

An aerial photograph of the Diablo Canyon nuclear power plant. The plant's containment domes and various buildings are visible on a coastal plain. To the left, the ocean features rocky shorelines and waves crashing against a breakwater. In the background, rolling green hills and mountains rise under a clear sky. The text "Diablo Canyon", "Independent", and "Safety Committee" is overlaid in a large, bold, dark blue font.

Diablo Canyon
Independent
Safety Committee

Public Meeting
February 19 and 20, 2025

Avila Lighthouse Suites

Diablo Canyon Power Plant: State of the Plant Update

February 19, 2025



Sam Williams, Director of Nuclear Training and Accreditation

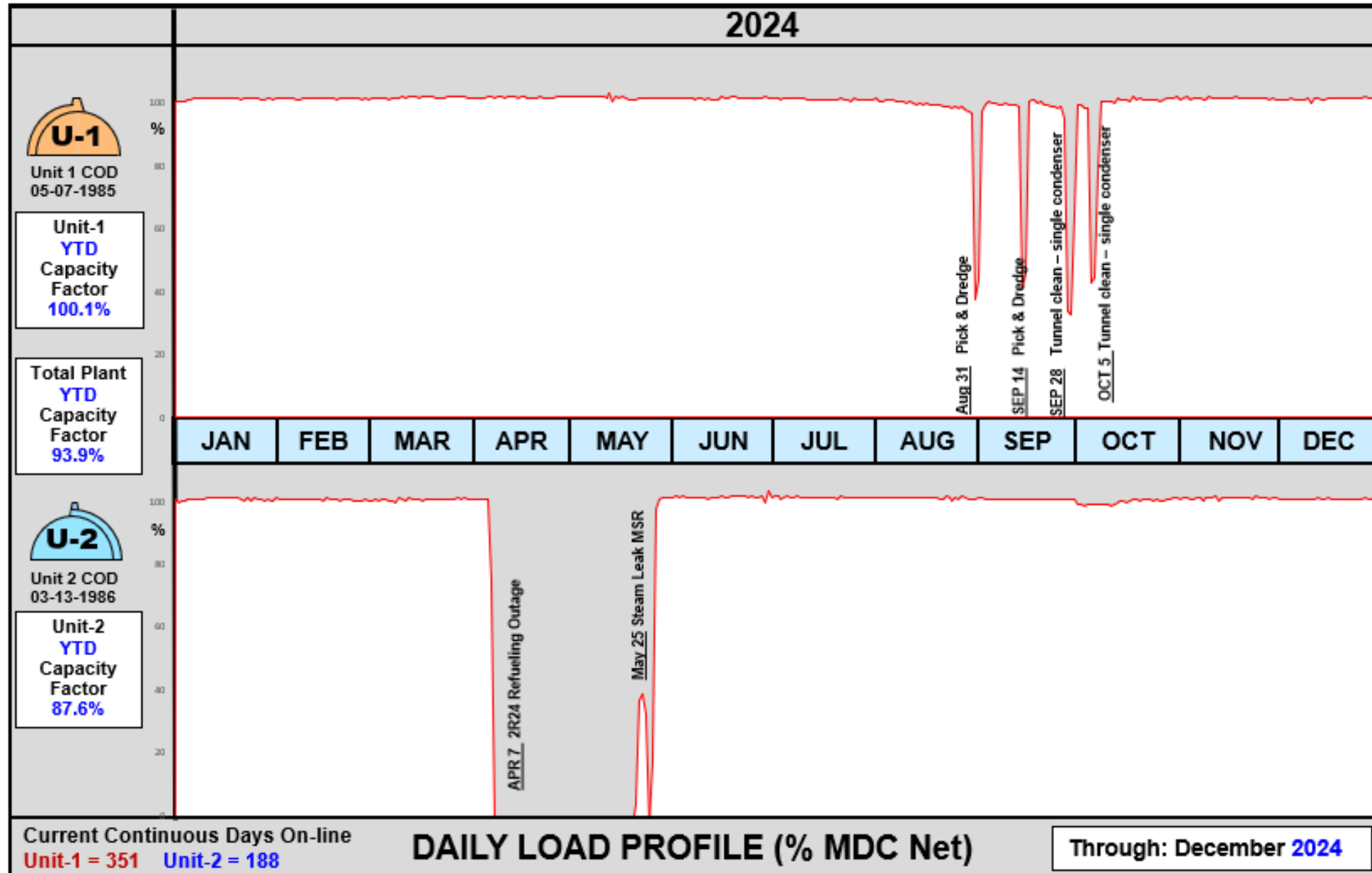
Plant Operation

- Units 1 & 2 are safely operating at 100% power
- All Nuclear Regulatory Commission (NRC) Performance Indicators (PIs) are Green



Daily Load Profile: Calendar Year 2024

Daily Capacity Factor Power History Curves



Key Events - Recently Completed Activities

- **October 7-11, 2024: NRC Independent Spent Fuel Storage Installation (ISFSI) Security Inspection**
- **2024 -2025: Completed two planned Diesel Emergency Generator (DEG) Major Maintenance Outage Windows (MOWs) with remaining four scheduled in 2025**
- **October 2024: Completed used fuel storage loading campaign**
- **December 9-12, 2024: NRC Region 4 Branch Chief visit**
- **January 28-29, 2025: Unit 1 Refueling Outage (1R25) Readiness Review**
- **February 10-14, 2025: NRC Force-on-Force Physical Security Inspection and Exercise**

Key Events- Upcoming Station Activities:

- **February 24- 28, 2025 NRC Unit 2 License Renewal Inspection**
- **Spring 2025: Unit 2 Tunnel Cleaning MOW**
- **March 17-20, 2025: Nuclear Safety Oversight Committee (NSOC) Visit**
- **Spring 2025: Unit 1 Refueling Outage (1R25)**
- **April 28-May 2, 2025: NRC Radiation Protection Inspection**
- **April 28-May 9, 2025: NRC Inservice Inspection**

Intake Channel Dredging - June 25 to July 7, 2024

- Design dredge depth was -36 feet
- 26,664 yards of sand and sediment were removed

Recent Storm Wave Events and Results



Date	Wave Height (ft)	Energy	Result
1-5-23	20	315,600	Proactive ramp both units to 25% power and Pick and Dredge all Condenser halves.
12-30-23	17	228,021	Proactive ramp both units to 50% power. Secured 1 CWP each unit. Start and Stop CWP for backwash to improve Condenser D/P.
12-23-24	20	306,489	Both units remained at 100% Power.

Unit 1 Control Rod Drop Update

- **No operational or safety impacts**
- **Rod recovery (restoration) completed following maintenance assessment, testing and industry experience review**
- **Evaluation determined that deposit build up was causal**
- **Subsequent control rod testing verified no equipment deficiencies**

Leadership Changes

Promotions:

- **Allen Wilson – Vice President, Engineering DCPD**
- **Blair Jones - Senior Director of Strategy, Performance Improvement, and Organizational Effectiveness**

Leadership Changes Effective March 1, 2025:

- **Shawn Kirven - Security Functional Area Manager for the STARS Alliance**
- **Sam Williams – Director, Security and Emergency Services**
- **Matt Birkel – Director, Nuclear Training and Accreditation**



Diablo Canyon Power Plant: State of the Plant Update

Questions?

Sam Williams
Diablo Canyon Power Plant

Diablo Canyon Outage Updates

Erik Werner
Outage Director
February 19, 2025



Summary

- Scope, Schedule, and Status of Preparations for Refueling Outage 1R25
- Implementation of Major Projects
- Inspections (Including Capsule B Removal)

Summary

- Diablo Canyon Unit 1 twenty-fifth refueling outage (1R25) will take place during the Spring of 2025
- The 40-day planned outage will encompass scope from planned maintenance and project work, refueling activities and license renewal required inspections
- Approximately 1,000 temporary additional workers will support the safe completion of 1R25



1R25 Outage Goals

Category	Goal
Safety	Zero Recordable Injuries Zero Nuclear Safety Events – No loss of decay heat removal Zero SIF Actuals / Zero SIF Potentials
Human Performance	Zero HU Event Site Clock Resets Zero FME Events
Outage Duration	≤ 40 Days
Dose Goal	As Low As Reasonably Achievable ≤ 31.325 Rem
Reliability	Power Ascension ≤ 5 days Reliability ≥ 90 days max capable power

1R25 Key Scope

Primary

- Including large motor overhauls and reactor refueling

Secondary

- Including high pressure turbine replacement and valve inspections and maintenance

Electrical

- Including 4kV/480V Bus H inspections and maintenance

License Renewal

- Including reactor vessel specimen Capsule Bravo removal

Projects

- Including reactor vessel inspections and phase one of fuel transfer system equipment upgrades

Thank you

Erik Werner





Results of the 2024 Operating Plan and Key Elements of the 2025 Operating Plan

Sam Williams, Director of Nuclear Training & Accreditation



2024 Operating Plan Results

Looking Back at 2024

- Increased capacity factor by 2.7 percentage points compared to 2023; nearly 94% for ~ 10% of Californians
- Entered extended operations for Unit 1 in November
- Successfully completed Unit 2 refueling outage
- Continued onboarding new coworkers in support of continued operations
- Completed dry cask fuel storage campaign
- Diablo Canyon remains in the highest performance category for all Nuclear Regulatory Commission (NRC) Performance Indicators



2024 Operating Plan Results

Measuring Results

Metric	Goal	Actual
DCPP Reliability & Safety Indicator	≥ 97.5	100.0
Regulatory Findings	No findings greater than green	No findings greater than green
NRC Reactor Oversight Process	Column 1 and no cross-cutting issues	Column 1 and no cross-cutting issues



Our 2025 Roadmap to Generating Excellence

Our 2025 Roadmap aligns PG&E's Virtues, Purpose, and Stands to our work at DCP

Our Purpose: Why We Exist

- Delivering for our hometowns
- Serving our planet
- Leading with love

Our Virtues: Who We Are

- Curious
- Trustworthy
- Empathetic
- Tenacious
- Nimble
- Owners

Our Stands: What We Will Deliver

- People
- Plant
- Prosperity



Our 2025 Roadmap to Generating Excellence

Our Vision: We are an industry-leading, top-performing station that California is proud to have powering its hometowns

WE EARN THE RIGHT TO CONTINUE OPERATING EACH DAY

We hold ourselves and each other accountable to our standards

We plan, prepare, and execute our work correctly the first time

We pursue continuous improvement with rigor

We work together to achieve excellence

We look out and care for one another



Our 2025 Roadmap to Generating Excellence

Our Pillars: Ensuring sustained exemplary performance

RIGOROUS USE
OF PI TOOLS
AND CAP

EXCELLENCE IN
EQUIPMENT
RELIABILITY

SAFE AND
EVENT-FREE
OPERATIONS



Our 2025 Roadmap to Generating Excellence

2025 Key Work Projects and Initiatives

- Top industry quartile safety performance
- Invest in our people
- Safely execute both maintenance and refueling outages (1R25 and 2R25)
- Prepare and execute plans in support of peak summer reliability
 - June 1 – September 30
 - Optimize schedule to provide maximum reliability for customers
- Achieve nuclear industry accreditation renewal for DCCP training programs

Thank you.

