentation to the public of the findings on both reports at the February 21-22, 2024 meeting.
- The Consultant's reports (2) will be due by the end of 2023 calendar year.
- During this project the Consultant will necessarily require the timely cooperation of Committee and DCPD staff in providing relevant information to complete these reports.
- Consultant's interface with DCPD will be arranged through the Committee's current technical consultant staff.

DIABLO CANYON INDEPENDENT
SAFETY COMMITTEE

CONSULTANT

By _____
Committee Chair

Dr. Mark Kirk

EXHIBIT B

Diablo Canyon ISC
Committee Policy No. 6

CONSULTANT GUIDELINES

The Diablo Canyon Independent Safety Committee (DCISC) may contract with consultants to perform various tasks in its review of the safety of operations of the Diablo Canyon Power Plant. The following are guidelines for consultant agreements and activities:

1) Prior to charges being made for services rendered, a consultant shall sign a written agreement that has been signed by the Chair or a designated DCISC member and approved by the affirmative vote of at least two-thirds of the members of the DCISC. A proposed standard form of Agreement is attached hereto.

2) Consultant work shall not commence without a specific scope of services description which shall be signed by the Chair or a designated DCISC member and approved by the affirmative vote of at least two-thirds of the members of the DCISC or attached as part of the signed agreement referred to in paragraph 1. A sample specific scope of services is attached.

3) The signed original of the Agreement and Specific Scope of Services shall be sent by the Chair or designated DCISC Member to the DCISC Legal Counsel for retention, with copies to the other DCISC members and the contracting consultant.

4) Any consultant recommendations in reports shall be made as recommendations to the DCISC which will review and decide on disposition. Consultant reports shall be marked and considered as drafts until approved by the affirmative vote of at least two-thirds of the members of the DCISC. The Chair or designated DCISC member shall review and approve for presentation draft reports prior to the Consultant's presentation at a DCISC public meeting.

Copies of draft reports shall be distributed to all DCISC members and the DCISC Legal Counsel prior to the Consultant's report at a public meeting and subsequent final approval by the affirmative vote of at least two-thirds of the members of the DCISC.

5) Consultant charges for travel expenses shall be for actual expenditures with receipts for charges of \$25.00 or more and for all lodging. The attached form is to be used for submittal for reimbursements.

6) Time reporting shall be as follows:

- a) Report time to nearest 0.25 hours.
- b) A "standard day" is defined as the normal eight-hour working day.
- c) All DCISC actual work-time and travel-time during the "standard day" is charged.
- d) All time on-assignment or on-location during the "standard day" is charged.
- e) DCISC actual work-time outside the "standard day" is charged at standard rates.
- f) DCISC travel-time outside the "standard day" is not charged unless it includes DCISC work.

7) Contracts entered into with consultants or experts for a particular project shall include an estimated total cost for such work, which amount shall not be exceeded without prior authorization by the Committee Chair and ratification by the affirmative vote of at least two-thirds of the members at a regular Committee meeting.

[Adopted June 1994; Revised October 2003]

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**AGENDA TRANSMITTAL FORM**

MEETING DATE:	September 14, 2023
AGENDA ITEM:	XXVII-A
AGENDA TITLE:	Financial Matters including Consultant Compensation, Administrative and Regulatory Matters and the Status of Governmental Interactions, Response to Senate Bill 846 and R.23-01-007 and D.23-08-004 and Other Matters including Future Funding for the Committee's Operations.

CONSENT [] ACTION [X] INFORMATION [X]

Staff Summary: On August 31, 2022, in the California Assembly, and on September 1, 2022, in the California Senate, the California Legislature passed and on September 2, 2022, Governor Newsom signed urgency legislation to invalidate the Joint Proposal which would have retired DCPD Unit 1 in 2024 and Unit 2 in 2025 in order to preserve the option of continued operation of DCPD beyond 2025 (California Senate Bill SB 846).

The legislation amends sections of the California Government Code, the Public Resources Code, the Public Utilities Code and the Water Code to require the Public Utilities Commission to consider setting new retirement dates for DCPD, conditioned upon the NRC extending the plant's operating licenses.

Public Utilities Code §§712.1 and 712.8, added by SB846, require the Committee to undertake certain additional reviews and duties including concerning the transmittal of its findings and recommendations.

It is anticipated the Members, Technical Consultants and Legal Counsel will hold a discussion and receive information including financial matters and consultant compensation, administrative and regulatory matters including the Committee's response to the passage of SB846 and the CPIC Order Instituting Rulemaking [R.23-01-007] and a recent Decision [D.23-08-004] addressing future funding for the Committee's continued operations, and recent interaction with governmental agencies.

RECOMMENDED COMMITTEE ACTION: Discussion and provide direction as appropriate.

