

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
September 13 and 14, 2023

Avila Lighthouse Suites



Per Peterson, Member, with Richard McWhorter and Ferman Wardell, Consultants

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 DCCP 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 (*Evening Presentation*)



Nuclear Safety Oversight Committee Exit Meeting (Remote)

- External Committee of Five 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 July 13
- Members of the PG&E Board of Directors Also Present at Exit Briefing
- Conclusion – The DCPD NSOC appeared to be thorough and comprehensive in their evaluations and candid in their reports.



Plant Health Subcommittee Meeting

- Relatively New Group – PHSC
 - Provides Input to the Plant Health Committee (PHC)
 - Focus on Equipment Reliability and System Health
- Primary Meeting Topics
 - Reviewed Digital Feedwater and Turbine Control Systems Control Panel Failures
 - Discussed and Made Recommendations to the PHC for New Issues to be Placed on the Top Ten Issues List
- Conclusion Plant Health Subcommittee Committee meeting was conducted efficiently and effectively.



Meet with NRC Resident Inspector and Regional Inspector

- Items Discussed Included:
 - Recent NRC Inspection Activities
 - DCPD's Ongoing Reviews of Corrective Maintenance, Preventive Maintenance, and Projects (the PMO++ Program)
- Conclusion – DCISC's meetings with the NRC continue to be beneficial.



Meet with DCPD Officer

- Adam Peck, Site Vice President
- 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.



Control Room and Auxiliary Building Ventilation Systems

- Both systems in generally good health with minor issues being tracked for resolution.
- Corrosion on Control Room air conditioning condensers will be addressed as a part of future project to replace all refrigerant systems with R-22.
- Control Room leakage testing successfully completed in early 2023.
- Past issues with Auxiliary Building system dampers in the appear to have been effectively resolved.
- Conclusion – DCCP's Control Room Ventilation and Auxiliary Building Ventilation Systems were in good health and performing well.



Inservice Inspection (ISI) Program

- Program complies with American Society of Mechanical Engineers Code, Section XI.
- Program inspects and tests all pressure vessels and piping important to safety.
- DCPD currently in fourth inspection interval (10-year interval) and just began third inspection period (3-year period) in that interval.
- All required third period inspections are now scheduled in upcoming outages.
- ISI group should be able to complete all code-required pressure vessel and piping inspections to support an extension of power operations without needing any relief requests from the NRC.
- Conclusion – DCPD's Inservice Inspection Program was planned and implemented well.



Large Transformers

- 14 Total Large Transformers at DCPD; All in Good Health
- Multiple Minor Issues Will Be Addressed in Upcoming Outages:
 - Oil and Conservator Leaks
 - Dissolved Impurity (Ethane) Trending Up on One Transformer
 - Fan Repairs
 - Corrosion
- Conclusion – DCPD's Large Transformers were in acceptable health overall. Several significant maintenance activities are planned during upcoming refueling outages to address minor issues.



Post-Earthquake Procedures for Plant Access and the Use of FLEX Equipment

- Focused Discussion About How FLEX Equipment Would be Used Following Seismic Event
- Procedures Reviewed:
 - SP-619, “Earthquake Response”
 - CP M-12, “Stranded Plant”
 - CP M-4, “Earthquake”
 - EOP ECA-0.0, “Loss of All AC Power”
 - FSG-05, “Initial Assessment and FLEX Equipment Staging”
 - FSG-44, “Site Debris Removal”



Post-Earthquake Procedures for Plant Access and the Use of FLEX Equipment (continued)

- FLEX Procedures contained appropriate guidance for emergency response personnel to access, transport and use FLEX equipment following a seismic event that is accompanied by an extended loss of all AC power.
- For seismic events not resulting in an extended loss of all AC power, the procedural directions for a transition to FLEX procedures and the use of FLEX equipment to clear access paths were less clear.



FLEX Equipment for
Clearing Accessways



Post-Earthquake Procedures for Plant Access and the Use of FLEX Equipment (continued)

- Conclusion – DCCP's post-earthquake response procedures are generally comprehensive; however, the primary earthquake response procedure CP M-4 does not include assessing FLEX equipment availability or transitioning to FLEX procedures should this be needed following a seismic event.
- Recommendation – PG&E should review and update its post-earthquake response procedure, CP M-4, and supporting procedures, to include assessment of post-earthquake FLEX equipment availability and transition points to use FLEX procedures should they be required.



Per Peterson, Member, with Richard McWhorter and Ferman Wardell, Consultants

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 DCCP 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 (*Evening Presentation*)

Diablo Canyon Power Plant: State of the Plant Update

Dennis Petersen

Station Director

September 13, 2023





Station Update





Station Update

Plant Operation

- Units 1 & 2 are safely operating at 100% power with a Probabilistic Risk Assessment (PRA) of “Green”
- All NRC Performance Indicators (PIs) are Green





Station Update

Station Update

Diesel Generator (DG) Maintenance in 2023

- ✓ July DG 1-1 - Complete
- ✓ August DG 1-2 – Complete
- ❑ January, 2024 DG 2-3 - Scheduled

Unit 1 Refueling Outage (1R24) Scope Oct. 2023

- Reactor Coolant system Drain-down
- Reactor Coolant Pump 1-3 and 1-4 Pump Seal Replacement
- Steam Generator Eddy Current Testing
- Main Turbine (HP) Inspection and mapping (Siemens)
- Main Generator Robotic Inspection (Siemens)
- Main Feedwater Pump 1-2 Pump Inspection
- Feedwater Heater inspections
- Vital Bus G 4kV and 480v Bus Maintenance
- 4kV Bus Preventative Maintenance





Station Update

Station Update

Unit 1 Outage Scope – RE: License Renewal

- Primary Inspections
 - First off weld inspections
 - Refueling Water Storage Tank
- Secondary Inspections
 - Condensate Polisher Vessels
 - Diesel Fuel Oil Storage Tanks
 - Intake Structure (Concrete)
 - Discharge Structure
- Electrical
 - 4kV Vital Bus Supply Cables
 - 480V Cables
 - Metal Bus Enclosures





Station Update

Station Update

- July 10-13 – Nuclear Safety Oversight Committee (NSOC) Site Visit
- July 24-28 – Nuclear Regulatory Commission (NRC) Fitness for Duty Program Inspection
- July 31-August 2 – NRC License Class Exam L23-1
- August 14-16 – Maintenance Program Independent Assessment Walkdown per SB846
- August 21 – NRC Commissioner Wright Onsite Visit
- August 29 – NRC Commissioner Crowell Onsite Visit
- August 21-24 – Mid Cycle Self-Assessment
- September 7- ERO Full Scope Drill



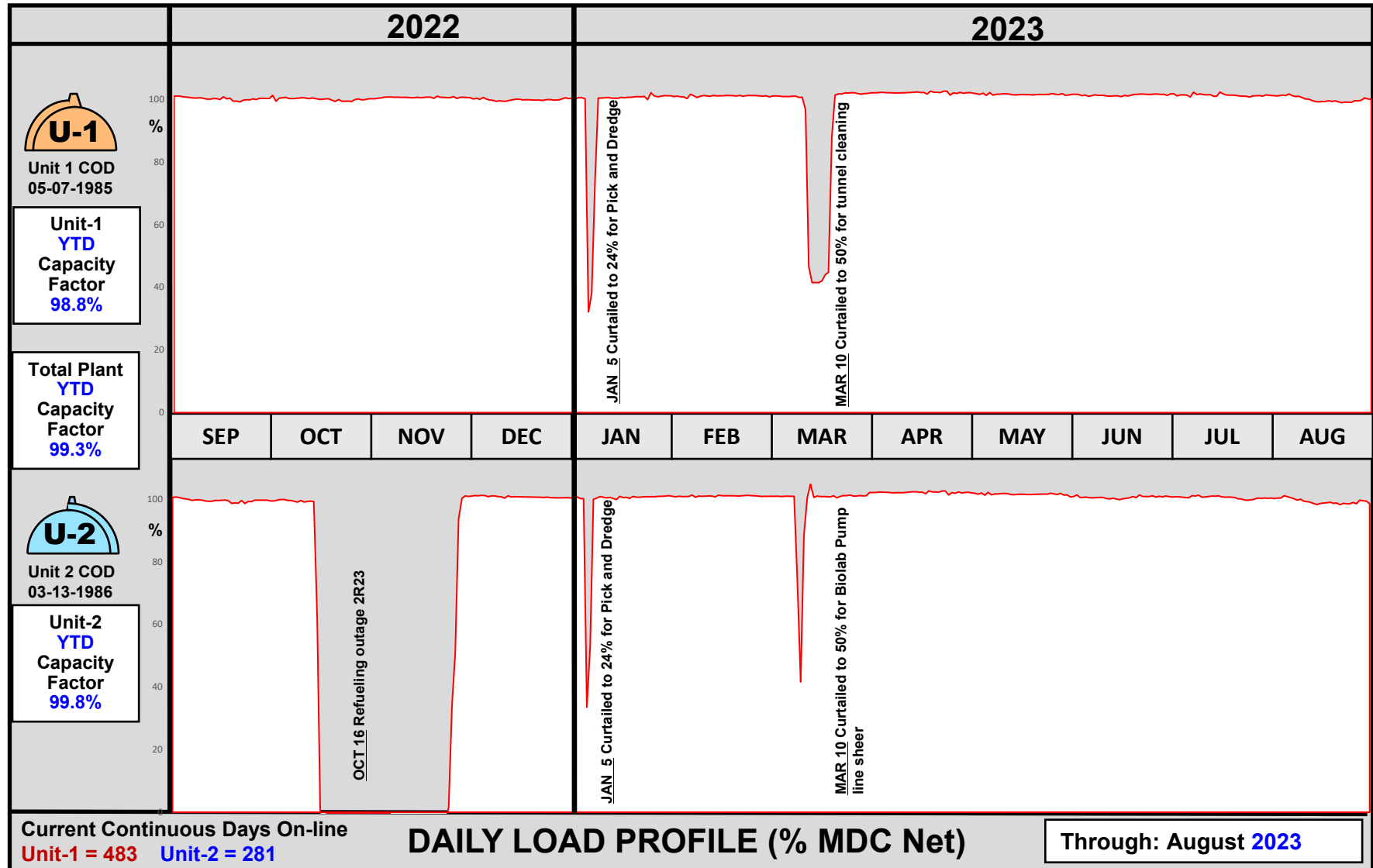


Diablo Canyon Power Plant

Daily Load Profile: Past 12 Months



Daily Capacity Factor Power History Curves





Station Update



Upcoming Station Activities

Nuclear Safety Oversight Committee (NSOC) Site Visit

- November 27-30

Upcoming NRC Inspections and License Renewal Inspections

- NRC Emergency Preparedness – September 2023
- License Renewal Inspections (1R24) – October 2023
- NRC Radiation Protection (1R24) – October 2023
- NRC Inservice Inspection (1R24) – October 2023