Sam Williams, Director of Nuclear Training & Accreditation





Robert Budnitz, Member, with Richard McWhorter, Consultant

1. Observe Nuclear Safety Oversight Committee Meeting
2. Meet with DCCP Senior Director
3. Program for Plant Changes Under Title 10 Code of Federal Regulations (CFR) 50.59
4. Meet with Nuclear Regulatory Commission (NRC) Resident Inspectors
5. Observe Plant Staff Review Committee Meeting
6. Meet with Geosciences Staff
7. Probabilistic Risk Assessment Program
8. Observe T-02 Weekly Scheduling Meeting
9. Chemical and Volume Control and Emergency Core Cooling Systems
10. World Association of Nuclear Operators Peer Review Results
11. Cause Evaluation for Auxiliary Saltwater Pump 2-2 Failure
12. Causes and Corrective Actions for Secondary System Steam Leaks
13. Causes and Corrective Actions for Dropped Control Rod Event
14. Plant Tour



Nuclear Safety Oversight Committee Exit Meeting (Remote)

- **External Committee of Five Outside Executive-Level Industry Peers**
- **Advises the Chief Nuclear Officer on Safety Policy and Provides an Independent Perspective on Plant Performance**
- **Typically Meets and Visits DCPD Three Times per Year**
- **Remotely Observed Exit Briefing on October 23**

Conclusion: The DCPD NSOC appeared to be thorough and comprehensive in their evaluations and candid in their reports.



Meet with DCPD Senior Director

- Allen Wilson, Senior Director, Engineering, Projects and Outages
- Discussed the Fact-finding Agenda Items and Other Items of Mutual Interest.

Conclusion: The regular meetings between DCISC and DCPD Officers and Directors continue to be beneficial for both organizations.



Program for Plant Changes Under Title 10 Code of Federal Regulations (CFR) 50.59

- **10 CFR 50.59 Provides Mechanism to Make Changes to Physical Facility or Procedures and Programs without Prior Regulatory Approval.**
- **Three Stages of Reviews**
 - **Applicability Determination (900 in 2023 / 1,300 in 2024)**
 - **Screening Evaluation (175 in 2023 / 233 in 2024)**
 - **Full Evaluation (1 in 2023 / 3 in 2024)**
- **Reviewed the four most recent full evaluations – Satisfactory**

Conclusion: Program was being properly implemented and ensured that changes were adequately reviewed prior to implementation.



Meet with NRC Senior Resident Inspector

- **Items Discussed Included:**
 - **Recent NRC Inspection Activities and Non-Cited Violations**
 - **Recent NRC inspection results**
 - **Corrective Action Program implementation at DCP**

Conclusion: DCISC's meetings with the NRC continue to be beneficial.



Observe Plant Staff Review Committee (PSRC) Meeting

- PSRC reviews overall facility operating and maintenance experience; proposed changes and tests; adequacy of procedures; and other subjects which may have a bearing on nuclear safety at the facility.
- PSRC Reviewed DCL-24-094, “License Amendment Request 24-04 Application to Revise Technical Specifications (TS) to Adopt TSTF-589 to Modify TS 3.3.5 and 3.8.2.”
- PSRC Reviewed “Surveillance Test Risk Informed Documented Evaluation, STP M-12B, Battery Charger Performance Test Interval.”

Conclusion: The November 12, 2024, PSRC meeting covered items on the agenda efficiently while allowing adequate time for any participants to question and discuss items of interest in more detail.



Meet with Geosciences Staff

- Discussed:
 - A general update and discussion regarding concerns from Dr. Peter Bird and the Independent Peer Review Panel
 - An overview of PG&E's latest correspondence contained in PG&E letter DCL-24-103, regarding the Noto Earthquake in Japan in January 2024
 - Evaluations and comments regarding Dr. Bird's October 30, 2024, correspondence to the DCISC
 - An update on the plans for the Long-Term Seismic Program (LTSP)

Conclusion: PG&E provided helpful information addressing each of several technical topics relevant to the seismic hazard at the DCCP site.

Recommendation: The DCISC should continue its work to develop its own independent understanding of the seismic hazard at the DCCP site.



Probabilistic Risk Assessment Program

- Discussed risk-informed program changes being implemented using PRA methods and analyses through NRC License Amendment Requests (LARs):
 - Risk-Informed Completion Times
 - Risk-Informed Surveillance Frequency Control Program
 - Mode Change Risk Evaluations
 - Risk-Informed In-Service Inspections
 - Risk-Informed Categorization of Systems, Structures and Components

Conclusion: Overall, the PRA Program continued to provide excellent support for enhancing the safety of plant operations.



Observe T-02 Weekly Schedule Review Meeting

- Regular meeting conducted as part of the 12-week rolling maintenance planning process
- Reviewed work plans for week starting November 25, 2024

Conclusion: The November 13, 2024, T-02 Work Week Schedule Review meeting covered items on the agenda efficiently while allowing adequate time for any participants to question and discuss items of interest in more detail. .



Chemical and Volume Control and Emergency Core Cooling Systems

- Reviewed Health of CVCS and ECCS (High, Medium and Low-Head Safety Injection Systems)
 - All Three Systems on Both Units Rated as ‘Green’ (Healthy)
 - Only a Few Issues Affecting System performance
 - No Problems Experienced During Major Outage Testing

Conclusion: DCPD’s Chemical Volume Control System and Emergency Core Cooling Systems were all in good health on both units.



World Association of Nuclear Operators Peer Review Results

- Privacy agreements limit the sharing of details
- Biennial Evaluation Completed in August 2024
- Generally Positive Results

Conclusion: DCPD's August 2024 evaluation by the World Association of Nuclear Operators was positive overall.



Cause Evaluation for Auxiliary Saltwater Pump 2-2 Failure

- Failure of ASW Pump 2-2 Motor Bearing in Fall 2023
- Repeat of Fall 2018 Failure
- Issue of Procedure Guidance and Methods for Setting Axial Pre-Loading
- Follow-up From DCISC Reviews in December 2023; May and November 2024
- Procedure Changes Sufficient and Validated by Use During Recent Overhaul
- Open Notification on Why 2018 Procedure Changes Were Ineffective

Conclusion: Appropriate Corrective Actions Were Initiated to Prevent Recurrence.

Recommendation: PG&E should continue to evaluate why a 2018 Root Cause Evaluation for a failed Auxiliary Saltwater Pump motor bearing did not result in sufficiently effective procedure changes.



Causes and Corrective Actions for Secondary System Steam Leaks

- **Steam Leak May 2024 During Startup Following 2R24; Generator Taken Offline**
- **Steam Leak on Valve XS-2-797 (Moisture Separator Reheater 2-1A Drain Line; Gasket Failed and Was Replaced)**
- **Second Steam Leak on Restart (Piping Crack; Temporary Patch Installed)**
- **Cracked Yoke on Valve Also Later Found in Same Area**
- **Cause Evaluation Contained Extensive Pressure/Temperature Analysis Which Identified Water Hammer as Most Likely Cause (Inoperable Pressure Switch and Improper Gasket Contributed).**
- **Corrective Actions Focused on Improving Responses to Water Hammer Issue**

Conclusion: Appropriate corrective actions were initiated for the equipment failures.



Causes and Corrective Actions for Dropped Control Rod Event

- August 2024; Control Bank D Rod P10 Fell Into Core During Power Reduction
- Vendor Guidance Followed to Troubleshoot Rod Control System
- Electrical Issues Eliminated as Possible Cause; Rod Withdrawn 18 Hours Later
- Concluded Likely Due to Corrosion Product Buildup Around Movable Gripper
- Industry Issue; Guidance in Development
- Did Not Affect Safety Function of Rods

Conclusion: DCPD's response to an August 2024 dropped control rod event was appropriate, and suitable interim corrective actions were initiated.

Recommendation: The DCISC should follow up on future corrective actions that may be initiated in response to an August 2024 dropped rod event.



Plant Tour

- **Toured Site Areas Inside of the Protected Area:**
 - **Cold Machine Shop**
 - **Mechanical Maintenance Shop and Offices**
 - **Instrumentation and Controls Maintenance Shops**

Conclusion: All observed areas were in good condition.



Robert Budnitz, Member, with Richard McWhorter, Consultant

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Per Peterson, Member, with Ferman Wardell, Consultant

- 1. Observe Plant Health Committee Meeting**
- 2. Electronic Procedures and WiFi Expansion**
- 3. Independent Spent Fuel Storage Installation Loading Campaign**
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- 6. Workplace Seismic Safety Tour**
- 7. Quality Verification Update**
- 8. Meet with NRC Resident Inspectors**
- 9. Meet with Senior Vice-President and Chief Nuclear Officer**
- 10. Staffing for Long-Term Operations**
- 11. License Renewal Update: Independent Spent Fuel Storage Installation**
- 12. Observe Operator Training: Extensive Damage Mitigation Guidelines**



Observe Plant Health Committee Meeting

Management Team Responsible for the following:

- **System and Program Health Issues**
- **Plant Health Issues List for action status and completion**
- **Station Top-Ten List**
- **Plant health issues that originated from system and component health reports, maintenance rule, operator workarounds, program health reports, and emergent issues**

Continued



Plant Health Committee Meeting (Continued)

- **Action plans to resolve degraded, unanalyzed and non-conforming conditions**
- **Plant health issue plans that are presented to the PHC**
- **Preventive Maintenance Oversight Committee functions**
- **Top Margin Issues List**
- **PHC budget for solutions to plant health issues**
- **Approving system, component, and program long range plans**

Continued



Plant Health Committee Meeting (Continued)

December 11, 2024 Meeting Agenda

1. Previous Meeting WELL (What Excellence Looks Like) Results
2. Refueling Outage 2R24 Critical Spares Report – 96% available
3. Motor Life Cycle Management Plan: Overall White health
4. Inoperable Equipment Returned to Operable Status
5. Top Margin Management Issues:
 - Ultimate Heat Sink Tech. Spec. Temp. Limit Increase– on hold
 - Main Generator Minimum Pickup Open Synch to Grid: a temporary modification to be implemented.
 - Main Steam Safety Valve Margin: the dump control modification - implementation in the R25 outages. (Cont'd.)



Plant Health Committee Meeting (Continued)

- 6. Operations Feedback**
- 7. Electric Issues Board**
- 8. Top 10 Equipment Items**
- 9. Action Item Review**
- 10. Meeting Feedback and WELL Results**

Conclusion: Plant Health Committee is Effective in Maintaining/Improving System/Program/Plant Health



Electronic Procedures and WiFi Expansion

- **DCPP has WiFi at multiple locations in the Powerblock: Office areas and other regularly staffed work areas.**
- **WiFi is temporarily set up inside Containment during refueling outages. It is used most by Radiation Protection for remote radiation level monitoring.**
- **No current plans for WiFi expansion elsewhere in the Powerblock.**



Electronic Procedures

- DCPP tried implementing in 2023 - Implementation issues
- DCPP will try again with Operations Procedures in 2025.
- Electronic procedure platform from Next Axion – Apple iPads
- Benchmarking – Next Axion successfully used by other plants
- Conclusion: This is a positive move. Potential for improved human performance & nuclear safety
- Recommendation to PG&E: PG&E should expand their use of electronic-procedures-type applications because the improved human performance and documentation of work can directly improve the safety of operations.