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**AGENDA TRANSMITTAL FORM**

MEETING DATE:	September 14, 2023
AGENDA ITEM:	XXVII-B
AGENDA TITLE:	Consider Approval of a Proposed Third Restatement of the Committee's Charter.

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

Staff Summary: On August 31, 2022, in the California Assembly, and on September 1, 2022, in the California Senate, the California Legislature passed and on September 2, 2022, Governor Newsom signed urgency legislation to invalidate the Joint Proposal which would have retired DCPD Unit 1 in 2024 and Unit 2 in 2025 in order to preserve the option of continued operation of DCPD beyond 2025 (California Senate Bill SB 846). The legislation amends sections of the California Government Code, the Public Resources Code, the Public Utilities Code and the Water Code to require the Public Utilities Commission to consider setting new retirement dates for DCPD, conditioned upon the NRC extending the plant's operating licenses.

Public Utilities Code §712.1, added by SB846, requires the Committee to undertake certain additional reviews and duties including concerning the transmittal of its findings and recommendations.

CPUC Decision 23-08-004 directed that the DCISC's Charter be amended to reflect the changes adopted in the Decision to raise compensation for DCISC members from \$260 per hour to \$270 per hour and to address the use of the Diablo Canyon Transition and Relicensing Memorandum Account to track the additional costs incurred by the DCISC related to the potential extension of operations for work activities the DCISC expects to incur in the period 2023, 2024 and 2025.

It is anticipated the Members, Technical Consultants and Legal Counsel will hold a discussion and receive information and consider approving a proposed Third Restatement of the Committee's Charter which would then be provided to PG&E for consideration for submittal to the CPUC Energy Division for approval through a Tier 2 Advice Letter.

RECOMMENDED COMMITTEE ACTION: Discussion and approval of proposed Third Restatement of the Charter for the Diablo Canyon Independent Safety Committee and provide direction as appropriate.

**~~THIRD~~SECOND RESTATEMENT OF THE CHARTER FOR THE
DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**

I. Formation and Membership of the Committee.

A. Composition and Responsibility of the Committee.

(1) An Independent Safety Committee (the "Committee") shall be established consisting of three members, one each appointed by the Governor of the State of California, the Attorney General and the Chair of the California Energy Commission ("CEC"), respectively, serving staggered three-year terms. The Committee shall review Diablo Canyon Nuclear Power Plant ("Diablo Canyon") operations for the purpose of assessing the safety of operations and suggesting any recommendations for safe operation and shall terminate its review in accordance with Section III. Safety of operations shall mean activities in connection with generation of electricity by Diablo Canyon and/or the operation of the Diablo Canyon Spent Fuel Pools and related support systems and the Diablo Canyon Independent Spent Fuel Storage Installation ("ISFSI"), including the transport of nuclear fuel to and from Diablo Canyon's Spent Fuel Pools and the storage of nuclear fuel within the Spent Fuel Pools and the transport and storage of nuclear fuel to and within the ISFSI or elsewhere at Diablo Canyon. Neither the Committee nor its members shall have any responsibility or authority for plant operations, and they shall have no authority to direct Pacific Gas & Electric Company ("PG&E") personnel. The Committee shall conform in all respects to applicable federal laws, regulations and Nuclear Regulatory Commission ("NRC") policies.

B. Appointment of Committee Members.

(1) Candidates for Committee membership shall be selected from those persons responding to an open request for applications. The California Public Utilities Commission ("CPUC") shall provide for public comment on qualified applicants by posting on the CPUC's homepage (www.cpuc.ca.gov) a link to information concerning the name of each qualified applicant, along with a summary of his or her qualifications and a statement identifying any potential conflict of interest, an Applicant's Application for Nomination shall address those items enumerated in Section I.C. The President of the CPUC shall provide to the appropriate appointing authority a list of not more than three qualified candidates as alternatives to the reappointment of that authority's designated Committee member whose term is expiring. The incumbent member, if he or she consents, shall be deemed an additional candidate. Each subsequent appointment shall be for a three-year term.

(2) Should a Committee member not complete the appointed term, the authority who appointed that member shall appoint a replacement to serve for the unexpired portion of the term from the most recent list of candidates selected by the President of the CPUC in accordance with the appointment procedures set forth herein.

(3) The President of the CPUC shall review each application to assess the applicant's qualifications, experience and background, including any conflict of interest and comment received from the public, and shall propose as candidates only persons with knowledge, background and experience in the field of nuclear power facilities and nuclear safety issues who demonstrate they have no conflict of interest as set forth in Section I.C. The CPUC Energy Division shall prepare, circulate for public comment and place on the CPUC's public

agenda a resolution ratifying the President's selection of not more than three qualified candidates and an incumbent member.