Thank You

Dennis Petersen,
Diablo Canyon Power Plant
Station Director



DCPP Regulatory Performance Update

Jordan Tyman
Director, Risk and Compliance
September 13, 2023





DCPP Performance Summary

Late June 2023 – September 2023

- 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 ~2000 hours of inspection time
- Three violations (3) of very low safety significance have been 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 remained in the highest performance category of the NRC's Reactor Oversight Process Action Matrix
 - Inspection findings very low safety significance (i.e., Green)
 - Performance indicators within the expected range (i.e., Green)



Regulatory Update

Late June 2023 – September 2023

NRC Violations

- **Three (3) violations of very low safety significance have been received since the last DCISC update.**
 - **Station procedures did not contain sufficient guidance to prevent simultaneous operation of two non-safety related plant water system pumps**
 - **Station personnel did not identify and correct a weld issue in 1994**
 - **Licensee-Identified Non-Cited Violation – Engineering vendor report information was not processed in accordance with station procedure**



Regulatory Update

Late June 2023 – September 2023

Licensee Event Reports

- **No Licensee Event Reports (LERs) have been submitted since the last DCISC meeting.**



Upcoming Inspections

Upcoming NRC Inspections and License Renewal Inspections

- NRC Emergency Preparedness – September 2023
- License Renewal Inspections
(1R24 Refueling Outage) – October 2023
- NRC Radiation Protection – October 2023
- NRC Inservice Inspection Program – October 2023



DCPP Regulatory Performance Summary

Late June 2023 – September 2023

- DCPP remains in the highest NRC regulatory performance category
- Three violations (3) of very low safety significance have been received since the last DCISC update
- DCPP continues to provide safe, clean, and reliable electricity to Californians

Thank you

Jordan Tyman
Director, Risk and Compliance





Peter Lam, Member with Ferman Wardell & Richard McWhorter, Consultants

- 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 DCCP Officer, Maureen Zawalick**
- 8. Boric Acid Leak Root Cause Evaluation**
- 9. Comprehensive Review of Equip. Long-Range Planning & Mnt.**
- 10. Radioactive Effluent Release & Environmental Monitoring Reports**
- 11. Reactor Vessel Embrittlement**



Meet with NRC Resident Inspector and Regional Inspector

- **Items Discussed Included:**
 - **Recent NRC Inspection Activities**
 - **DCPP' s Ongoing Reviews of Corrective Maintenance, Preventive Maintenance, and Projects (the PMO++ Program)**
- **Conclusion – Meetings with NRC continue to be beneficial.**



Powerblock WiFi and Electronic Work Packages and Procedures

- DCCP has WiFi at multiple locations in the Powerblock primarily in office areas and other regularly staffed work areas
- WiFi is temporarily set up inside Containment during refueling outages
- Used by Radiation Protection for remote radiation level monitoring
- No current plans for WiFi expansion elsewhere in the Powerblock

(Continued)



Powerblock WiFi and Electronic Work Packages and Procedures, Cont' d.

- Previous attempts at electronic work packages not successful
 - Difficulty of reading and comprehending multiple documents (e.g., procedures, drawings, manuals, etc.) on small tablets
 - Not user-friendly
 - Two Maintenance Groups, Scaffolding and Insulation & Coatings, use them regularly as their packages are relatively simple.
- Conclusion: WiFi to remain as is. Electronic procedures may be a better fit. DCISC should review electronic procedures.



Observe Maintenance Work

- DCISC toured the 4kV Vital Bus 1–G Room
- Observed Instrument and Controls (I&C) Maintenance Teams performing two work packages:
 - 1) Replacement of toggle switches on the Emergency Diesel Generator (EDG) output breaker panel
 - 2) Testing and adjusting relays on the EDG controls.
- Conclusion: Maintenance technicians had the proper procedures and instructions, proper personnel protective equipment, and used human performance tools such as procedure place-keeping.



Rod Control and Indication System

The primary purpose of the Rod Control System is the following:

- Move the control rods sequentially in manual or automatic to:
 - Start up the reactor (in manual)
 - Shut down the reactor (in manual)
 - Maintain reactor coolant temperature (in manual or automatic)
- Indicate the positions of control rods

(Continued)



Rod Control and Indication System, cont' d.

- The Rod Control System (RCS) consists of the following components:
 - Dedicated motor-generator sets for assured DC power
 - Reactor Trip Breakers which will trip open on various trip signals, causing the Control Rods to drop into the Core
 - Automatic Reactor Control Unit & Logic Cabinet
- Two System events on Unit 2 in February & June 2020

Conclusion: The System is in good health and will be better able to serve DCCP during an extension of power operations with replacement of the system control cabinet, which is planned.



Employee Concerns Program

- Alternate confidential venue for employees to report concerns
- Program independent of line management
- ECP may be used to report nuclear safety concerns

Other Avenues:

- Employee's immediate supervisor or someone higher
- Compliance and Ethics Hotline
- Directly to the NRC: Allegations

(Continued)



Employee Concerns Program, Cont' d.

Conclusions

Based on discussions with ECP manager and ECP data:

- The DCPPE ECP appeared to function effectively in receiving and investigating employee concerns in a confidential manner.
- During 2022, as in past years, and to-date in 2023, there were no significant concerns regarding nuclear safety.



Nuclear Safety Culture

- DCPD Safety Culture: “Core values and behaviors which result from a collective commitment from leaders and individuals to emphasize safety over competing goals to ensure the protection of people and the environment.”
- Nuclear Safety Culture, Safety Conscious Work Environment (SCWE), and Employee Concerns Program all work in tandem, and each needs to be well aligned with the others.
- SCWE is a work environment in which employees are encouraged to raise safety concerns.

Continued



Nuclear Safety Culture, Continued

The most recent NRC PI&R inspection in December 2022 identified a few isolated cases in which some employees were reluctant to raise safety issues; however, it concluded the following regarding DCPD SCWE:

“Based upon all these interviews, observations, and document reviews, the [NRC] team found that the station has a safety conscious work environment . . .

“ . . . from interviews the [NRC] team found your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.”

Continued



Nuclear Safety Culture, Continued

Conclusions:

- NRC concluded that DCPD “ . . . has a safety conscious environment.”
- DCISC, in its monthly fact-finding meetings with DCPD leadership and employees, has frequently observed the traits of a good Safety Conscious Work Environment. Personnel emphasize nuclear safety first as well as “telling it like it is,” e.g., report to the DCISC the strengths and weaknesses of programs and systems.



Meet with DCPD Officer

- Maureen Zawalick, Vice President, Business & Technical Services
- 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.



Boric Acid Leak Root Cause Evaluation

- Inservice Inspection engineers spotted a white deposit in Containment during Outage 2R23 normal inspection.
- Presence of boric acid was confirmed on a 2” vacuum fill line off the Loop 1 Reactor Coolant System cold leg.
- No active leakage when the boric acid was discovered.
- Evidence of past leakage when the plant was operating at full pressure and temperature.
- Issue was entered into the Corrective Action Program for resolution.

Continued



Boric Acid Leak Root Cause Evaluation, Continued

- A Root Cause Evaluation Team was assembled to determine the root cause.
- Investigation showed the leak was from a crack in a faulty 2-inch socket weld exacerbated by normal vibration from the Reactor Coolant Pump.
- Inspection of other similar welds showed no problems.
- A weld overlay, permitted by the applicable piping code, was performed to stop the leakage.
- The weld will be cut out and examined further at the next outage and the joint rewelded.

Continued



Boric Acid Leak Root Cause Evaluation, Continued

- Conclusion: The Unit 2 boric acid leak in the early stages of Outage 2R23 was identified and resolved appropriately. There were no nuclear safety concerns.



Review of Equipment Long-Range Planning and Maintenance

- This item will be presented in full at tonight's public meeting.



Annual Radioactive Effluent Release Report (ARERR) and Radiological Environmental Monitoring Program Report (REMP)

- DCCP submitted its annual ARERR and REMP to NRC on May 1, 2023 for 2022 results.
- The ARERR described the measured/calculated quantities of radioactive gaseous effluents, liquid effluents, and direct radiation released from the plant.
- The REMP Report measures and assesses the levels of radiation or radioactivity in the environment related to operation of DCCP and verifies that DCCP operated within its design parameters.

Continued



Annual Radioactive Effluent Release Report (ARERR)
and
Radiological Environmental Monitoring Program Report (REMP), cont' d.

<u>Effluent Type</u>	<u>Calculated Radiation Dose</u>	<u>Percent of ODCM Limit</u>
Liquid	0.000275 millirem	0.092%
Gaseous	0.00220 millirem	0.022%

Continued



Annual Radioactive Effluent Release Report ARERR)
and
Radiological Environmental Monitoring Program Report (REMP), cont' d.

Conclusions

- The results of the 2022 ARERR showed that the doses associated with plant effluent releases were much less than the respective DCPD Technical Specification and NRC limits.
- The 2022 REMD reported that operation of DCPD continued to have no detectable offsite radiological impact.