Independent Spent Fuel Storage Installation (ISFSI) Campaign #8

- ISFSI is sized to store all fuel through current operating licenses (2024/2025) with an additional 20 years of storage available in the Spent Fuel Pools.
- DCPD has safely completed seven loading campaigns since 2009.
- Campaign #8 moved 12 Multi-Purpose Canisters containing 32 spent fuel assemblies each = 256 fuel assemblies.
- DCPD ISFSI now contains 70 casks (2240 Spent fuel assemblies).

(Continued)



Independent Spent Fuel Storage Installation (ISFSI) Campaign #8

DCPP used the following procedures/techniques to assure safe, efficient, incident-free operation:

- Robust procedures on all work activities
- PG&E management oversight of all work activities
- Experienced crew members
- Pre-campaign training and dry runs
- Readiness reviews by external subject matter experts
- DCPP readiness challenge boards
- ALARA (As Low As Reasonably Achievable) radiation protection

Conclusion: This is good performance.



New Artificial Intelligence Process (Atomic Canyon)

- Atomic Canyon is a powerful, sophisticated document data search and retrieval engine.
- Significant cost savings and improved operational efficiency
- Integrated with current DCPD systems such as SAP, which has been used for DCPD Corrective Action Program.
- The search capabilities provided by AI tools have significant potential to enhance plant safety.
- **Recommendation to DCISC:** Because the application of Artificial Intelligence tools has significant potential to change and to improve DCPD's operational safety, the DCISC should review this topic frequently.



Reactor Coolant System Process Control System (PCS) Update

- PCS is considered part of the “brains” of the plant because it:
 - Measures and controls most of the key process parameters of the RCS and Secondary Systems such as:
 - Pressurizer Level and Pressure
 - Control Rod Speed and Direction
 - Charging Flow
 - Volume Control Tank Level
 - Auxiliary Feedwater Runout Protection and Level
 - Letdown Heat Exchanger Outlet Temperature
 - Steam Dump Valves

(Continued)



Reactor Coolant System Process Control System (PCS) Update

- PCS originally consisted of analog controls
- DCPP replaced the PCS in Unit 1 in Refueling Outage 1R17 (May 2012) and in Unit 2 in Refueling Outage 2R17 (March 2013) with digital controls.
- PCS now operates better than expected:
 - Control and monitoring systems with no issues
 - Decreases the required maintenance
 - Responds better than the simulated response
 - Provides operators with more information for monitoring and controlling the plant

Conclusion: Health is good. Upgrade was a positive move.



Workplace Seismic Safety Tour

- July 2024: Unbraced cabined was found in DCISC's inspection.
- Corrective Action Program corrective actions were made.
- DCPD reviewed other installations for extent of condition.
- December 2024: Tall, unbraced cabinet was found in CNO office, not found in July extent of condition inspections.
- This unbraced cabinet was entered into the CAP, although this cabinet would soon be moved to the other side of office per a previous request.
- **Recommendation to PG&E:** PG&E should review why an extent of condition inspection for an unbraced cabinet found by the DCISC in July 2024 did not identify a similar condition found by the DCISC in December 2024.



Quality Verification Update

The QV Department is an independent group within DCPD, reporting directly to the Senior Vice-President and Chief Nuclear Officer. QV's responsibilities include the following:

- Audits
- Assessments
- Independent in-plant Inspections
- Plant Quality Control Inspections
- Vendor/Supplier Audits and Material Receipt Inspections

Continued



Quality Verification Update (Continued)

Meeting report was based on the November/December 2024 Nuclear Quality Digest, which provided the following:

- Director's Corner: What's in QV's Sights
- Two Key Takeaways from Radiation Protection Audit
- Audit Findings from Recent Audits
- Upcoming Activities
- Performance Summaries of the 15 Functional DCPP Groups (see more below)
- QV Observations and Current Perspectives for the Period

Continued



Quality Verification Update, Continued

The following Functional Groups were rated Yellow with improving trajectories:

- Operations Performance – continuing challenges in the areas of plant status control and execution of the clearance/tagging process
- Maintenance – Leadership generally focused on continuous improvement, task preview, place-keeping, and post-job critiques
- Strategic Projects – the Group is addressing gaps in prioritization of activities and support, and multiple plant processes, which it is actively addressing.



Meeting with NRC Senior Resident Inspector and Resident Inspector

- Recent NRC Inspection Activities and Non-Cited Violations (None)
- Seismic Workplace Safety Review by DCISC FFT
- Agenda items for this Fact-finding Meeting

Conclusion: Meetings beneficial - continue



Meet with Senior Vice-President and Chief Nuclear Officer

- The participants discussed the current DCISC meeting agenda items and other items of mutual interest.
- During the meeting, the FFT inspected furniture in the office for seismic bracing, and discovered that the office had a tall, unbraced cabinet. Put into Corrective Action Program.

Conclusions: The regular meetings with DCCP Officers and Directors are beneficial for both organizations and should be continued.



Staffing for Long-Term Operations

DCPP reported that is it fully staffed for current and long-term operations and is planning for small future staffing decreases from normal and process improvement attrition.

Conclusion: This appeared satisfactory to the DCISC FFT.



License Renewal Update for the Independent Spent Fuel Storage Installation (ISFSI), (continued)

- Original ISFSI 10 CFR Part 72 license ran through March 2024
- PG&E submitted its NRC ISFSI LAR on March 9, 2022 for 40 more years continued use of Holtec Multi-Purpose Canisters (MPCs)
- License temporarily extended by NRC while LAR is reviewed
- NRC approval expected in 2025



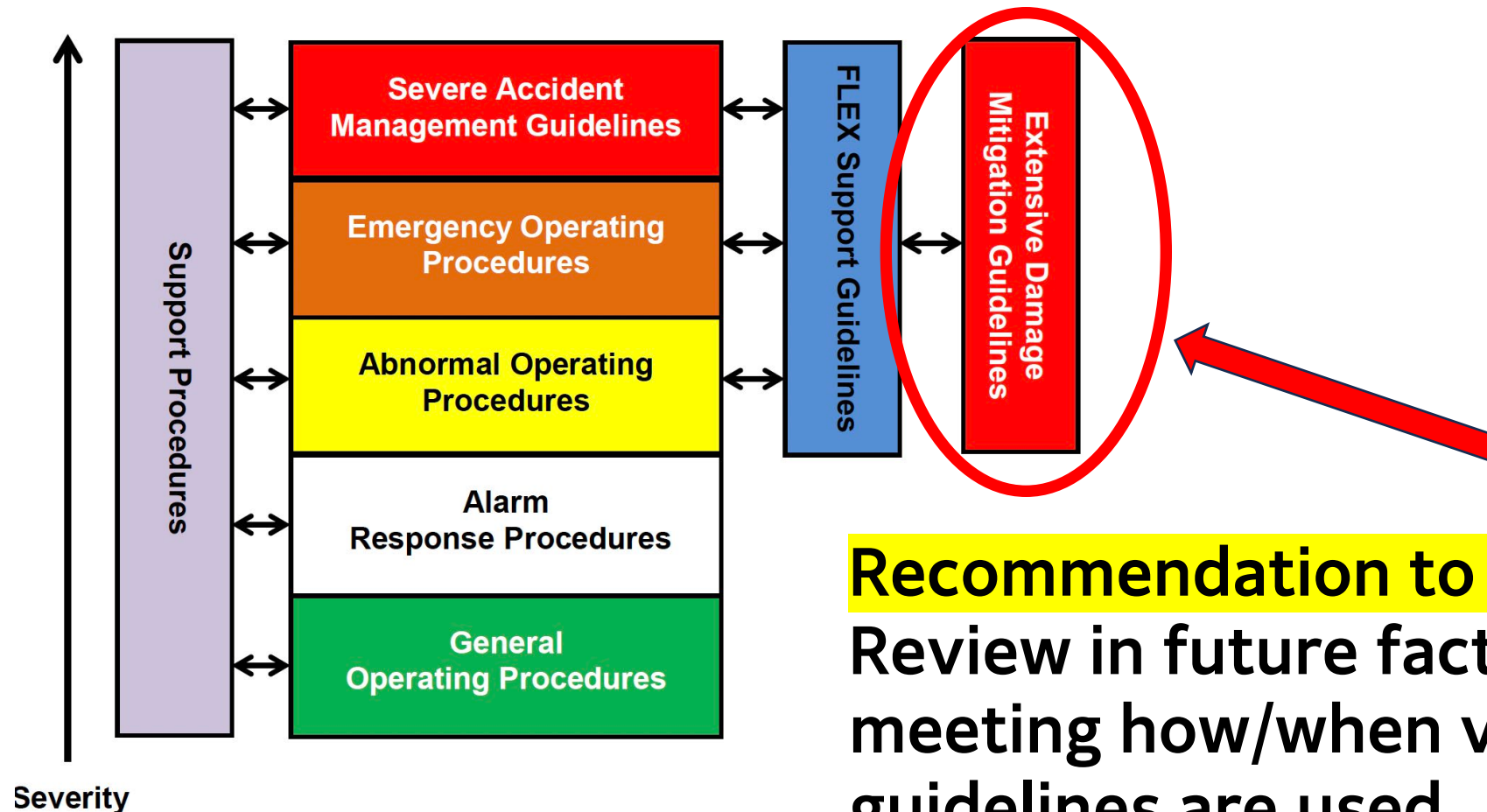
Observe Operator Training: Extensive Damage Mitigation Guidelines

Organization of DCCP Plant Procedures & Guidelines

1. General Operating Procedures
2. Alarm Response Procedures
3. Abnormal Operating Procedures (AOPs)
4. Emergency Operating Procedures (EOPs),
5. Severe Accident Management Guidelines (SAMGs)
6. **Extensive Damage Mitigation Guidelines (EDMGs)**
7. FLEX Support Guidelines (FSGs)



Observe Operator Training: Extensive Damage Mitigation Guidelines



Recommendation to DCISC:
Review in future fact-finding meeting how/when various guidelines are used.



Observe Operator Training: Extensive Damage Mitigation Guidelines

Extensive Damage Mitigation Guidelines (EDMGs)

EDMGs refer to a set of guidelines and strategies designed to maintain or restore critical functions where large portions of the plant have been severely damaged by explosions or fires.

Entry into EDMGs is initiated by either of the following:

- Command and control cannot be established at the Control Room or Hot Shut Down Panel (HDSP)
- Or
- Spent Fuel Pool (SFP) damage has occurred with leakage greater than the capability of normal make-up to the SFP.