C. Conflict of Interest.

(1) No person shall serve as a member of the Committee if he or she has received \$500.00 or more in income (as defined in Government Code Section 82030, but excluding dividends or interest from stocks or bonds) or gifts (as defined in Government Code 82028) from PG&E or an affiliated company within twelve months prior to the start of his or her original term, or if he or she has, at the time of the commencement of service, an investment (as defined in Government Code Section 82034) worth \$2,000.00 or more in PG&E or any affiliated company. In addition, no member of the Committee shall make, participate in making, or in any way attempt to use his or her official position to influence any action of the Committee in which he or she knows or has reason to know that he or she has a financial interest. The provisions of the Political Reform Act, including implementing regulations and rulings, as applied to Government Code Section 87100 shall be used to determine whether a member has a conflict of interest.

(2) Members of the Committee shall file a Statement of Economic Interest at the same time and in the same manner as designated employees of the CPUC must file under the Political Reform Act and CPUC Conflict of Interest Code. Members of the Committee shall disclose any investment in or income from the following:

- (a) An electric corporation subject to the jurisdiction of the CPUC, including any parent, subsidiary or affiliated business entity;

- (b) A business entity that regularly supplies natural gas, nuclear fuel, fuel oil or other forms of energy to an electric corporation subject to CPUC jurisdiction;
- (c) Any business entity that has done more than \$10 million of work on the design, construction, engineering or operation of the Diablo Canyon power plant.

Copies of the members' Statements shall be available for public inspection.

(3) No person shall serve as a member of the Committee if he or she has a prior history of supporting or opposing PG&E as a witness or intervenor in nuclear licensing or CPUC proceedings associated with Diablo Canyon.

D. Commencement of Term.

(1) The list of candidates shall be submitted to the appointing authorities on or before January 1 of each year. Appointments shall be made by March 1 of each year. Each Safety Committee term shall commence on July 1 of the year of appointment. If any such deadline is missed, the relevant action shall be taken or shall occur at the earliest possible date thereafter.

(2) In accordance with Government Code Section 1302, a Committee member shall continue to discharge his or her duties until reappointed or replaced.

E. Exercise of Powers.

(1) The Chair of the CEC and the President of the CPUC shall exercise their powers after consultation with their respective commissions in public session.

II. Scope of Committee Operations.

A. Receipt of Reports and Records.

(1) The Committee shall have the right to receive on a regular basis such of the following operating reports and records of Diablo Canyon as the Committee may request. Such reports and records shall be provided quarterly as available:

- (a) Automatic scrams while critical;
- (b) Significant events;
- (c) Safety system actuations;
- (d) Forced outage rate;
- (e) Collective radiation exposure;
- (f) Industrial safety loss time accident rate;
- (g) NRC public reports and evaluations of Diablo Canyon; and
- (h) Such other reports pertinent to safety as may be produced in the course of operations and may be requested by the Committee.

B. Annual Site Inspection.

(1) The Committee shall have the right to conduct examinations of the Diablo Canyon site. If the Committee requires additional information regarding a specific issue the Committee may request such information and, upon proper notice to PG&E, conduct a site visit to investigate that issue.

(2) PG&E shall cooperate with the Committee in arranging times for the Committee's visits to the site and shall be responsible for ensuring the cooperation of PG&E employees and contractors in providing information and access to the plant and facilities of PG&E and to pertinent records. Any such site visit must comply with all applicable federal laws,

regulations and NRC policies, including laws, regulations and policies governing screening of persons who may participate in site inspections.

C. Committee Reports and Recommendations.

(1) 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 shall be made part of the report which shall then be submitted to the CPUC, the Governor, the Attorney General and the CEC. The CPUC, the Governor, the Attorney General and the CEC, or any one of them, may file a request pursuant to 10 CFR Sec. 2.206 for the Director of Nuclear Reactor Regulation to institute a proceeding to require PG&E to adopt any safety recommendation made by the Committee. PG&E is free to oppose any such recommendation before the NRC.

D. Confidentiality of Information

(1) In the course of review of Diablo Canyon operations, Committee members may receive confidential information. Federal law restricts disclosure of certain information; accordingly, Committee members shall seek approval of the NRC for access to such information and shall comply with all laws, regulations and policies applicable to access to, possession and use of such information. The Committee is subject to the California Public Records Act (Government Code Section 6250 et seq.). To the extent that PG&E believes that information sought by the Committee, not otherwise regulated by the Atomic Energy Act, is confidential under the California Public Records Act and/or constitutes confidential business information, the disclosure of which might injure PG&E in its business, PG&E shall so designate that information

and the basis on which PG&E believes the information is exempt from disclosure. If the Committee receives a demand for disclosure of information so designated by PG&E the Committee shall notify PG&E and lawfully object and defend any rights the Committee may have to non-disclosure of the confidential information.. A dispute between the Committee and PG&E on a claim of confidentiality shall promptly be submitted to binding arbitration. Committee members and all persons who receive confidential information in the course of or as a result of the Committee's activities shall have a duty to maintain the confidentiality of that information and, in addition to complying with the requirements of federal and state law and regulations, shall execute a confidentiality agreement prior to receiving any confidential information.