Reactor Vessel Embrittlement

- Items Discussed:
 - History of Unit 1 Embrittlement
 - Unit 1 Coupon Removal in Outage 1R24
 - Severance Document
 - DCISC will have an Independent Review of All Information by its Expert Consultant
 - Consultant Report to Be Made at DCISC February 2024 Public Meeting
 - Conclusion: DCISC will perform an independent review of the DCPD Unit 1 Reactor Vessel Embrittlement issue.



Peter Lam, Member with Ferman Wardell & Richard McWhorter, Consultants

- 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 DCCP Officer, Maureen Zawalick**
- 8. Boric Acid Leak Root Cause Evaluation**
- 9. Comprehensive Review of Equip. Long-Range Planning & Mnt.**
- 10. Radioactive Effluent Release & Environmental Monitoring Reports**
- 11. Reactor Vessel Embrittlement**



Robert Budnitz, Member, with Richard McWhorter, Consultant

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. Intake Structure 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 Planning and Safety Schedule
12. Review of Equipment Long-Range Planning and Maintenance
13. Intake Cove Sediment Issues



Spent Fuel Management

- Orano Procurement Update
 - Certificate of Compliance Amendment 4 Submitted to the NRC in June 2023 (Includes Higher Heat Loads)
 - Site Specific Analyses Still In Progress; Possible Amendment Needed
- Upcoming Spent Fuel Movement Plans
 - 12 Holtec Multi-Purpose Canisters (MPCs) Procured
 - Offload Campaign Planned for Summer/Fall 2024 (6 MPCs per Unit)
 - Creates Enough Room in Spent Fuel Pools to Support Operations Through 2027



Spent Fuel Management (continued)

- Independent Spent Fuel Storage Installation (ISFSI) License Renewal Update
 - Revision 1 Submitted in August 2023 (Addressed Possible Extended Operations)
 - Responses In Preparation to June 2023 NRC Requests for Additional Information – No Significant Technical Issues
 - No Current Plans to Expand ISFSI
- Conclusion – DCCP's procurement of a new spent fuel storage system from Orano was continuing. Procurement of 12 new Holtec MPCs was underway, and a spent fuel offload campaign was planned to be performed in July to November 2024. The License Renewal Application for the existing spent fuel storage system was recently amended to reflect the possibility of extended operations.



License Renewal

- Draft License Renewal Application (LRA) Complete and Under Review
- 43 Aging Management Plans; 12 New Since 2009 LRA
- PG&E Working on Planning for LRA Inspections to be Performed During Refueling Outage 1R24; Also Coordinating With NRC Inspection Plans
- Once LRA Submitted and the NRC Deems It a Sufficient Application, Operations May Continue Past License Expiration
- Conclusion – DCPP's preparation of a License Renewal Application was proceeding on schedule to meet the needed submission date to the NRC of December 31, 2023. Planning was nearly complete for initial Aging Management Plan inspections to be performed during the upcoming Refueling Outage 1R24.



Plant Health Prioritization Committee (PHPC) Meeting

- PHPC's Purpose
 - Reviewing All Changes Initiated by Plant Health Improvement Plans and Selecting and Funding Those Warranting a Feasibility Study
 - Approving Implementation Schedule, Scope, Funding, and Risk Determination After Feasibility Study Has Been Performed
- Meeting Topics
 - Routine Agenda; Gate 1 Study Reviews for Eight Proposed Projects.
- Conclusion Plant Health Prioritization Committee meeting was conducted efficiently and effectively.



Meet with DCPD Officers (Two Meetings)

- Adam Peck, Site Vice President
- Maureen Zawalick, Vice President Business and Technical Services
- 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.



Staffing Following Tier 2 Retention Program Expiration

- Under Joint Proposal – Tier 1, 2016 – 2020, and Tier 2, 2021 – 2023 (August)
- Since SB 846, 215 Additional Staff Hired by DCPD
- DCPD Working with Union to Finalize Proposal for New Incentive Plan
- New Plan Proposed to Span 2024 – 2030 in Tiers
- Consistent with SB 846 Language
- PG&E Presentation During Thursday Afternoon Public Meeting Session
- Conclusion – DCPD was working to define and seek approval for a new employee retention program that would begin following the expiration of the Tier 2 incentive program and continue incentive payments through the proposed extension of power operations to 2030.



Intake Structure Tour

- Intake Structure
 - Outside Areas – Traveling Screens; Maintenance Shops
 - Inside Areas – Circulating Water Pumps; Auxiliary Saltwater Pumps
- Conclusion The DCISC Fact-Finding Team toured the DCPD Intake Structure and observed that equipment was in good condition.



FFT at Intake Structure



Meet with NRC Resident Inspector and Regional Inspector

- Items Discussed Included:
 - Recent NRC Inspection Activities
 - Upcoming NRC Inspections to Support License Renewal
 - Recent NRC Commissioner Visits
- Conclusion – The meeting with the NRC Senior Resident Inspector was beneficial, and the DCISC should continue the meetings.



Steam Generators

- All Steam Generators (Four per Unit) in Excellent Health Since Replacements in 2008 and 2009.
- Currently Eight Tubes Plugged on Unit 1 and Three Tubes Plugged on Unit 2
- Next Inspections Planned for:
 - 1R24 (Fall 2023) on Unit 1
 - 2R27 (Fall 2028) on Unit 2
- Conclusion – DCCP's Steam Generators were in excellent health, and plans for future Steam Generator inspections were appropriate.



Seismic and Geosciences Update

- Update on Seismic Assessment Mandated by SB 846
 - PG&E Assessment Team Met and Began Assessment on July 21
 - Draft Results Planned for Meeting on September 19; Final on November 6
 - If Level 1 Analysis Necessary (September), Final Would Be Late 2024
 - PG&E Presentation During Thursday Afternoon Public Meeting Session
- 2018 Quality Assurance Audit of Geosciences Department
 - Pertained to Department-Specific Program Developed in 2002
 - Not Applicable to Major Studies Used for Current Seismic Analyses
- Conclusion – PG&E has begun work on its updated seismic assessment required by SB 846 and draft findings should be available in September.



Refueling Outage 1R24 Planning and Safety Schedule

- Reviewed Status of Outage Preparations
 - Some Planning Milestones Not Met; Recovery Plans in Progress
 - License Renewal Inspections Scope Understood and Resources Available
- Draft Outage Safety Plan Reviewed
 - No Red or Orange Defense-in-Depth Windows
 - More Yellow Windows than Typical (10); Driven Mostly By Partial Draining of the Reactor Coolant System to Support Valve Maintenance
- Conclusion – DCCP's preparations for Refueling Outage 1R24 were progressing satisfactorily with recovery plans in place for some planning activities that were behind schedule.



Review of Equipment Long-Range Planning and Maintenance

- Update on Independent Assessment of Maintenance Mandated by SB 846
 - Team of Two Industry Consultants Completed Onsite Work in Mid-August
 - Final Report Expected by End of October
 - PG&E Presentation During Thursday Afternoon Public Meeting Session
- Also Discussed Role of PHPC and Planning Activities for Future Projects to Support an Extension of Power Operations.
- Conclusion – The independent consultant study of maintenance required by SB 846 is nearing completion, and DCPD expects to receive a final report by the end of October 2023.



Intake Cove Sediment Issues

- Issue Discussed During Reviews of Future Projects
- Sand Accumulation in Intake Cove Entrance – 16–20 Feet of Sand on Top of Base Depth of 36–38 Feet
- Increases Velocity of Water Drawn Through Screens by Circulating Water Pumps and Possibly Increases Kelp Ingestion
- Complicates Inspections and Cleanings by Divers
- DCPD Pursuing Expedited Permit for Dredging
- Could Begin in Fall 2023; 50 Days; Spoils to Disposal Area in Morro Bay
- Conclusion – DCPD's plans to pursue dredging of the intake cove were appropriate.



Robert Budnitz, Member, with Richard McWhorter, Consultant

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. Intake Structure 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 Planning and Safety Schedule
12. Review of Equipment Long-Range Planning and Maintenance
13. Intake Cove Sediment Issues



July 13, 26 and 27, 2023, Fact-Finding Report

Per Peterson, Member, with Richard McWhorter and Ferman Wardell, Consultants

Section 3.9 – Review of Equipment Long-Range Planning and Maintenance

August 9 and 10, 2023, Fact-Finding Report

Peter Lam, Member, with Ferman Wardell and Richard McWhorter, Consultants

Section 3.9 – Comprehensive Review of Equipment Long-Range Planning and Maintenance



Background

- Joint Proposal Signed in 2016, Approved by CPUC in 2018
- SB846 Enacted in September 2022
- *“(B) The commission shall review the reports and recommendations of the Independent Safety Committee for Diablo Canyon described in Section 712.1. If the Independent Safety Committee for Diablo Canyon’s reports or recommendations cause the commission to determine, in its discretion, that the costs of any upgrades necessary to address seismic safety or issues of deferred maintenance that may have arisen due to the expectation of the plant closing sooner are too high to justify incurring....”*
- CPUC asked DCISC to report by June 2023; later delayed to August 2023



Outline

- Projects and Long-Range Planning
 - History, Initiatives to Support Extended Operations, Results, Independent Reviews
- Preventive Maintenance
 - History, Initiatives to Support Extended Operations, Results, Independent Reviews
- Corrective Maintenance
 - History, Initiatives to Support Extended Operations, Results, Independent Reviews
- Conclusions



Projects and Long-Range Planning

- History
 - From 2018 to 2022, Capital Projects (Upgrades) Formally Reviewed and Reduced Consistent with Planned Cessation of Power Operations
 - Project Review Results Approved as a Part of 2020 General Rate Case Before the CPUC
 - Records for These Formal Processes Were Retained in DCPD's Data Management System (SAP) and Were Available for Subsequent Reviews and Additional Consideration Following the Passage of SB846
 - DCISC reviewed DCPD's capital project planning process twice in 2018 and once in 2022 – Concluded that DCPD followed an effective and formal process for prioritizing, completing and cancelling capital projects (upgrades).