Observe Operator Training: Extensive Damage Mitigation Guidelines

EDMG	Title
Large Events that may Result in Damage to the Plant Beyond the Design Basis	
EDMG-1	Extensive Damage Mitigation Guideline
EDCG-1	ERO Guidance for Extensive Plant Damage Mitigation
EDWM-1	Fire System Management Strategies
EDG-5	Refueling Water Storage Tank Makeup
EDG-6	Makeup to Condensate Storage Tank
EDG-7	Manually Depressurize SGs to Minimize RCS Inventory Loss
EDG-8	Manual Operations to Control Steam Generator Water Level
EDG-9	Use of Fire Engine to Supply Water to Steam Generators
EDG-10	Containment Flooding with Portable Pump
EDG-11	Vent Containment
EDG-12	Start Diesel Generator without DC Power
EDG-13	Portable Sprays
EDG-16	Pressurize Diesel Generator Starting Air Receivers with a
	Portable Compressor
Large Spent Fuel Pool Leaks	
EDG-1	Internal Spent Fuel Pool makeup
EDG-2	External Spent Fuel Pool makeup
EDG-3	Spent Fuel Pool Cooling via Spray
EDG-4	Spent Fuel Pool Leakage Control Strategies
Equipment Inventory	
EDG-14	EDMG Equipment Annual Inventory



Observe Operator Training: Extensive Damage Mitigation Guidelines

Conclusion: The classroom training for the licensed operator continuing EDMG training appeared satisfactory with materials appropriate for this subject and for the type of work operators are licensed to perform. The instructor was knowledgeable on the subject and was good at interacting with the students.



Per Peterson, Member, with Ferman Wardell, Consultant

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Najmedin Meshkati, Member, with Richard McWhorter, Consultant

1. FLEX Program
2. Institute of Nuclear Power Operations Programs
3. Review of Recent Root Cause Evaluation and Cause Evaluation
4. Major Project Planning Update
5. Emergency Preparedness Plan and Facilities Tour
6. Plans for a New Artificial Intelligence Process (Atomic Canyon)
7. Meet with Nuclear Regulatory Commission (NRC) Resident Inspectors
8. Meet with DCPD Officer
9. Station Nuclear Safety Culture and Employee Concerns Programs
10. Human Performance Program
11. Observe Listening and Learning Session
12. Tsunami Hazard Evaluation
13. Refueling Outage 1R25 Preparations
14. Corporate Nuclear Safety Culture



FLEX Program

- Reviewed Program Design and Phases (Initial Onsite; Expanded Onsite; Offsite)
- Reviewed How FLEX Procedures Interact with Other Emergency and Abnormal Procedures
- Reviewed Training for FLEX Procedure Use

Conclusion: DCCP's FLEX Response Procedures were appropriately integrated with other procedures for responding to emergency events and severe accidents.



Institute of Nuclear Power Operations Program

- Privacy agreements limit the sharing of details
- Reviewed Periodicity of INPO Evaluations
- Reviewed Training Accreditation Process
- Biennial Evaluation Completed in August 2024; Generally Positive Results

Conclusion: DCCP provided a briefing on its relationship with the Institute for Nuclear Power Operations and an overview of the results of their recent evaluation which was mostly positive.



Review of Recent Root Cause Evaluation and Cause Evaluation

- Discussed Questions on Root Cause Evaluation (RCE) for 1-RV-8010B Leak-by and Cause Evaluation (CE) for XS-2-797 Steam Leak
- Reviewed How DCCP Chooses RCE or CE for Equipment Failures
- Discussed Functions of Notification Review Team and Other Corrective Action Review Board teams
- Received Additional Information on Sequence of Events for Steam Leak CE
- Reviewed Development and Use of:
 - Organizational Learning Tool (RCE and CE)
 - Safety Culture Assessment (RCE Only)
- Reviewed What Follow-up Is Done for the Results of the Organizational Learning Tool and Safety Culture Assessment



Review of Recent Root Cause Evaluation and Cause Evaluation (continued)

- Found It Difficult to Tie All Results to Corrective Actions
- Found No Trending Being Performed Across Organizational Learning Tools in Multiple CEs (Station Notification Generated)

Conclusion: DCPD's programs for performing Cause Evaluations and Root Cause Evaluations were appropriate in classifying the evaluations to be performed and conducting technical analyses. However, possible weaknesses were identified in how insights gained from the Organizational Learning Tools and Safety Culture Assessments were captured and appropriate corrective actions initiated for organizational issues.



Review of Recent Root Cause Evaluation and Cause Evaluation (continued)

Recommendations:

- The DCISC should review the Organizational Learning Tool and Safety Culture sections in all Root Cause Evaluations and Cause Evaluations conducted in 2024.
- PG&E should review its cause evaluation processes and initiate actions to ensure that deficiencies observed via the Organizational Learning Tool and Safety Culture Assessment are captured and tied to the initiation of appropriate corrective actions.
- PG&E should review its cause evaluation processes and initiate actions to ensure that periodic trending is performed across the multiple Organizational Learning Tools and Safety Culture Assessments that are performed as a part of Cause Evaluations and Root Cause Evaluations.



Major Project Planning Update

- **Several Major Projects Completed Since the DCISC' s 2023 Review:**
 - **High Voltage Transformer Improvements**
 - **Intake Traveling Screen Replacements**
 - **Unit 2 Main Generator Inspections**
 - **Major License Renewal Inspections**
 - **Intake Cove Dredging**
 - **Emergency Diesel Governor Replacements (2)**
- **Numerous Current Projects Tracked on “Project Dashboard”**



Major Project Planning Update (continued)

- **Major Projects Planned for 1R25 and 2R25 Include:**
 - **High Pressure Turbine Steam Path Replacements**
 - **500kV Tie-line Relay Replacements**
 - **Fuel Transfer Cart and Upender Upgrades**
 - **Main Condenser Waterbox and Tubesheet Coatings**
 - **Digital Rod Position Indication System Replacements**
 - **Reactor Vessel Internal Inspections (Including Capsule B Removal)**
 - **Remaining License Renewal Inspections and Supporting Activities**
 - **Unit 1 Pressurizer Safety Valve Inlet Box Support Modifications**



Major Project Planning Update (continued)

- **Major Projects Planned for Future Outages Include:**
 - **Feedwater Heater Replacements**
 - **Main Annunciator System Replacements**
 - **230kV Relay Replacements**
 - **Main Generator Relay Replacements/Refurbishments**

Conclusion: The DCISC found that PG&E's planning for upcoming major plant projects was being effectively managed and projects important to safety were being pursued for implementation.



Emergency Preparedness Plan and Facilities Tour

- Overview of Emergency Preparedness Program and Emergency Plan
- Toured Emergency Preparedness Facilities:
 - Technical Support Center
 - Operations Support Center
 - Emergency Operations Facility (Offsite)
 - Unified Dose Assessment Center (Offsite)

Conclusion: DCCP provided a briefing on Emergency Preparedness planning, and facilities used for responding to emergencies were toured and observed to be in good condition.



Plans for a New Artificial Intelligence Process (Atomic Canyon)

- Similar Topic to December FF Meeting
- Atomic Canyon is a powerful, sophisticated document data search and retrieval engine.
- No Current Plans to Use Generative AI (which creates new content)
- System Will Be Based on Retrieval Augmented Generation

Conclusion: DCPD's initiative to study and use an Artificial Intelligence platform for document and data search, retrieval, and reporting is positive. There were no safety concerns associated with DCPD's current plans for the possible use of Artificial Intelligence at the station.

Recommendation: As recommended in its December 2024 Fact-Finding Report, the DCISC should frequently review the topic of Artificial Intelligence.



Meet with NRC Resident Inspectors

- **Items Discussed Included:**
 - **Performance of Root Cause Evaluations and Cause Evaluations at DCPD**
 - **Problem Identification and Resolution Inspection Results**
 - **Performance of DCPD's Notification Review Team and Corrective Action Review Board**

Conclusion: DCISC's meetings with the NRC continue to be beneficial.



Meet with DCPD Officer

- Maureen Zawalick, Vice President, Business and Technical Services
- Discussed the Fact-finding Agenda Items and Other Items of Mutual Interest
- Also Discussed Questions on Site Relationship to PG&E Corporate Management
 - Current Focuses of Senior PG&E Leadership
 - Safety and Nuclear Oversight Committee of the Board

Conclusion: Discussions regarding the status of the current Nuclear Safety Culture at the corporate level were generally positive.

Recommendation: The DCISC should meet with members of the Safety and Nuclear Oversight Committee of the PG&E Board.



Station Nuclear Safety Culture and Employee Concerns Programs

- **DCPP' s Program Based on Nuclear Energy Institute 09-07 and Institute of Nuclear Power Operations 12-012.**
- **Program Core is the Nuclear Safety Culture Monitoring Panel Which Reports to Senior Leadership Team.**
- **Also Reviewed Status of Employee Concerns Program**
- **Low Number of Formal Investigations and NRC Allegations in 2024**
- **High Number of Anonymous Notifications in 2024 (noted after meeting)**



Station Nuclear Safety Culture and Employee Concerns Programs (continued)

Conclusion: DCCP's Nuclear Safety Culture and Employee Concerns Programs were performing well.

Recommendations:

- The DCISC should review the results of a PG&E employee safety culture survey following its completion.
- The DCISC should further review the higher than typical numbers and nature of anonymous Notifications received in 2024.



Human Performance Program

- **Follow-up On Questions from August 2024 Fact-Finding Meetings Concerning the Use of Human Factors Analysis and Classification System (HFACS)**
- **HFACS Use Driven As Needed by HU Event Response Process**
- **Also Discussed Human Factors in the Control Room**

Conclusion: DCPP satisfactorily answered questions regarding uses of the Human Factors Analysis and Classification System evaluation tool.



Observe Listening and Learning Session

- **All-employee Remote Meeting**
- **Short Presentations on Various Topics by Senior Leadership Team Members**

Conclusion: The “Listening and Learning Session” held by DCCP senior leadership for all employees appeared successful in providing beneficial information for participants.



Tsunami Hazard Evaluation

- Reviewed the History of Tsunami Evaluations and Design Basis:
 - 1967 – Original Maximum Probable Tsunami of 20’
 - 1982 – Changed to 34.6’ (Auxiliary Saltwater Snorkels at 48.5’)
 - 2011 – Post-Fukushima Analyses 32.8’ Plus Other Factors = 47.7’
 - Submitted to NRC in 2016; Approved in 2017.
 - 2024 – Study for California Coastal Commission (CCC) Included Reviews of Sea Level Rise and Shoreline Erosion.
 - Concluded 2016 Analysis Highly Conservative.
- Also Discussed How Auxiliary Saltwater Can Be Discharged Should the Discharge Structure Be Damaged by a Beyond Design Basis Event



Tsunami Hazard Evaluation (continued)

Conclusion: None of the information contained in a 2024 PG&E report to the CCC challenged any previous assumptions or conclusions contained in DCPD's 2016 design basis analysis of the risk from a maximum probable tsunami.

Recommendation: The DCISC should further review if DCPD should have considered developing FLEX procedures for providing an alternative discharge path for the ASW System following a Beyond Design Basis event that may cause a collapse of the Discharge Structure.