(2) The Committee may contract for services, including the services of consultants and experts, to assist the Committee in its safety review. Disclosure of PG&E information or records to any such person shall be governed by the provisions of this agreement in the same manner as disclosure to members of the Committee. No disclosure of confidential information shall be made to any person who does not have a need to receive the information in order to assist the Committee in its safety review. Nor shall such disclosure be made to any person known to have a conflict of interest.

(3) This provision shall not preclude the Committee from submitting relevant information to the NRC or to the CPUC, the Governor, the Attorney General, or the CEC to the extent permitted by federal law. Prior to the disclosure of any confidential information, however, the Committee shall give PG&E notice of its intention to do so and an opportunity to

designate specific documents or information which should not be publicly disclosed and to seek to prevent public disclosure by the entity to which disclosure is made.

E. Compensation of the Committee

(1) Members of the Committee shall be compensated in an amount established by the CPUC commensurate with fees PG&E pays for similar services. Each member shall receive a \$10,~~80~~000.00 annual retainer and, in the event a member performs more than 40 hours of work on Committee business between July 1 and the following June 30, such hours shall be compensated at \$2~~75~~0.00 per hour. PG&E shall file annually, on April 1, a report updating commensurate fees for comparable services and concurrent with that report, ~~an~~ Tier 2 advice letter with proposed revisions to the compensation levels. Prior to submitting its annual DCISC compensation advice letter, PG&E shall provide the Committee an opportunity to comment on PG&E's proposed member compensation levels, and PG&E shall include a summary of any feedback provided by the Committee as part of its advice letter filing.

(2) The fees and expenses of the Committee and its contractors that are not directly associated with the Committee's evaluation of potential extended operations at Diablo Canyon- shall continue to be paid by PG&E and PG&E shall be entitled to recover those amounts through its cost-of-service rates. An authorized Committee budget not exceeding \$673,077.00 for calendar year 1996, with a 1.5% annual escalation for every year thereafter, has been established, which includes all costs, member compensation, travel expenses, contracting fees, staff salaries and audit expenses. Funds provided for the fees and expenses of the Committee and its contractors not directly associated with the Committee's evaluation of potential extended operations at Diablo Canyon which remain unspent and uncommitted on

December 31 of a calendar year will be returned to PG&E to be applied as a credit to its cost-of-service rates. During calendar years 2023 through 2025 the Committee shall estimate and record all work related to the potential extension of operations at Diablo Canyon to the Diablo Canyon Transition and Relicensing Memorandum Account (DCTRMA) so the Committee's costs related to the potential extension of operations at Diablo Canyon can be accurately tracked in the DCTRMA. The Committee shall send an invoice to PG&E as soon as practicable with an estimate of 2023 Committee operational costs associated with the Committee's assessment of the potential extension of operations at Diablo Canyon including any anticipated shortfall for the year and send a similar cost estimate and invoice to PG&E for associated 2024 and 2025 costs. Any unspent and uncommitted funds from the DCTRMA will be returned to PG&E during the fourth quarter of 2025. The compensation of Committee members, which is included in the budget, is tied to the fees paid by PG&E for similar services. Therefore, the rate of change in the budget could differ from the rate of change in the compensation paid to committee members.

(3) The Committee and its contractors shall keep accurate books, records and accounts, which shall be open to inspection and audit by the CPUC or its designee and by PG&E. Such audit shall include review of the reasonableness of fees and expenses and review for conflict of interest.

F. Outreach

(1) The Committee shall undertake public outreach in the affected community, including, but not limited to, assuring that the Committee meetings are conducted in accordance with the Bagley–Keene Open Meeting Act and videotaped and broadcast. To the extent that public outreach results in an increase in costs associated with the Committee, beyond any annual

authorized funding level, the Committee's budget shall be increased by the same amount and PG&E shall be entitled to recover that amount through a CPUC-determined increment to PG&E's cost-of-service rates.

(2) The Committee shall undertake outreach concerning matters within its purview with other review committees established by the CPUC (e.g., the Independent Peer Review Panel for Seismic Studies at Diablo Canyon Power Plant) and by PG&E (e.g., the Diablo Canyon Decommissioning Engagement Panel) including, but not limited to, providing advanced copies of its public meeting agendas and, upon request, copies of its non-confidential documents and reports.

III. Termination of Committee's Review of Diablo Canyon Operations.

(1) The Committee will terminate its review of safety of operation upon further order of the CPUC or upon the date of successful completion of the transfer of all nuclear fuel from both Diablo Canyon Spent Fuel Pools to the ISFSI. The Committee will then prepare and submit a final annual or an interim report and terminate its activities within twelve months after such order or date