(continued) 4



Projects and Long-Range Planning (continued)

- Initiatives to Support Extended Operations
 - December 2022 – January 2023: Cross-Functional Team Formed to Perform Comprehensive Review (PMO++ Program)
 - PMO++ Program Team Reviewed all Design Changes and Modifications (Upgrades) Previously Proposed but Not Approved
 - 560 Potential Projects and Issues Identified as Possible Upgrades Needed to Support Extended Operations
 - Potential Projects Ranked Based on Risk and Complexity of Implementation
 - DCISC found that DCPD's process provided strong assurance that nuclear safety would not be compromised by equipment degradation, and effectively considered all factors in considering which upgrades were prudent and necessary to support extended operations.

(continued) 5



Projects and Long-Range Planning (continued)

- Results
 - About 250 Projects Identified for Consideration of Implementation with Prioritization
 - Project List Subdivided into Scheduled Outages and Non-Outage Projects; Now Transitioned to Working Document to be Refined Going Forward
 - Detailed Project List (as of July) Provided to and Reviewed by the DCISC
 - DCISC Reviewed Project List to Confirm Assurance of Nuclear Safety Moving Into Extended Operations
 - Focused Examination of Most Risk-Significant Systems
 - Detailed Review and Validation of Issues Identified in Past DCISC Reports Back to 2016

(continued) 6



Projects and Long-Range Planning (continued)

- Results
 - Example: Partial List of Refueling Outage 2R23 Projects (Spring 2024):
 - High Voltage Transformer Improvements *
 - Spare High Voltage Transformer Relocation
 - Intake Traveling Screen Frame Replacements
 - Reactor Vessel Level Indication System Repairs *
 - Main Condenser Waterbox and Tubesheet Coatings *
 - Rod Control Power Supply Upgrade
 - 230kV/500kV Relay Replacements *
 - Steam Generator Blowdown Tank Replacement
 - Radiation Monitor Sampling Enhancements *
 - Paper Chart Recorder Upgrades *
- DCISC found that the results of the reviews and plans for future plant upgrades were appropriate to ensure nuclear safety and a high standard of equipment reliability.

(continued) 7



Projects and Long-Range Planning (continued)

- Independent Reviews
 - Two External Reviews Performed by Industry Peers in May 2023
 - No Gaps or Deficiencies Identified
 - Positive Comments on Process and Resources Used
 - Minor Recommendations Made With Regards to Future Management of a Large Number of New Projects
 - NRC Was Also Onsite During July Performing Reviews (report not yet available)
 - Independent Review Required by SB846 In Progress



Preventive Maintenance (PM)

- History
 - Procedurally Controlled Program to Ensure Safety and Non-Safety Related Systems Maintained Such That They Will Perform Their Intended Functions
 - Two Categories of Equipment – Critical and Non-Critical
 - Many Critical Components Have Regulatory Requirements for PMs and Are Covered Under the NRC's Maintenance Rule
 - During the Period From 2016 to 2022, DCPD Continued to Perform All PMs on Safety-Related Equipment, Equipment Important to Safety, and Risk-Significant Equipment



Preventive Maintenance (PM) (continued)

- History
 - In 2018, DCPD Performed a Review of All PMs at the Station – the Original PMO (Preventive Maintenance Optimization) Program
 - The 2018 PMO Program Was Focused on Optimizing PMs for Non-Critical Components
 - DCISC Reviewed DCPD's PMO Program Twice in 2018 – Concluded the program was being performed in accordance with procedures and DCPD continued to appropriately perform all PMs on critical components.



Preventive Maintenance (PM) (continued)

- History
 - DCPD's Systems, Structures and Components Important to Safety Continually Covered by the NRC Maintenance Rule (MR)
 - Risk-Based Performance Criteria Monitored Continually; If Component Fails to Meet Performance Criteria, Corrective Actions Initiated
 - DCISC reviewed DCPD's MR Program twice since 2018 – Concluded the program was effective to prevent failures of components important to safety.
 - DCISC also regularly reviews the health of systems – Findings usually show systems in good health with no major issues.
 - DCISC found that historically DCPD's PM Program has been effective in preventing failures of components important to safety.



Preventive Maintenance (PM) (continued)

- Initiatives to Support Extended Operations
 - December 2022 – January 2023: Cross-Functional Team Formed to Perform Comprehensive Review (PMO++ Program)
 - The PMO++ Program Team Reviewed all PM Change Requests (PMCRs) Processed Since 2018
 - 526 PMCRs Reviewed – Most Involved Detailed Procedure Changes and Not Broad Scope or Periodicity Changes
 - Focus – Find Any PMCRs That Initiated Changes Based Primarily Upon the Planned Cessation of Operations
 - DCISC found that DCPD developed an extensive, logical, and formal process for identifying and evaluating PM activities that may have changed since 2018 due to the planned cessation of operations.

(continued) 12



Preventive Maintenance (PM) (continued)

- Results
 - 526 Old PMCRs Reviewed
 - 88 New PMCRs Generated Affecting Approximately 200 Maintenance Plans.
Timeframe – Achieve Reliable Operations for an Indefinite Period
 - Majority of New PMCRs Affected Non-Critical Components
 - Full List of 526 PMCRs and the Associated 200 Maintenance Plans Provided to and Independently Reviewed by the DCISC
 - DCISC found that the results of DCCP's reviews of PM Program changes made since 2018 properly reinstated any previous PM Program changes needed to support extended operations.



Preventive Maintenance (PM) (continued)

- Independent Reviews
 - Two External Reviews Performed by Industry Peers in May 2023
 - No Gaps or Deficiencies Identified
 - No Negative Comments on Process or Results
 - NRC Was Also Onsite During July Performing Reviews (report not yet available)
 - Independent Review Required by SB846 In Progress



Corrective Maintenance (CM)

- History
 - Procedurally Controlled Program Using the Corrective Action Program (SAP System) to Identify, Evaluate, Track, Schedule and Repair Equipment Issues
 - Priorities 1, 2 and 3 – Critical and High Priority CM Work Requiring Scheduling and Repair Within 24 hours/7 days/45 days
 - Priority 4 – Routine CM Work Scheduled into the Normal 12-Week Rolling Work Schedule or Next Maintenance Outage Window
 - Priority 5 – Routine CM Work Scheduled as Time Permits
 - CM Work on Equipment that is Quality-Related (Flagged in SAP) Always Classified as Priority 1 – 4



Corrective Maintenance (CM) (continued)

- History
 - Priority 5 Work Can Be Further Classified as “Deferred Maintenance with Monitoring” or “Unscheduled”
 - From 2018 to 2022, DCPD Did Not Defer or Cancel any Priority 1, 2 or 3 CM Work Activities or any Priority 4 Work on Quality-Related Equipment
 - The DCISC Independently Verified This Through The Results of Its Reviews of System Health and the MR Program (Similar to the PM Program)
 - Backlog of Priority 4 Work on Non-Quality Related Equipment and Priority 5 Unscheduled Work Grew Over the Last Two Years Due to the Pending Cessation of Operations



Corrective Maintenance (CM) (continued)

- History
 - DCPD Never Cancelled Any CM Work, No Matter How Low the Priority or If Classified as Unscheduled (A Very Conservative Policy)
 - Approximately 2200 Unscheduled or Monitored Priority 5 CM Work Orders in the SAP System in Late 2022
 - DCISC found that historically, DCPD's CM Program was effective in reporting, scheduling, and repairing equipment deficiencies. Since 2018, DCPD has not deferred any CM Work for components important to safety or reliability. Records of all CM Work not performed on systems other than those important to safety or reliability were retained in DCPD's work management system.



Corrective Maintenance (CM) (continued)

- Initiatives in Support of Extended Operations
 - PMO++ Program Team Reviewed the Entire List of About 2200 Priority 4 and 5 Unscheduled or Monitored CM Work Orders on Non-Quality Related Equipment
 - Unscheduled or Monitored CM Work Orders That Warranted Reconsideration Were Reentered into the Daily Review Team Process for Reevaluation and Reconsideration of Scheduling for Completion
 - DCISC found that DCPD developed an extensive, logical, and formal process for identifying and evaluating all CM Work on non-quality related equipment that DCPD chose not to perform over the last few years given the planned cessation of power operations.



Corrective Maintenance (CM) (continued)

- Results
 - The Daily Review Team's Reviews Resulted in the Reinstatement of Approximately 160 Priority 4 and 5 CM Work Orders
 - Full List of 160 Priority 4 and 5 CM Work Orders Was Provided to and Reviewed by the DCISC
 - Additionally, the PMO++ Program Team Identified a Number of Unscheduled CM Work Orders Involving Corrosion and Coating Concerns.
 - A Special Work Group Was Established to Address Corrosion and Coating Deficiencies
 - The DCISC found that the results of DCP's CM Work Order reviews appropriately reinstated all unscheduled CM Work Orders that were not previously planned to be worked given the cessation of power operations.

(continued)



Corrective Maintenance (CM) (continued)

- Independent Reviews
 - Two External Reviews Performed by Industry Peers in May 2023
 - No Gaps or Deficiencies Identified
 - No Negative Comments on Process or Results
 - NRC Was Also Onsite During July Performing Reviews (report not yet available)
 - Independent Review Required by SB846 In Progress



In-Progress Independent Review

- Included in SB846 was the following mandate for PG&E:
- *“(14) A covenant that the operator [PG&E] shall commission a study by independent consultants to catalog and evaluate any deferred maintenance at the Diablo Canyon powerplant and to provide recommendations as to any risk posed by the deferred maintenance, potential remedies, and cost estimates of those remedies, and a timeline for undertaking those remedies.”*
- Consultants Selected and Began work in June 2023
- Results Expected in October 2023



Conclusions

- DCPD developed an extensive, logical, and formal process for effectively and positively capturing and prioritizing possible plant upgrade projects following the passage of SB846 and considering the possibility of extending power operations through 2030. The DCISC found that DCPD's resulting plans for future plant upgrades to support extended operations were appropriate to ensure nuclear safety and a high standard of equipment reliability. The DCISC recommends that California state authorities support the funding of the plant upgrade projects recommended by DCPD. The DCISC did not find any upgrades necessary to ensure nuclear safety that were not already being planned by DCPD.