Refueling Outage 1R25 Preparations

- Begins in Mid-April; Scheduled Duration of 40 Days
- Major Activities Included:
 - Reactor Refueling Including Reactor Vessel Internal Inspections and the Removal of “Capsule B”
 - Corrective and Preventive Maintenance Work Needed to Support 18 Months of Operation
 - Completing the Remaining License Renewal-related Inspections and Activities
 - Completing Major Projects (discussed earlier)

Conclusion: DCCP’s preparations for Refueling Outage 1R25 appeared to be progressing satisfactorily.



Corporate Nuclear Safety Culture

- Reviewed Sources of Funding for DCPD and Their Impact on Safety
- Discuss the Various Means of Regular Interaction Between DCPD, Corporate Management, and the PG&E Board

Conclusion: Discussions regarding the status of safety culture at the corporate level and its effects on DCPD were generally positive.



Najmedin Meshkati, Member, with Richard McWhorter, Consultant

1. FLEX Program
2. Institute of Nuclear Power Operations Programs
3. Review of Recent Root Cause Evaluation and Cause Evaluation
4. Major Project Planning Update
5. Emergency Preparedness Plan and Facilities Tour
6. Plans for a New Artificial Intelligence Process (Atomic Canyon)
7. Meet with Nuclear Regulatory Commission (NRC) Resident Inspectors
8. Meet with DCPD Officer
9. Station Nuclear Safety Culture and Employee Concerns Programs
10. Human Performance Program
11. Observe Listening and Learning Session
12. Tsunami Hazard Evaluation
13. Refueling Outage 1R25 Preparations
14. Corporate Nuclear Safety Culture



Diablo Canyon Power Plant Probabilistic Risk Assessment (PRA) Program Seismic Evaluation

Presented to Diablo Canyon Independent Safety Committee
February 19, 2025
Avila Beach, California



- Probabilistic Risk Assessments (PRAs) for nuclear power plants pioneered as part of the WASH-1400 "Reactor Safety Study" in 1975
- NRC Policy Statement on PRA (1995):
"The use of PRA technology should be increased in all regulatory matters to the extent supported by the state of the art in PRA methods and data, and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy."
- The DCCP PRA model was developed in 1988 and included a full-scope seismic PRA. The seismic PRA was updated in 2018 to meet requirements of 50.54(f)
- NRC and the nuclear industry continue to rely on PRA to prioritize regulatory actions and to support risk informed regulation

- PRA is an analytical tool that can:
 - Identify possible scenarios (accident analysis, industry experience)
 - Estimate likelihood of occurrence
 - Estimate consequences (impacts to frontline and support systems)
- Provides specific technical analysis that systematically answers the risk triplet
 - What can happen (i.e., normal conditions and/or off-normal conditions)? (scenario)
 - How likely is it to occur? (probability, frequency)
 - What will be the outcome? (consequences)

- The PRA models are used to estimate the potential for an event to cause Core Damage: Core Damage Frequency (CDF)
- The models include contributions from:
 - Fire
 - Flood
 - Equipment failure
 - Equipment out of service
 - Seismic
- DCPD PRA models have been independently reviewed by industry peers to meet ASME standards accepted by the NRC
- DCPD PRA models are continuously updated incorporating design changes, procedure changes and new data to ensure the PRA matches the as-built facility

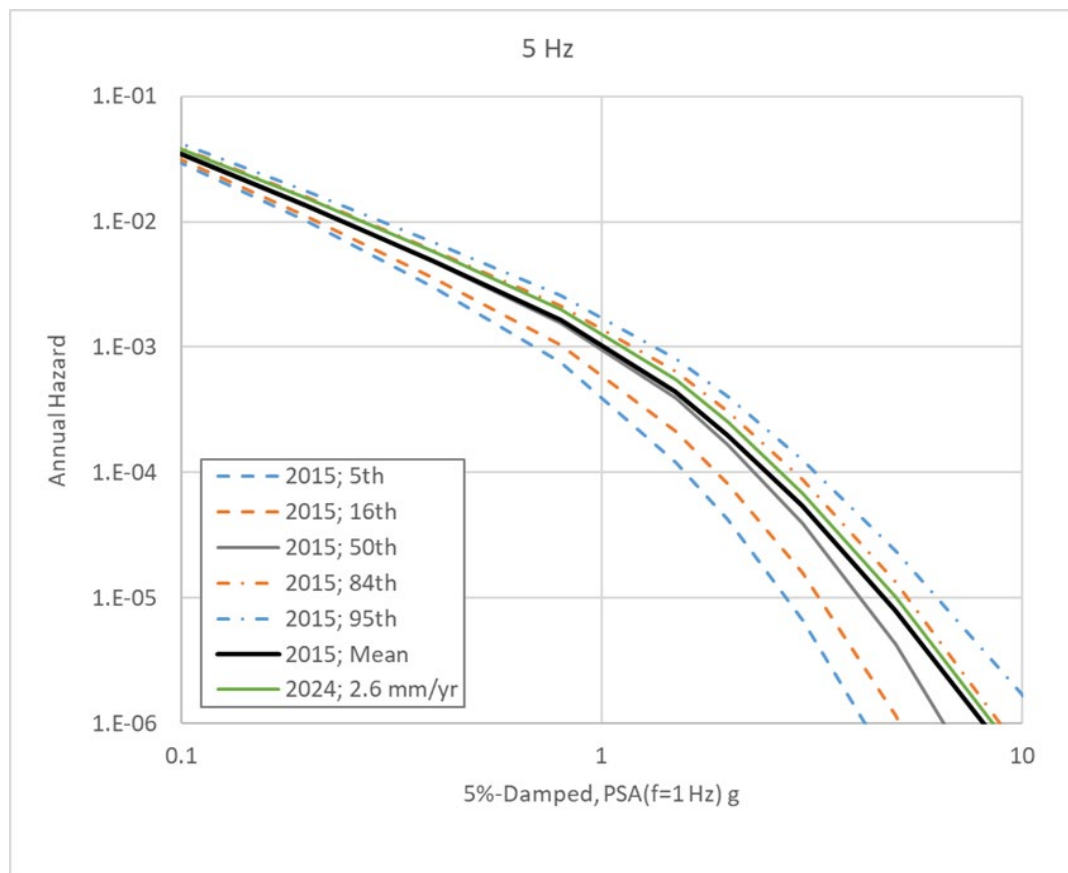
Major Risk Informed Applications - Summary

- Risk-Informed Completion Time (RICT) – PRA supports model development and use for calculation of risk-informed completion times
- Risk-Informed Surveillance Frequency Control Program – PRA supports testing interval increases
- Maintenance Rule (a)(4) online risk assessments – PRA is responsible for maintaining the model and software that Operations and Work Control uses for these assessments
- 50.69 – Risk informed categorization and treatment of Structures, Systems, and Components (SSCs) – License Amendment Request (LAR) approval received in December of 2024

- Characteristics of the DCPP Seismic PRA Model
 - Seismic events from 0.1 to 9g are modeled
 - Dominant contribution to Core Damage Frequency (CDF) is $\sim 3g$
 - well above deterministic design earthquake levels
 - Results are similar to many other US nuclear plants

Alternative Hosgri Interpretations

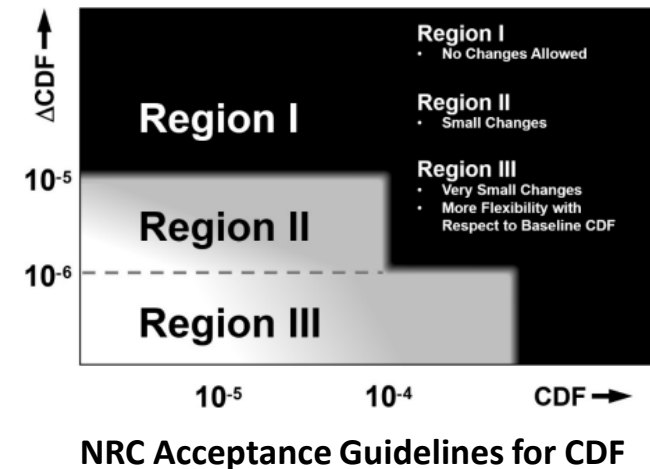
- DCISC requested that we examine IPRP's proponent position to only consider Hosgri slip rate from the cross-Hosgri slope site (2.6 mm/yr; **green line**)
- Not a preferred approach as it does not consider alternative interpretations
Not consistent with the SSHAC process
- **Change results in slight increase in hazard but remains well within confidence bounds**



Slip Rate Sensitivity Seismic Risk Assessment - Results

Description	CDF (/yr)	Delta CDF	% Change
Baseline	2.96E-05	-	-
Hazard Scaling Factor of 1.135	3.36E-05	4.0E-06	13.5%

- **These results are well within the NRC PRA thresholds for nuclear power**
- Conservatively using the 0.5Hz scaling factor, the increase in Seismic CDF is approximately 4E-06/yr.
- Even with the use of this conservative scaling factor, the total CDF remains in Region II (changes in risk of less than 1E-05/yr are allowed in this region)
- Structure and component fragility importance results (both Fussell-Vesely and RAW) were compared to the baseline case. No significant change in importance was identified – all less than 5% change.
- The above CDF change increase of 13.5% is just for the seismic CDF. The percent change in CDF against all PRA models (fire, seismic, flooding, internal events) is smaller.



PRA is a tool that can be used to:

- Understand the relative importance of different hazards
- Identify changes in design and processes to reduce risk
- Optimize work planning to reduce risk

Seismic Risk:

- Seismic Risk is just one contributor to overall core damage frequency
- Changes in overall plant risk due to differences in hazard interpretations are small and remain in region II of RG 1.174 guidance

Seismic Safety:

- **Recent studies continue to confirm that DCPD is seismically safe**
- The Central Coast is the most studied area near a power plant for earthquake faults and the potential for strong ground motion
- NRC provides an independent assessment of seismic hazard
- The Long-Term Seismic Program (LTSP) maintains seismic hazards and risk

Questions?

Diablo Canyon Power Plant Regulatory Performance Update

Jordan Tyman
Director, Risk and Compliance





DCPP Performance Summary

October 2024 – January 2025

- DCPP continues to provide safe, clean, and reliable electricity to Californians
- Since the last update to the DCISC, the NRC oversight of DCPP included approximately ~1500 hours of inspection time
- Update on the very low safety significance violations received since the last DCISC update
- DCPP remains in the highest performance category for all NRC Performance Indicators



NRC Performance Indicators

DCPP remains in the highest performance category

- In addition to performing inspections, the NRC also evaluates every nuclear plant using performance indicators
- NRC gauges licensee performance using 16 separate indicators related to various aspects of plant operation
- DCPP remains in the highest performance category of the NRC's Reactor Oversight Process Action Matrix
 - One Inspection finding of very low safety significance (i.e., Green)
 - Performance indicators within the expected range (i.e., Green)



Regulatory Update

October 2024 – January 2025

NRC Violations

- DCCP received one violation of very low safety significance since the last DCISC update (as defined by the NRC Reactor Oversight Process)
- Violation centered on procedure not being adequately updated to incorporate maintenance guidance



Regulatory Update

October 2024 – January 2025

Licensee Event Reports (LER)

- There were no LERs issued during the reporting period

Upcoming Inspections

Upcoming NRC Inspections

- Unit 2 License Renewal Inspection – Late February 2025
- Unit 1 Refueling Outage – Radiation Protection Inspection – April 2025
- Unit 1 Refueling Outage – Inservice Inspection (ISI) – April 2025



Licensing Activities

License Amendments

- DCPD has submitted License Amendment Requests which are with NRC for review and approval (e.g., TSTF-505 for Instrumentation, Online Monitoring (OLM), etc.)



