

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 15 and 16, 2022

Avila Lighthouse Suites



November 16-17, 2021 Fact-finding Report

Peter Lam, Member, and Ferman Wardell, Consultant

- 1. Licensed Operator Training – Loss of Heat Sink**
- 2. Independent Spent Fuel Storage Installation Cask Inspection**
- 3. Digital Systems Update**
- 4. Meeting with NRC Resident Inspectors**
- 5. Feedwater Heater Tube Failure and Forced Reactor Shutdowns**
- 6. Operating Experience Program Update**
- 7. Plant Health Committee Meeting (Remote)**
- 8. Simulator Training on Anticipated Transient without Scram**
- 9. NRC Ultimate Heat Sink Inspection Results**
- 10. Meeting with DCPD Officer**



Observe Licensed Operator Training – Loss of Heat Sink

- **Five Operations Shifts – Each in Training Every Five Weeks**
- **Loss of “Normal” Heat Sink, i.e., Cooling to Reactor Core**
- **Cooling Loss Caused by “Dry” Steam Generators, Which Have Lost Main and Auxiliary Feedwater**
- **Training Focused on**
 - **Review of Involved Components & Systems**
 - **Emergency Operating Procedures**
 - **Industry Operating Experience**
- **Class Materials & Instructor Effective**
- **Good Participation by Students**



Independent Spent Fuel Storage Installation (ISFSI) Cask Inspection Results

- **June 22, 2021 Visual Inspection of Eight Casks* for Indications of Stainless Steel Stress Corrosion Cracking (SCC)**
 - **Also Inspected Cask Overpacks and Concrete Pad**
 - **Diverse Set of Casks Selected:**
 - **Various Alloys of Stainless Steel**
 - **Various Ages**
 - **Various Locations**
 - **Result: “ISFSI Is in Good Condition” – No SCC Indications**
- * Multi-Purpose Canisters (MPCs)**



Digital Systems Update

- **Changes from Electro-Mechanical Analog Controls to Digital Computer Controls**
 - Turbine Control
 - Intake Traveling Screens
 - Feedwater Control
 - Spent Fuel Pool Bridge Cranes
 - Process Control
 - Control Room Annunciators
 - Meteorological Towers
 - Transient Recording System
- **Long-Term Strategy: Digital Controls Good Thru 2025**
- **No New Digital Controls Needed**



Meet with NRC Resident Inspectors

- **Met with the Following NRC Personnel:**
 - DCPD Resident Inspector
 - DCPD Acting Senior Resident Inspector
 - Director, Division of Radiation Safety
 - Chief, Reactor Projects, Region IV
- **DCISC & DCISC Fact-finding Agenda**
- **Seismic Workplace Safety**
- **Adequacy of DCPD Staffing to Operate DCPD Safely**
- **Feedwater Heater Forced Outages**
- **Emergency Diesel Generator License Event Report**
- **Conclusion: Meetings with NRC Are Beneficial**



Feedwater Heater (FWH) Tube Failures & Forced Reactor Shutdowns

- **FWHs Are Shell and Tube Heat Exchangers**
- **FWHs Use Extraction Steam from Turbine to Pre-Heat Feedwater Prior to Its Entering Steam Generators**
- **Unit 2 FWH 2-5B Exhibited Tube Leak Indications**
- **Unit 2 Power Lowered and Then Shut Down for Repairs**
- **Following Repairs, Unit 2 Back To 100% Power**
- **FHW 2-5B Leakage Increased and Unit 2 Shut Down**
- **Tube Failures Found and Repaired**
- **Unit 2 Back to 100% Power and Remains There**
- **Root Cause Evaluation in Progress**



Operating Experience Program (OEP) Update

- **Operating Experience Info. Comes From the Following:**
 - **IRIS (INPO Reporting and Information System)**
 - **Industry Sources (NRC, Vendors, Committees, etc.)**
- **DCPP OEP Coordinators Screen & Distribute OE to DCPP Subject Matter Experts for Applicability**
- **Applicable OE Is Input to Corrective Action Program for Review, Possible Action, and Tracking**
- **DCPP Events Are Sent to INPO IRIS and Possibly NRC (LERs)**
- **DCPP Rated OEP As “Green”**
- **DCISC FF Team Conclusion: DCPP OEP Effective**



Observe Plant Health Committee **(PHC) Meeting (Remote)**

The PHC Is a Management Team Responsible for:

- **Continual Review of System & Program Health Issues**
- **Monitoring Plant Health Issues for Action Status & Completion**
- **Review/Approval of Plans to Address Plant Health Issues**
- **Performing Preventive Maintenance Oversight functions**
- **Approving PHC Budget for Solutions to Plant Health Issues**
- **Approving System, Component, & Program Long Range Plans**

Continued



PHC, Cont'd. - Agenda

- **Operations Tactical Update**
 - **Operations Parameters: (Work Arounds, Main Annunciator Defeated, Operator Burdens, Adverse Condition Monitoring, Control Board Issues)**
- **Top 10 Equipment Reliability Issues: (Radiation Monitoring, Plant Process Computer, Unit 2 Condensate Polisher, Aux Bldg HVAC, Fire Water Valve, Pressurizer Relief Tank, 230 kV Voltage, Condenser Seal, Volume Control Tank, Intake Gantry Crane)**
- **Conclusion – The Plant Health Committee was Effectively Run with Clear Presentations and Good Participation by Attendees.**



Observe Simulator Training

- **Subject: Anticipated Transients Without Scram (ATWS)**
- **One of the “Worst Case” Accidents Analyzed**
- **A Transient Occurs But Control Rods Do Not Drop into Core**
- **Simulator Was Set Up to Run This Situation**
- **Operators Followed Procedures Properly, Manually Shutting Down the Reactor**
- **Training Appeared Successful**



NRC Triennial Ultimate Heat Sink Inspection

- **The “Ultimate Heat Sink” Is the Chain of Systems & Components Which Provide Assured Reactor Cooling If Normal Cooling Systems Are Lost**
- **These Safety-Related Systems Lead to the Pacific Ocean**
- **Ultimate Heat Systems:**
 - **Auxiliary Saltwater**
 - **Component Cooling Water**
 - **Emergency Diesel Generators**
 - **Residual Heat Removal**
- **The Inspection Resulted in No Findings or Violations**



Dr. Lam Meeting with Paula Gerfen,
Site Vice President

- **Discussed Items from the Fact-Finding Meeting and Other Subjects of Interest**



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DCPP Performance Based on NRC Performance Indicators

Russ Prentice
Director, Risk and Compliance
February 15, 2022

October 2021– January 2022

- This presentation covers approximately 4 months of NRC inspections involving ~2000 hours of inspection time
- DCPP remains in the highest performance category for all NRC Performance Indicators
- There have been no findings or violations of more than minor significance since the last DCISC update

NRC Performance Indicators

Unit 1	Unit 2	
G	G	Unplanned Scrams per 7000 Critical Hrs
G	G	Unplanned Power Changes per 7000 Critical Hrs
G	G	Unplanned Scrams with Complications
G	G	Safety System Functional Failures
G	G	Mitigating Systems Performance Index, Emergency AC Power System
G	G	Mitigating Systems Performance Index, High Pressure Injection System
G	G	Mitigating Systems Performance Index, Heat Removal System
G	G	Mitigating Systems Performance Index, Residual Heat Removal System
G	G	Mitigating Systems Performance Index, Cooling Water Systems
G	G	Reactor Coolant System Activity
G	G	Reactor Coolant System Leakage
G	G	Drill/Exercise Performance
G	G	ERO Drill Participation
G	G	Alert & Notification System
G	G	Occupational Exposure Control Effectiveness
G	G	RETS/ODCM Radiological Effluent