Conclusions (continued)

- DCPD's Preventive Maintenance Program has been effective in the past in preventing failures of components important to safety based both on recent programmatic reviews as well as many other past reviews on the health of individual systems. All changes made to the Preventive Maintenance Program since 2018 were appropriately recorded and available for later reviews. The DCISC found that the majority of previous changes to the PM Program were made for equipment that was not important to safety or reliability. DCPD properly reviewed all Preventive Maintenance Program changes made since 2018 and appropriately reinstated or otherwise modified the previous changes in order to support extended operations. The results of DCPD's Preventive Maintenance Program review were prudent and would ensure that nuclear safety and equipment reliability were appropriately maintained during a period of extended operations.



Conclusions (continued)

- DCPD's Corrective Maintenance Program has been effective in the past in the reporting, scheduling, and repairing of equipment deficiencies. Since 2018, DCPD has not deferred any corrective maintenance of components important to safety or reliability due to the previous plan to cease power operations in 2025. The DCISC found that DCPD developed an extensive, logical, and formal process for identifying and evaluating all Corrective Maintenance activities on non-quality related equipment that DCPD chose not to perform over the last few years given the planned cessation of power operations. DCPD properly reviewed all open Corrective Maintenance work orders and appropriately reinstated any unscheduled work orders that were not previously planned to be worked in light of the cessation of power operations but were now appropriate to be worked in order to support extended operations. The results of DCPD's Corrective Maintenance Program reviews were prudent and would ensure that nuclear safety and equipment reliability were appropriately maintained during a period of extended operations. 24



July 13, 26 and 27, 2023, Fact-Finding Report

Per Peterson, Member, with Richard McWhorter and Ferman Wardell, Consultants

Section 3.9 – Review of Equipment Long-Range Planning and Maintenance

August 9 and 10, 2023, Fact-Finding Report

Peter Lam, Member, with Ferman Wardell and Richard McWhorter, Consultants

Section 3.9 – Comprehensive Review of Equipment Long-Range Planning and Maintenance

Engineering Organization Update

Diablo Canyon Power Plant

Allen Wilson

Sr. Director, Engineering, Projects, & Outages

September 13, 2023





2022 Update Recap

Previous update given in June 2022; the organization was in transition to Decommissioning:

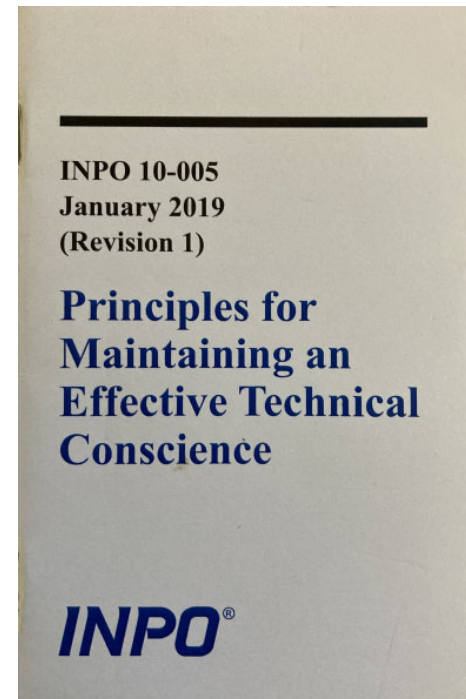
- Focus continued to be on strong Technical Conscience and advocacy for safe and reliable operation through end of licensed operation
- Tactical Engineering grouped Component Engineers to support EFIN
- Strategic Engineering grouped System Engineers to allow focus on system monitoring and planning for maintaining reliable operation
- Program Engineering manages the major Engineering programs to allow focus through the end of licensed operation
- Design Engineering matched demand as projects portfolio reached end of business plan



Engineering's Role

Continue in the role as the strong **Technical Conscience** for the organization

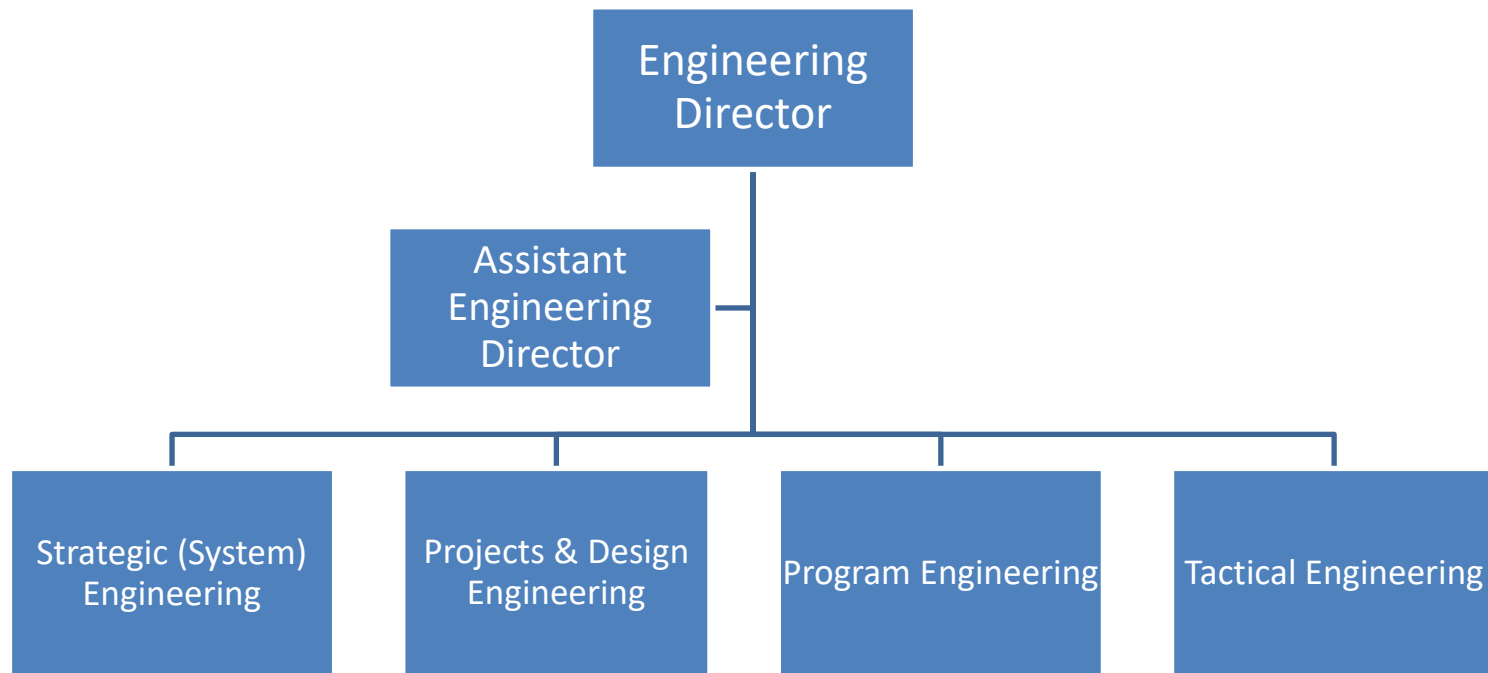
A set of principles that guide the behaviors to ensure ethical and technical support of the operation, maintenance and modification of nuclear power plants.





2023 Engineering Organization

2023 Engineering Services





2023 Engineering Organization Update

Pivoted back into a more traditional and industry benchmarked Engineering organization to continue to support safe and reliable extended operations

Strategic (System) Engineering
Design Engineering
Program Engineering
Tactical Engineering



Knowledge Transfer & Proficiency Committee

Working group to identify and manage knowledge, qualification and proficiency.

- Composed of Supervisors/Mentors within the Engineering organization, includes Learning Services representative
- Charter:
 - Identify engineering knowledge needs
 - Assign Knowledge Transfer (KT) plans to identified needs and monitor progress
- Coordinate with the Engineering People Committee (EPC) to match KT needs with opportunities for individuals interested in those areas of need



Managing Proficiency by Engagement

Employee Engagement

- Pre-Job Brief (Job Preparation & Risk Management)
- Standards (Procedure Use & Adherence)
- Peer-to-Peer Coaching
- Training and Qualification
- Mentoring (Technical, Process & Behaviors)

Leadership Engagement

- Field & Training Observations
- Excellence in Standards

Managing Proficiency by Training & Qualification





Summary

- Continue to effectively manage increased staffing through engaged leadership, knowledge transfer, and training to maintain strong safety and human performance
- Leadership engagement through Observation Review Meetings to ensure safe and reliable operation through continued operations
- Continue to be the strong Technical Conscience and advocates for DCP

Thank you

Allen Wilson

Sr. Director, Engineering, Projects, & Outages



Quality Verification's Perspective on Plant Performance

Diablo Canyon Power Plant

Shane Guess

Director, Quality Verification

September 14, 2023





Quality Verification

Responsibilities include:

- Audits
- Assessments
- Plant Quality Control (QC) Inspections
- Vendor/Supplier Audits and Material Receipt Inspections



Performance Summary

- To date in 2023, DCPD has continued to exhibit traits reflecting a strong Nuclear Safety Culture
- DCPD continues to effectively implement the Quality Assurance Program consistent with regulatory requirements and commitments to the Nuclear Regulatory Commission (NRC)
- In 2023, the station focused on workforce management and industrial safety by implementing robust action plans
- Lean operating system maturity and breakthrough thinking has guided performance improvement at the station



Performance Summary

Operations

- Operations is focusing on human performance and plant status control

Maintenance

- Maintenance Services is focused on mitigation of bump/contact risks to plant equipment during maintenance

Emergency Planning

- Emergency Planning is focusing on drill & exercise performance metrics



Performance Summary

Engineering

- Engineering Services is focused on:
 - Human performance
 - Evaluation quality
 - Plant digital systems

Work Management/Outage Management

- The station is focused on support of outage management milestones

Operational Focus

- The station is focused on new coworkers, proficiency, and upcoming refueling outage work scopes and milestones



Summary

- Overall plant performance remains strong and on a stable trajectory.
- The Quality Verification organization will continue to assess and challenge the station's performance as it continues on its path to license renewal

Thank you

Shane Guess

Director, Quality Verification



Diablo Canyon Continuous Improvement Programs

Matt Birkel

Director, Performance Improvement and Innovation

September 14, 2023





Station Continuous Improvement

Belief in Continuous Improvement

The journey towards sustained exemplary performance is built upon a belief in continuous improvement. The focus on this belief allows corporate and leadership to align behaviors and move to action with urgency in support of exemplary performance.