DCPP Regulatory Performance

October 2024 – January 2025

- DCPP remains in the highest NRC regulatory performance category
- All violations received since the last DCISC update were of very low safety significance
- DCPP continues to provide safe, clean, and reliable electricity to Californians

Thank You

Jordan Tyman
Diablo Canyon Power Plant
Director, Risk and Compliance



DCPP Risk Informed Applications Update

Jordan Tyman
Director, Risk and Compliance



NRC Risk Informed Applications Framework

Risk Informed Decision Making (RIDM)

- ***“...An integrated approach to the decision process that considers risk in addition to requirements and deterministic factors.”***
- NRC Policy Statement on Probabilistic Risk Assessments (PRAs), 1995:
“PRA technology should be increased in all regulatory matters to the extent supported by the state of the art in PRA methods and data, and in a manner that complements the NRC’s deterministic approach and supports the NRC’s traditional defense-in-depth philosophy.”
- Risk Informed Application based on NRC approved methodology and industry best practices
- Requires NRC review and approval

Recent Risk Informed Applications

NRC Approved Risk Informed License Amendment Requests (LARs) for DCPD:

- TSTF-505 Risk Informed Completion Times
- 10 CFR 50.69 Classification of Systems, Structures and Components (SSC)

DCPD submitted the following LARs to the NRC for approval:

- TSTF-505 Risk Informed Completion Times – Instrumentation & Controls
- Integrated Leak Rate Testing Interval Extension – NRC Regulatory Guide 1.163

Recent Risk Informed Applications

TSTF-505 Risk Informed Completion Times (RICT)

- RICT Program allows the Technical Specification (TS) Allowed Outage Time (AOT) to be risk informed to extend the TS AOT to the “Backstop” time as approved by the NRC for Diablo Canyon
- Actual RICT TS AOT is determined based on plant conditions (e.g., grid status, equipment out of service, etc.) and actual risk
- Risk Management Actions are developed based on NRC guidance
- Majority of industry has implemented RICT
- Prevents unnecessary plant shutdowns and grid reliability

Recent Risk Informed Applications

10 CFR 50.69 Classifications of SSCs

- 10 CFR 50.69 allows a risk informed approach for the treatment of controls for Systems, Structures and Components (SSCs)
 - Equipment determined to be of low safety significance, alternative requirements can be applied
 - Equipment determined to be of high safety significance, requirements will not be changed
- Allows improved focus on equipment that has safety significance resulting in improved plant safety
- Over half the US industry has implemented 50.69 with the remaining in the process of implementation



Future Risk Informed Application

NRC License Amendment Requests Under Review

TSTF-505 RICT – Instrumentation & Controls

- RICT Program allows the Technical Specification (TS) Allowed Outage Time (AOT) to be risk informed to extend the TS AOT to the “Backstop” time as approved by the NRC for DCP
- Applies to Instrumentation & Controls TS

Integrated Leak Rate Testing (ILRT)

- Based on industry ILRT performance and low risk significance NRC methodology allows ILRT interval to be extended from 10 to 15 years
- Approximately half the industry has implemented this standard practice based on risk insights

Thank You

Jordan Tyman
Diablo Canyon Power Plant
Director, Risk and Compliance



Diablo Canyon

Status of Performance Improvement Program

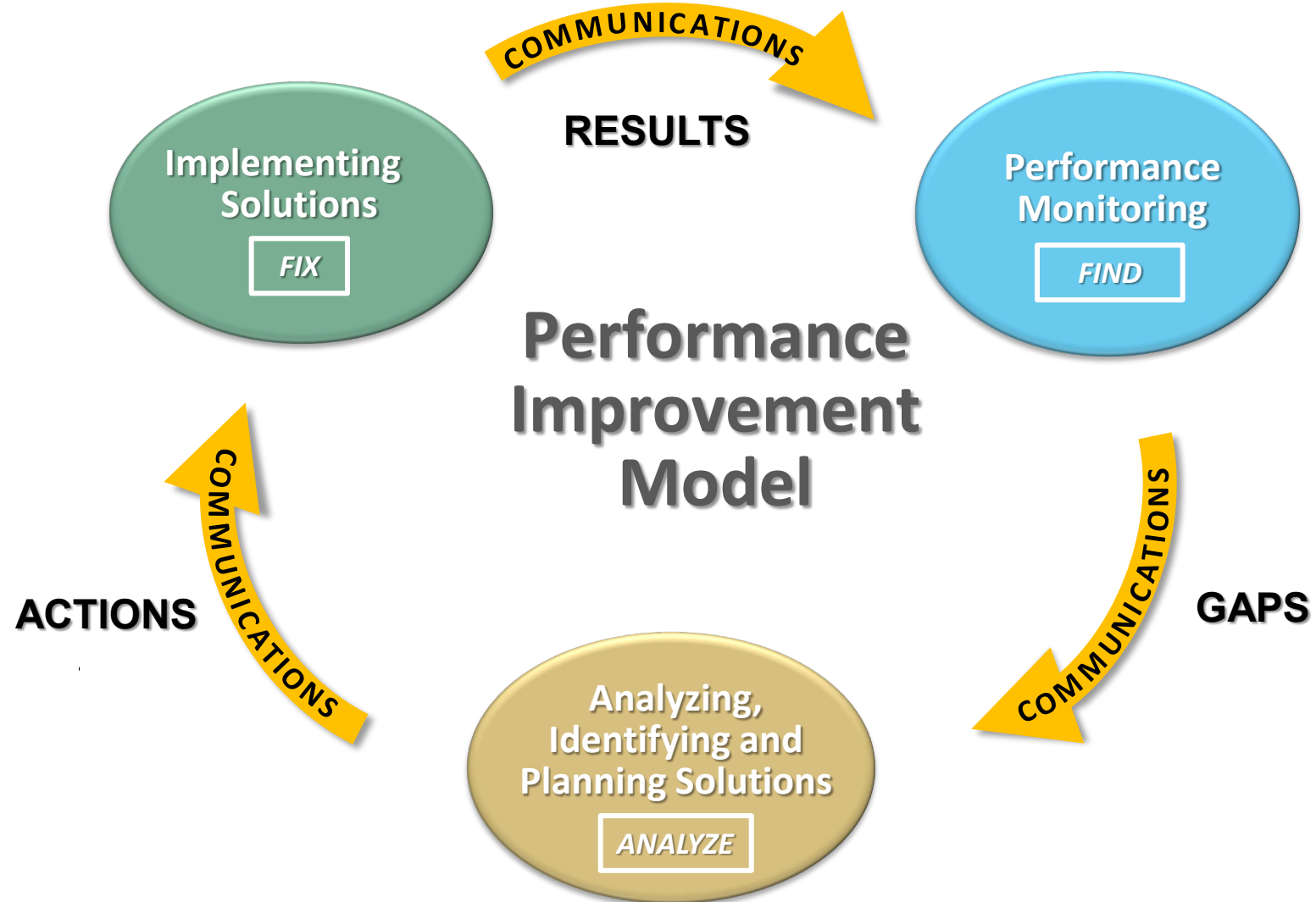
Blair Jones

**Senior Director, Strategy, Performance Improvement
& Organizational Effectiveness**

February 2025



Performance Improvement (PI) Model



Elements

- Corrective Action Program (CAP)
- Self-Assessment
- Benchmarking
- Use of Operating Experience – incoming and outgoing
- Performance Monitoring and Trending
- Use of Human Performance Tools
- Field Engagement and Coaching (Observations)

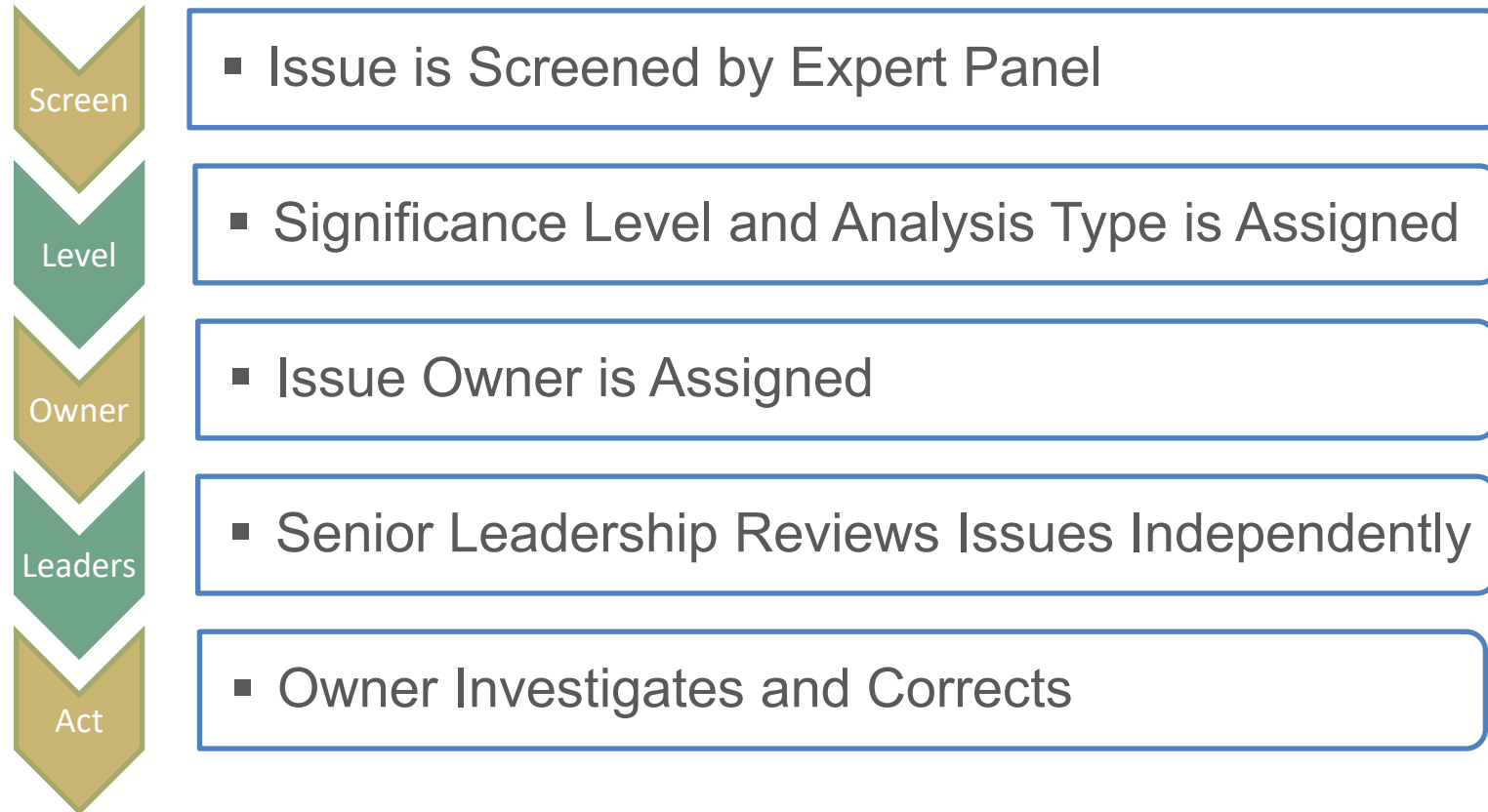
Corrective Action Program (CAP)