This belief in continuous improvement is foundational in our Performance Improvement Model.



Performance Monitoring

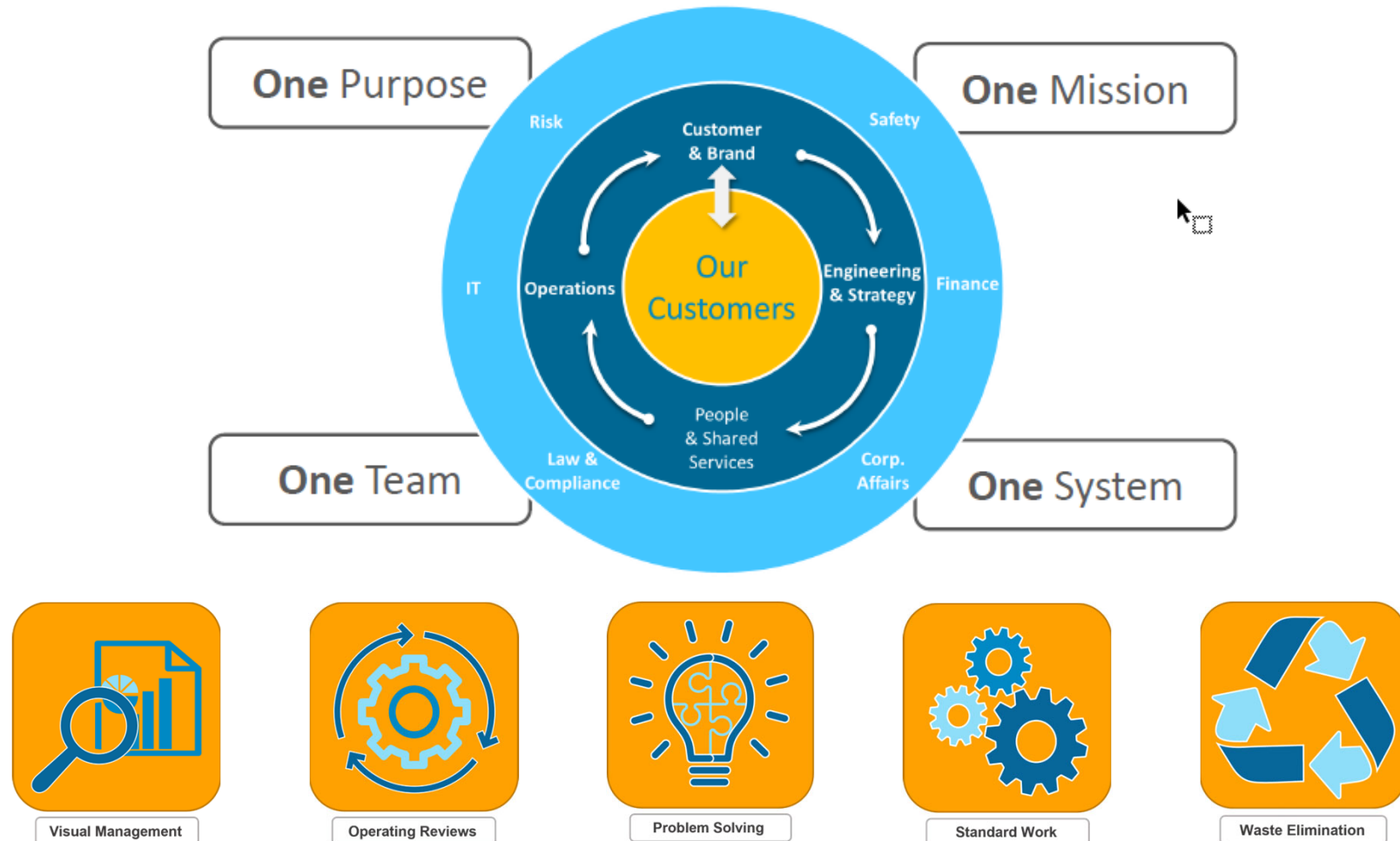
DCPP leverages performance monitoring and processes that promote organizational continuous learning, cross-functional teamwork, and self-correction. Listed are some items that are included in performance monitoring:

- Self-Assessments and Benchmarks
- Corrective Action Review Board
- Observation Review Meetings
- Management Review Meetings
- Daily, Weekly and Monthly Operating Review Meetings
- Quarterly Performance Review Meetings
- Plant Health Committee
- Equipment Reliability Executive Oversight Board
- Station Oversight Committee



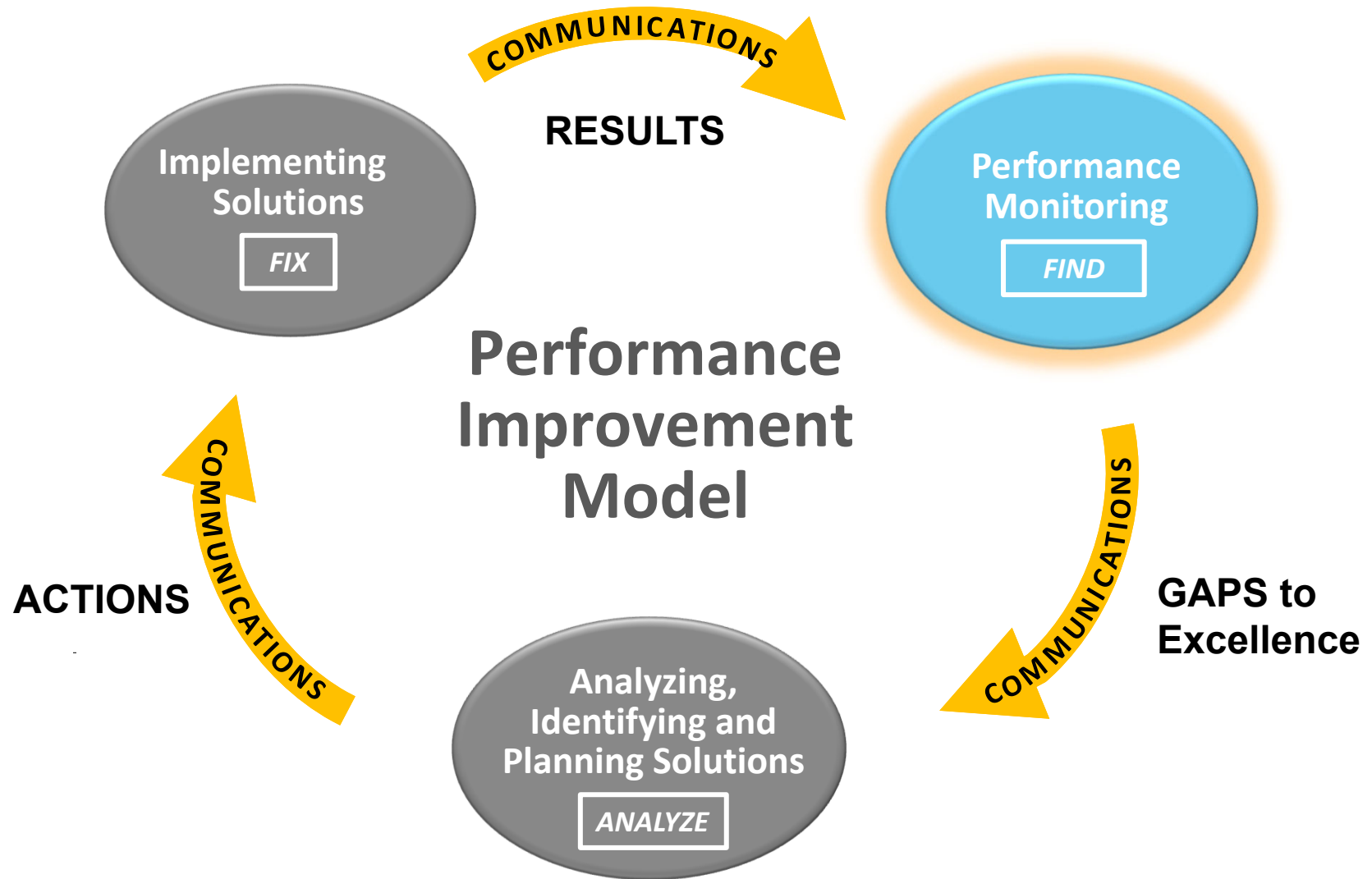
Operating Review Meetings

Lean Operating System





Performance Improvement (PI) Model





Self-Assessments & Benchmarks

Self-Assessments & Benchmarks provide:

- Self-Awareness of our performance and best practices of others
- Structured method for reviewing the activities and performance of our 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
- Some reviewed and approved by CARB



Performance Monitoring – Oversight

It is vital to the health of DCPD that performance is monitored and challenged in multiple venues and at all levels in the organization. Review meetings provide the venue for peer and leader challenges to excellence gaps in behaviors and metrics.