CAP improves the safety culture

- Employees identify and document issues electronically, CAP mobile application, paper form, anonymously or directly into SAP
- Issues are assessed for risk and evaluated
- Resulting corrective and preventive actions are tracked to completion
- Issue writer is notified when actions are complete

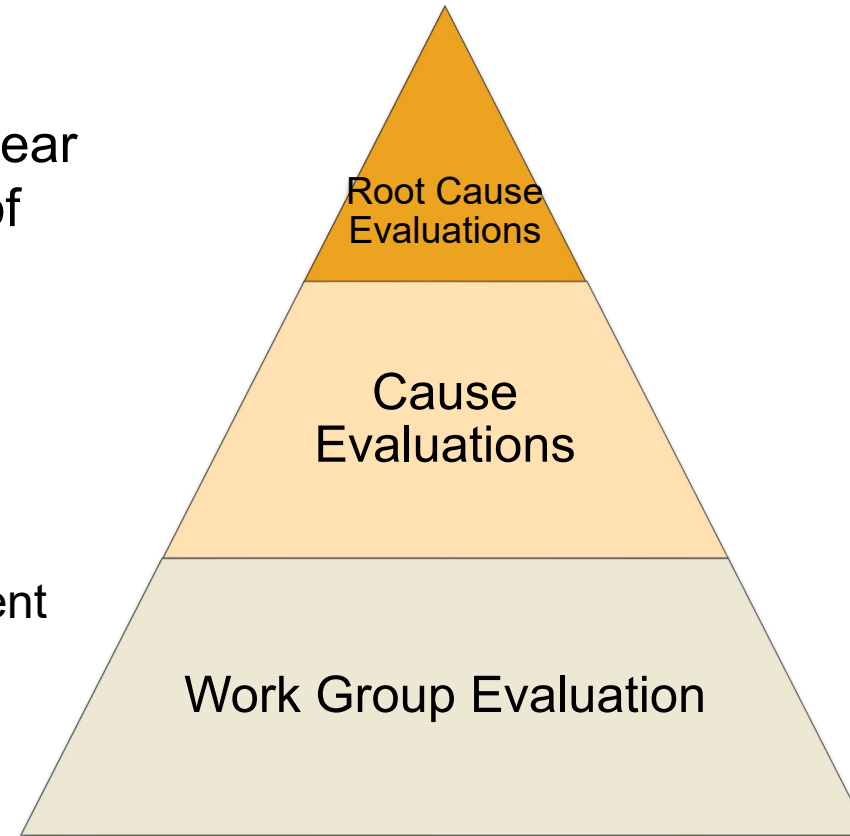
Corrective Action Program (CAP)

After Issue is Submitted



Corrective Action Program - CAP

- Issue Significance Levels
 - The level of significance is based on the risk of the nuclear safety or regulatory aspect of the issue
 - 1: High
 - 2: Medium
 - 3: Low
- Cause Determination Levels
 - The type of analysis is dependent on issue significance, risk, and consequence (high to low)
 - Root Cause Evaluation
 - Cause Evaluation
 - Work Group Evaluation



Self-Assessments Provide:

- Structured method for reviewing the activities and performance of an organization
- A way to identify performance gaps when compared to internal and external standards
- Strategically targets some known or potential performance issues for further investigation

Number of Self-Assessments in 2024:

41

Benchmarking Provides:

- Self-Awareness of our performance and best practices of others
- Who we benchmark:
 - Other DCPD departments
 - Other nuclear facilities
 - Internal PG&E lines of business
 - Comparable industries

Number of Benchmarking Activities in 2024:

94

Use of Operating Experience - OE

What is OE?

- Events, issues, and lessons learned from other stations that enhance each plant's safety and reliability

How do we use OE?

- Reviewed by appropriate departments
- Incorporated into work orders, work practices, engineering designs, & training
- Safety and human performance items are shared with all station personnel

Sources of OE

- Independent external agencies
- Other nuclear and non-nuclear stations
- Other industries
- Industry vendors
- Nuclear steam supply system owners groups
- Other PG&E lines of business (non-nuclear)

Diablo Canyon OE

- Shared externally to nuclear industry
- Safety and HU processes are shared internally with broader PG & E

Number of external OE items reviewed in 2024:

582

Performance Monitoring and Trending

What we monitor:

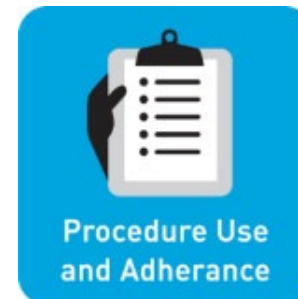
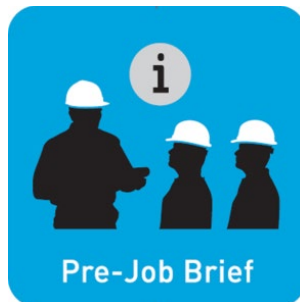
- CAP data
- Observations
- Safety events
- Human Performance events
- Metrics / Performance Indicators
- Self-Assessments results
- Benchmark recommendations
- Quality Verification findings
- Feedback from Independent external agencies
- Worker and leader behaviors
- Safety culture

What we do with it:

- Daily cognitive analysis by a dedicated team of analysts
- Binning and grouping to ID trends
- Analysis of trends to find cause
- Identify precursors and act before bigger issues arise
- Communication of issues and concerns
- Recommend actions
- Use CAP to track
- Perform rapid trending and issue response during outages

Human Performance Tools reduce errors

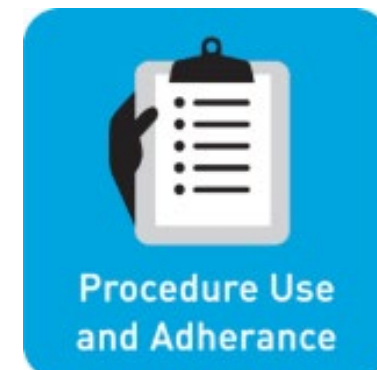
- Humans are fallible. Even the best people make mistakes.
- The average person does not intend to make errors
- Situations where errors can occur are predictable, manageable, and preventable
- Workers use simple yet very effective error prevention tools regularly, such as...



- Our workers have HU checklists used at the start of every job
- Site Standards Handbook is carried and used by every employee

Human Performance

Self-Checking and Procedure Use and Adherence



Why is it Performed?

- Gets leaders into the workspace
- Provides an opportunity to observe how the worker conducts their work
- Allows for immediate feedback concerning performance and behaviors
- Used when trends or patterns indicate a need to check in
- Used to provide positive feedback and reinforcement

How is it Performed?

- Leaders check in on work during the workday
- Focused observations are planned when trends indicate
- Observation Review
Meetings are used to gather data and allow leaders to share experiences
- Software is available to record observations
- Data is reviewed and analyzed by PI team

PI Results Achieved - 2024

41

- Self-Assessments Performed

94

- Benchmarks Performed

582

- Operating Experience Reviewed

34

- DCPPE OE items shared with industry

New Coworker Orientation (NCO)

The Performance Improvement team as part of a “New to Nuclear” training initiative conducted interactive presentations for new employees

- Reviewed the basis of the Corrective Action Program and the requirements of Problem Identification and Resolution
- Reviewed and discussed the process flow of a notification (sapn) using SAP
- Overview of our Human Performance program & procedures
- Overview of the Station's Observation Data & Database
- Overview of Assessments and Benchmarking

The Performance Improvement program at Diablo Canyon is effective

- Self-Assessments ensure alignment with established guidance
- Benchmarking ensures we see our performance in relation to others
- Human Performance Tools effectively reduce errors
- Operating Experience is reviewed, incorporated and shared, thus improving safety
- Trend analyses enable early identification of changes in performance
- Field engagement ensures leaders are aware of performance and promotes real-time feedback

Thank you

Blair Jones

Diablo Canyon Power Plant (DCPP)

Update on the Transition to Extended Operations including License Renewal (Application Review, Aging Management Inspections, and Interactions with the NRC), Staffing and Retention Programs, Major Project Planning, Funding Sources/Approvals, and Status of State and Local Permitting

Presented by:

Philippe Soenen, Director, Strategic Initiatives

Tom Jones, Senior Director, Regulatory Environmental and Repurposing

Allen Wilson, Vice President Engineering

Brian Ketelsen, Director, Business and Technical Services

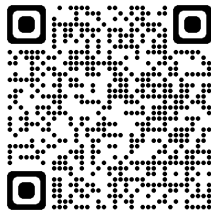
February 20, 2025



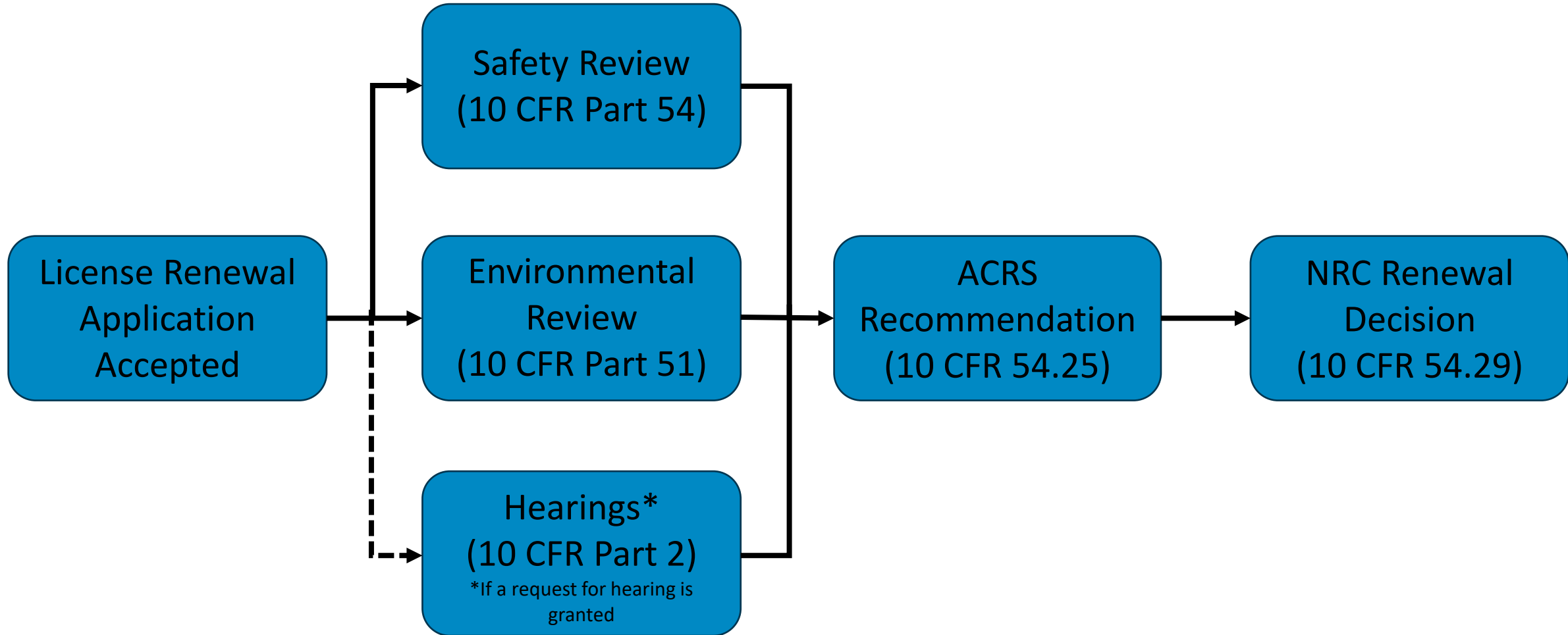
- Background (*Philippe Soenen*)
- License Renewal Application (LRA) Status (*Philippe Soenen*)
- Status of Permitting Activities (*Tom Jones*)
- Staffing and Retention Programs (*Tom Jones*)
- Major Project Planning (*Allen Wilson*)
- Funding Sources and Approvals (*Brian Ketelsen*)