- Observation Review Meetings
 - Line management review of observations of work being performed
- Department Performance Review Meetings
 - Higher level review of department performance
- Continuous Performance Monitoring Meetings
 - Cross-functional Performance Improvement team led, trending
- Station Management Review Meeting
 - Station-wide leadership review of performance



Operating Experience

DCPP utilizes industry operating experience to evaluate other nuclear power plant events and precursors so actions can be identified and implemented to eliminate vulnerabilities and prevent similar events.

- Incoming OE assigned to DCPP SMEs depending on area of expertise
- DCPP provides responses when it is identified that an outside event or trend has the potential to impact operations
- DCPP and industry share a requirement to provide notification and review OE when material quality does not meet requirements



Station Oversight Committee

The goal of the SOC is to sustain exemplary performance by applying intrusive oversight that aligns behaviors, reinforcing high standards, driving accountability, and ensuring organizational alignment.

Gaps to excellence identified in other oversight venues are incorporated into station excellence plans and are presented to Station Oversight Committee via the Station Management Review Meeting

- Internal and external audit findings
- Corporate and station initiative status

The SOC allows corporate and station leaders share accountability for building trust and gaining alignment.

Thank You

Matt Birkel



Staffing and Continued Operations

Diablo Canyon Power Plant

Adam Peck

Site Vice President

September 14, 2023





DCPP's Current Retention Program

- Under the current retention program, Diablo Canyon Power Plant (DCPP) employees were offered a 25% retention payment each year for seven years, through a two-tier program:
 - Tier 1 period (4 years, 2016-2020)
 - Tier 2 period (3 years, 2021-2023)
- Tier 1 finished with a 98% participation rate and Tier 2 exceeded 95% participation
- The Tier 2 retention period concluded on August 31, 2023



Retention through Continued Operations

- In 2022, California Senate Bill (SB) 846 was signed into law providing a path to extend operations to 2030, conditioned upon the approvals of applicable state agencies and NRC approval
- SB 846 ordered the continuation of a coworker retention program
- PG&E will submit an application on the future retention program to the CPUC for consideration
- After filing, CPUC approval process expected to take up to one year from submittal



Hiring and Staffing

- The DCPD Leadership Team conducted an in-depth staffing review shortly following SB 846 approval to prioritize hiring needs in support of continued operations
- DCPD completed onboarding and training new employees in maintenance, engineering, projects, and security over the past year and has completed the staffing needed for continued operation, license renewal, and to account for end of Tier 2 retention
- New class of non-licensed operators hired in January 2023 and August 2023; one new upgrade license class is complete and a new initial license class began in March of 2023 with completion forecast for summer 2024



Hiring and Staffing

- DCPD leadership reviews staffing on a weekly basis, and performs monthly “deep dives” of specific departments
- The new retention proposal is structured to mitigate attrition and maximize knowledge transfer over the continued operations period

Thank you

Adam Peck
Site Vice President
Diablo Canyon Power Plant



SB846 Independent Consultant Maintenance Assessment Update

Diablo Canyon Power Plant

Allen Wilson

Sr. Director, Engineering, Projects, & Outages

September 14, 2023





Diablo Canyon Power Plant Maintenance

- At Diablo Canyon Power Plant (DCPP) all necessary investments and maintenance to ensure safe and reliable operations has and continues to be performed, including continued operations.
- The Nuclear Regulatory Commission (NRC) continues to assess and reaffirm that Diablo Canyon is operating safely and is among the highest-performing plants in the nation.
- Additionally, maintenance activities at DCPP are reviewed by independent committees



Senate Bill 846

- A provision of CA SB 846 required PG&E to commission a study by independent consultants to catalog and evaluate maintenance at DCCP. The consultants are to:
 - Identify risk posed by any findings,
 - Provide potential remedies with cost estimates, and
 - Provide timelines for undertaking remedies



Independent Consultant Review Status

- A thorough review of the Maintenance Program has been completed which includes a review of maintenance changes since 2016
- A material walk down of DCPP was completed. Areas walked down included the intake, transformer yards, turbine building, auxiliary building, and ancillary support buildings
- Interviews were completed with various levels of staff (individual contributors to management) across various departments



Independent Consultant Review Status

- A review of inspection reports from various auditing and regulating groups is in progress and the draft report is being assembled
- To-date the SB846 Independent Consultant Review has identified no gaps or deficiencies, thus no risks, costs, or remedies needed
- These independent reviews continue to support our focus to maintain the plant to the highest standards and will ensure we continue to meet all regulations and requirements to support extended operations.

Thank you

Allen Wilson

Sr. Director, Engineering, Projects, & Outages



SB-846 Seismic Update

Jearl Strickland – PG&E Consultant

Jeff Bachhuber – PG&E Director Geosciences

September 14, 2023





Long Term Seismic Program (LTSP) 1985-Ongoing

The NRC included a condition to the operating license for DCPD to continue to study and evaluate seismic information and perform updated studies as necessary

PG&E developed the Long Term Seismic Program (LTSP) in 1985 to satisfy this license condition that includes:

- Maintain an LTSP staff of geosciences and engineering experts to keep abreast of new geological, geophysical, seismological, and seismic engineering information
- Operation of a strong motion accelerometer array and Central Coast Seismic Network

PG&E is continuing the commitment for the LTSP for the duration of an extended operating license



Example LTSP Ongoing Studies

- Continued Seismic Monitoring & Geodetics
- Fault source studies (offshore and onshore)
- U.S. Geological Survey-PG&E Cooperative Research Agreement
- Southern CA Earthquake Center Annual Program
- University Research & Ph.D. Support
- Advancing Non-ergodic ground motion models and core science
- Evaluation of new techniques (e.g. Precariously Balanced Rocks (PBR))
- 2023 Kahramanmaras Turkey earthquake reconnaissance



DCPP Double Rock PBR Study

Results from the LTSP are presented annually to the California Public Utility Commission Independent Peer Review Panel (CPUC IPRP)



SB 846 Seismic Assessment

Senate Bill (SB) 846 specifically requires the following for Diablo Canyon Power Plant (DCPP) in connection with the loan agreement between PG&E and the California Department of Water Resources (DWR):

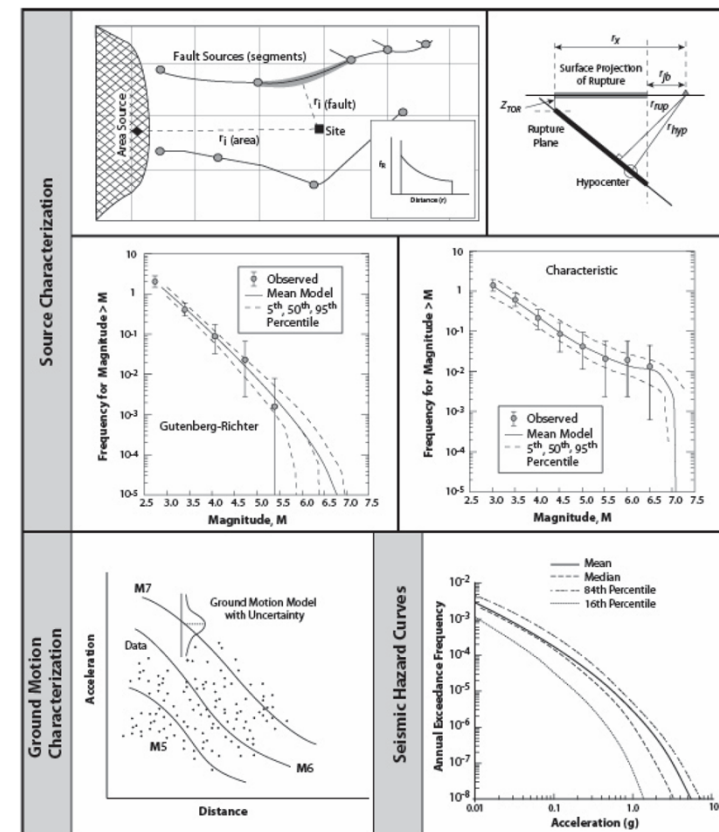
“A covenant that the operator shall conduct an updated seismic assessment.”



SB 846 Seismic Assessment Process

- Modeled after the NRC Senior Seismic Hazard Analysis Committee (or SSHAC) process, includes:
 - a two-step evaluation and integration that is focused on capturing the center, body, and range of technically defensible interpretations
 - robust peer review and clear, transparent documentation
- Standard approach for conducting nuclear seismic hazard studies
- Modified to be incremental after evaluation stage

NUREG-2213 (2018) Updated Implementation Guidelines for SSHAC Hazard Studies



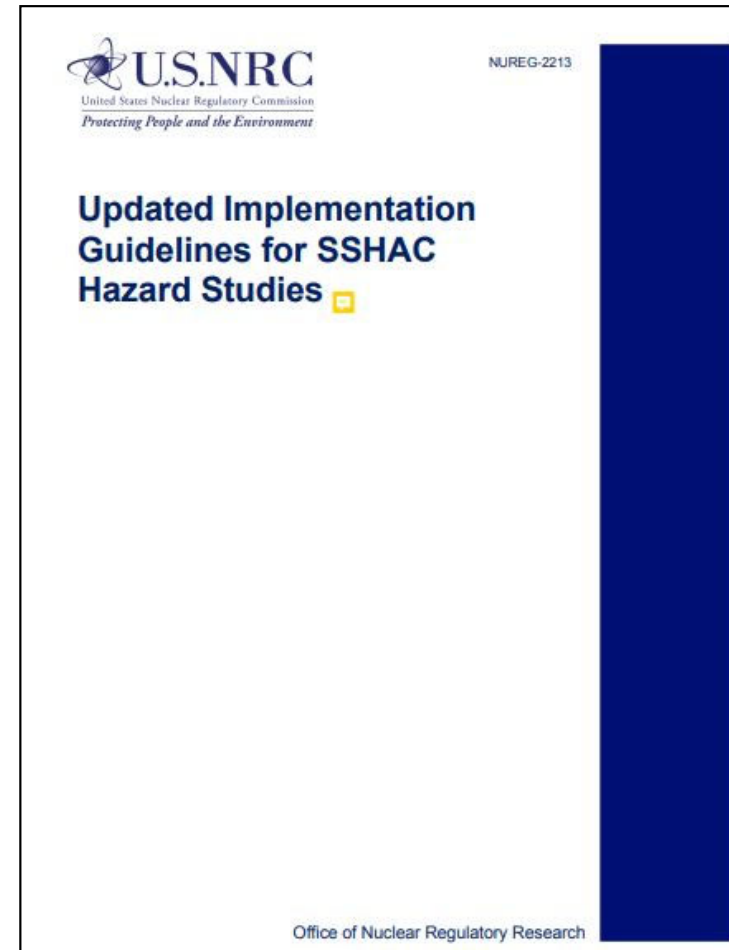


SSHAC Level 1 for Existing PSHA Review

NUREG-2213 Guidance for Existing Study Evaluation

If an existing SSHAC Level 3 or 4 study exists an evaluation should be performed in two steps