- In 2022, the State of California (State) asked PG&E to preserve the option of extending operations and take the necessary steps to relicense the plant for an additional 5 years.
- In response to the request from the State, PG&E submitted a license renewal (LR) application on November 7, 2023, to the Nuclear Regulatory Commission (NRC) to help ensure electrical reliability statewide.

DCPP's LRA submittal



Process Overview



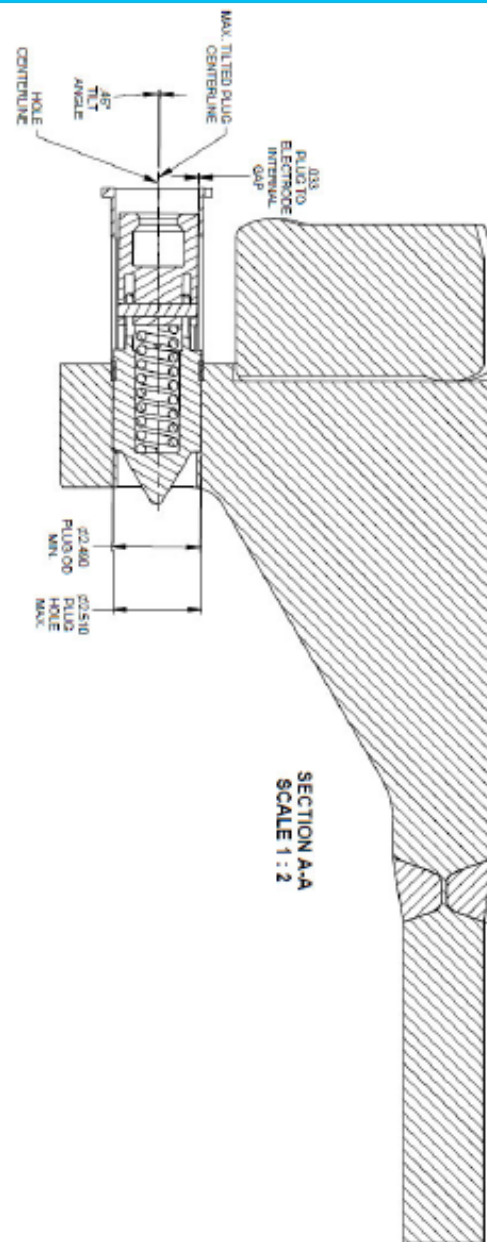
- **NRC License Renewal Reviews and Inspections**
 - 4 Inspections
 - 3 Audits
 - Breakout Sessions
 - 3 sets of requests for additional information (RAIs)
 - PG&E has responded to sets 1 and 2; set 3 response is in progress
- **LRA Supplements**
 - In October 2024, PG&E submitted Supplement 1 to the LRA
 - Included current licensing basis (CLB) changes and updates discussed with NRC during audits and breakouts

- **Aging Management Programs (AMPs)**
 - PG&E's LRA included 44 AMPs which consisted of both new and existing programs
 - Over 280 procedure revisions completed to date
 - Approximately 600 inspections completed
 - No challenges to continued safe operations



Unit 1 Surveillance Capsule B





Capsule Bravo will be shipped offsite for testing.

- NRC regulation requires updated capsule evaluations to be submitted to the NRC within 18 months of a capsule being removed.

- **NRC License Renewal Reviews**
 - 2-week long environmental audit
 - 2 sets of RAIs
 - NRC issued the draft supplemental Environmental Impact Statement

- **Upcoming Activities**

- DCCP LRA review schedule is located on NRC website (click [here](#))
- June 2025 – Safety Evaluation Report is scheduled to be issued by the NRC
- June 2025 – Final SEIS is scheduled to be issued by the NRC
- July 2025 – Advisory Committee on Reactor Safeguards Meeting (*open to the public*)
 - Hybrid meeting

Overview of Permitting Activities

- **Review**
 - The U.S. Nuclear Regulatory Commission's (NRC's) federal licensing action is subject to permitting and review by State and Federal agencies
- **Communication**
 - PG&E continues to consult for Federal and State agencies for License Renewal
 - Completed lease modification with California State Lands Commission
 - Submitted CZMA application to California Coastal Commission
 - Ongoing staff meetings

- **Coordination**

- PG&E has coordinated with the NRC, U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and U.S. Army Corps of Engineers (USACE) regarding the federal Endangered Species Act (ESA) Section 7 Consultation required for License Renewal and Decommissioning
- Section 7 Consultation is a process where federal agency actions are reviewed by the USFWS/NMFS to ensure compliance with the Endangered Species Act
- Next steps for the NRC's Section 7 Consultation with USFWS and NMFS, PG&E submitted a draft USACE permit application package to the agencies on May 29, 2024

- **Status**
 - PG&E has corresponded with the Central Coast Regional Water Quality Control Board regarding the Clean Water Act Section 401 Certification and National Pollutant Discharge Elimination System (NPDES) permit
 - Status: PG&E submitting an NDPES permit application to the Water Board in first quarter 2025

- **Status**
 - PG&E submitted a Coastal Zone Management Act Certification request to the California Coastal Commission (CCC) concurrently with the NRC LRA submittal
 - PG&E working with CCC to obtain Coastal Zone Management Act (CZMA) certification required for LR

- **State and Federal Agency Permitting**
 - PG&E continues to work through the State and Federal agency regulatory requirements for License Renewal
- **NRC Environmental Review**
 - In October 2024, NRC released a Draft Supplemental Environmental Impact Statement (DSEIS) as part of its independent environmental review pursuant to NEPA
 - The DSEIS concludes that License Renewal would have no greater than SMALL impacts for all resource areas
 - The DSEIS makes no recommendations for new or additional mitigation measures
 - NRC staff's recommendation in the DSEIS is to renew the Diablo Canyon operating licenses
 - Final EIS is anticipated to be published by June 2025

- **Retention**

- Senate Bill 846 included an extended operations period employee retention program
 - PG&E was required to submit an application to the California Public Utilities Commission (CPUC) to seek approval for a program and structure
- In September 2024, the CPUC issued its final decision approving the Employee Retention Program for extended operations through 2030

DCPP Retention Program

- Senate Bill 846 extended DCPP's retention program through 2030, aligning with the station's new closure date
- This program builds off the previous retention program which has successfully served us for the better part of a decade
- The first commitment period (September 1, 2023 to December 31, 2024), concluded with over 99% of coworkers participating
- The second commitment period (January 1, 2025, to December 31, 2025), has more than 99% of the eligible employee base currently signed up to participate
- The third and longest commitment period will run January 1, 2026 to December 31, 2028
- The fourth and final commitment period will cover January 1, 2029 through November 1, 2030, the day after Unit 2 is scheduled to go offline

Major Project Planning

- DCPD continues to make necessary project investments to ensure safe and reliable operations
- The NRC continues to assess and reaffirm that Diablo Canyon is operating safely and is among the highest performing plants in the nation
- Additionally, the Diablo Canyon Independent Safety Committee (DCISC) thoroughly evaluates activities at DCPD on a routine basis
- We are in various phases (design, procurement, material fabrication) for our safety and reliability focused major projects, highlights include the replacements of the Unit 1 and 2 high pressure turbines in 2025 and feedwater heater contingency replacements in future outages; these large projects are essential to ensure sustained high performance and delivering reliable energy for California and our customers

Major Project Planning

Unit 1 Projects – Spring of 2025	Unit 2 Projects - Fall of 2025
Digital Rod Position Indication Display Obsolescence	Digital Rod Position Indication Display Obsolescence
10% Steam Dump Controls	10% Steam Dump Controls
Fuel Transfer Cart Upgrades	Fuel Transfer Cart Upgrades
230kV & 500kV Tie Line Relay Upgrades	500kV Tie Line Relay Upgrades
Condenser Saltwater Expansion Joint Replacement	Condenser Saltwater Expansion Joint Replacement
Intake Traveling Screen Frame Replacements – <i>cont'd</i>	Intake Traveling Screen Frame Replacements – <i>cont'd</i>
Circulator Water Tunnel Vent Pipe Replacement	Circulator Water Tunnel Vent Pipe Replacement
Pressurizer Safety Valve Inlet Restraint Modification	Steam Generator Blowdown Tank Replacement
Reactor Vessel Inspections	230kV Tie Line Breaker Upgrades
Digital Paper Chart Recorder Upgrades	
Pipe Gallery Vital Area Upgrades	
Condensate Storage Tank Floating Roof Replacement	

Department of Water Resources (DWR) Loan

- PG&E requested disbursement of \$380M in August 2024 and received the funds in early September 2024
- All loan funds have been disbursed to PG&E with 5% retained by DWR for loan administration costs
- DCPD Actual Spend:
 - 2023 - \$301M
 - 2024 - \$477M
- Performance Based Disbursements:
 - 2023 - \$124M
 - 2024 - \$118M
- Fall 2024 Semi-Annual True-Up submittal still in review

Department of Energy (DOE) Civil Nuclear Credit

- PG&E submitted audit certificates to the DOE in Q2 2024 for Award Year (AY) 2023 revenues and transition costs
- DOE external auditor completed compliance audit on December 13, 2024
- The DOE and external auditor had no findings or adjustments of claimed amounts
- Audit certificates for Award Year (AY) 2024 will be submitted by March 31, 2025.
- First payment from DOE to reimburse DWR expected in Q3/Q4 2025.

DCPP Extended Operations Funding

- CPUC final decision authorized \$723M revenue requirement, which fully funded all DCPP operating expenses
- 2026 funding request on track for March 2025 submittal

PG&E has secured the necessary funding for the continued safe and reliable operation of Diablo Canyon

Questions?