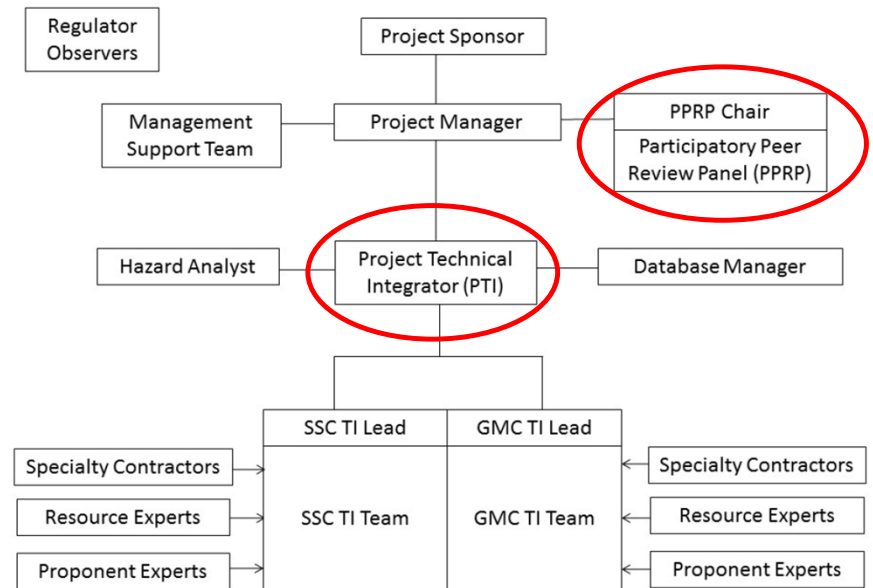
- Conduct a SSHAC Level 1 study using available information that became available since the original SSHAC study was completed
- Compare existing study Probabilistic Seismic Hazard Analysis (PSHA) with results of SSHAC Level 1 review to determine if an update is needed





Roles within a SSHAC

- SSHAC process outlines specific roles and adhering to the roles is important for success of a project
- Technical Integration (TI):
 - At the center of the project
 - Gather inputs and develop the model
- Participatory Peer Review Panel (PPRP):
 - Subject matter experts engaged through the process
 - Primary reviewers





Roles within a SSHAC: Regulatory Observers

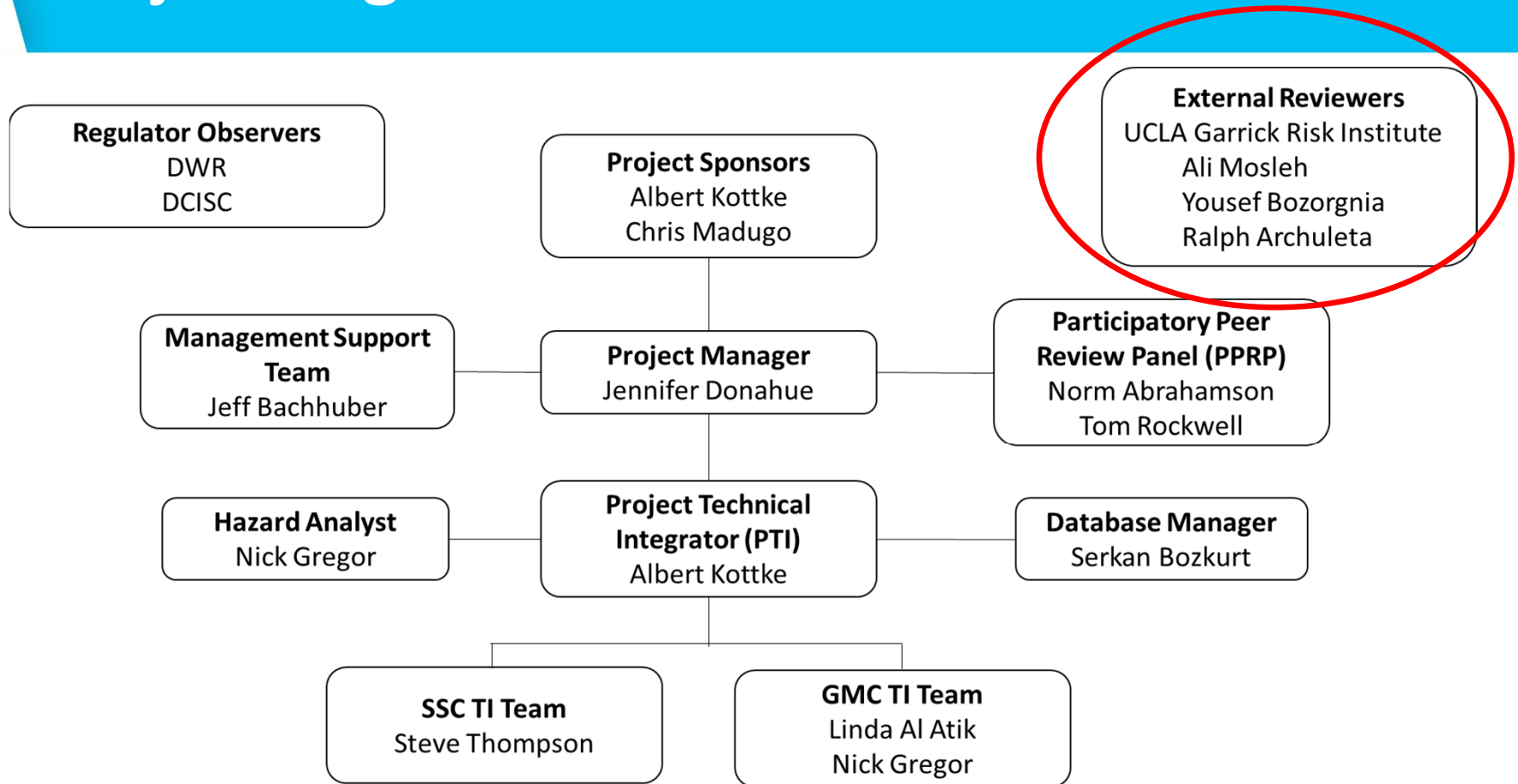
- Observers are invited to attend all workshops
- Allows the regulatory bodies or other decision-makers to witness, first-hand, the process:
 - Primarily observers
 - General practice invite observers ask questions or make comments
- Questions and comments can be incorporated to improve project documentation





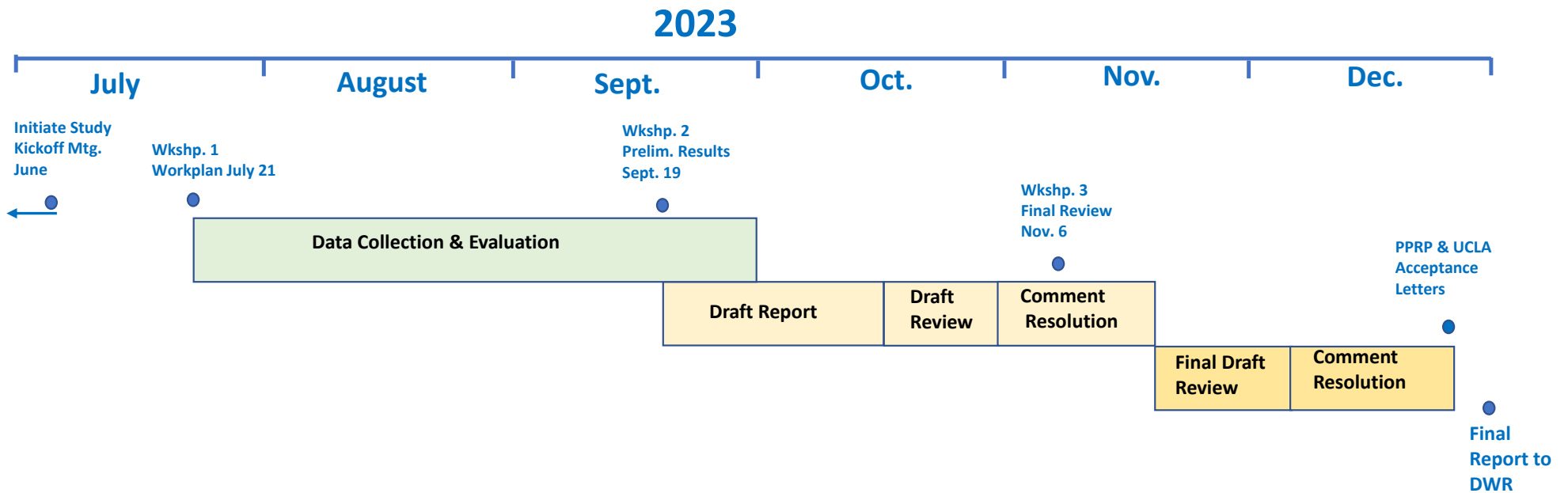
Project organization

Additional Level of Review





Project Schedule





Thank You

Jearl Strickland
PG&E Consultant

Jeff Bachhuber
PG&E Director Geosciences