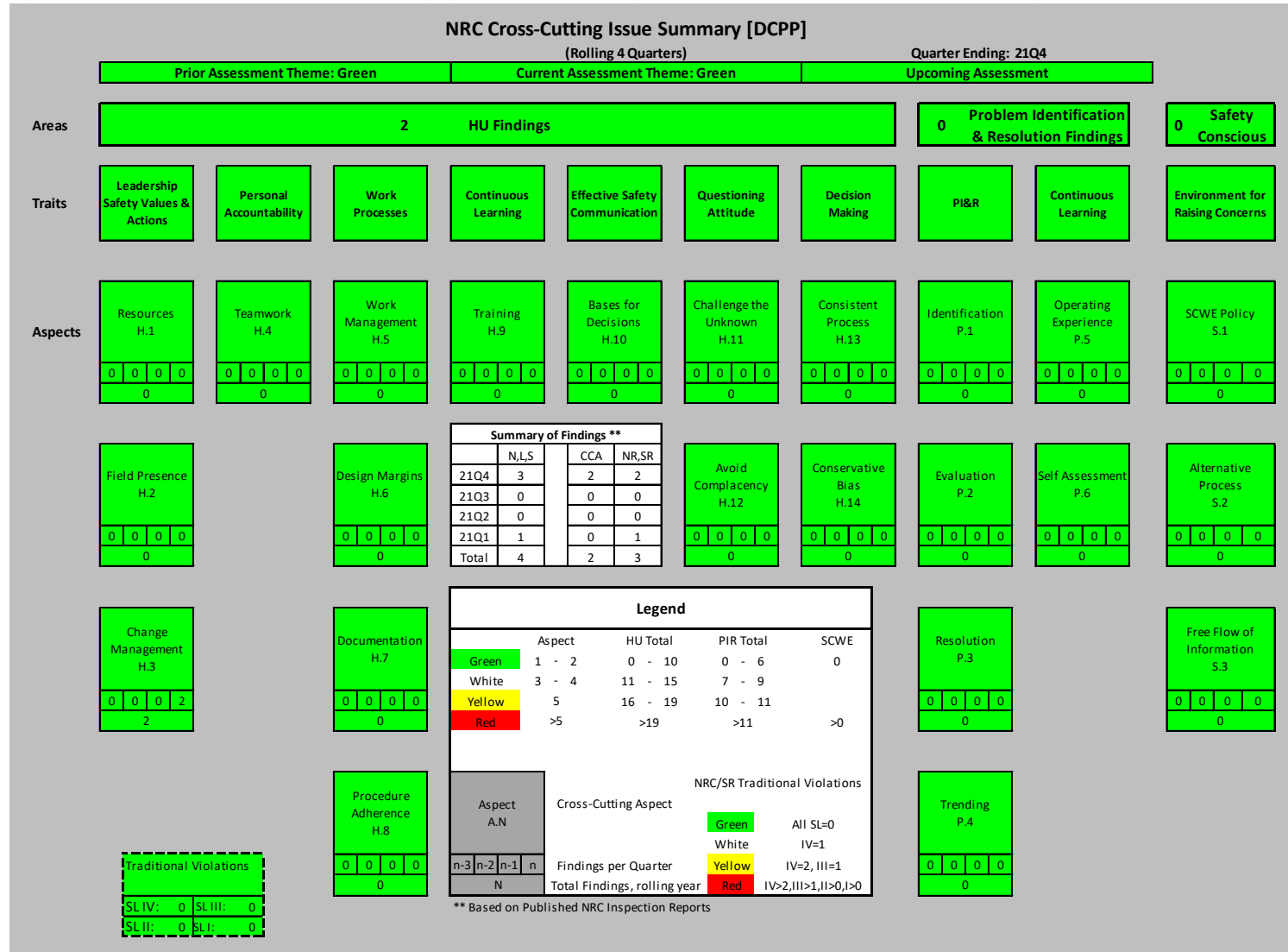
NRC Violations

October 2021 – January 2022

- There have been no findings or violations of more than minor significance since the last DCISC update

NRC Violations – Cross-Cutting Aspects

Rolling 4-Quarter Cross-Cutting Aspect Performance



October 2021 – January 2022

- One Licensee Event Report (LER) was submitted during this time period
 - Unit 2 LER 2021-002-00 was submitted on 12/14/2021, which documented that Unit 2 was manually shut down on October 15, 2021, in response to increasing water level in a secondary-side feedwater heater. Following shutdown of Unit 2, the feedwater heater was subsequently repaired, and Unit 2 was returned to service.



DCPP Performance Summary

October 2021 – January 2022

- DCPP remains in the highest performance category for all NRC Performance Indicators
- One Inspection Report was issued by the NRC during the October 2021 and January 2022 timeframe:
 - 3rd Quarter 2021 Integrated Inspection Report (2021-003, 11/03/2021)



Status of License Amendment Requests

License Amendment Requests approved since the last DCISC update:

- No License Amendments have been approved since the last update.

Thank you

Russ Prentice



Update on 1R23 Refueling Outage preparations

Mike Quitter
Outage Manager
February 15, 2022



1R23 Goals

- Zero Disabling Injuries
- Zero Recordable Injuries
- Zero Nuclear Safety Issues – No loss of Decay Heat Removal
- Zero Human Performance Event Site Clock Reset
- Duration Goal < 30 Days
- ALARA Dose Goal 21.250 REM
- Zero FME Events
- Power Ascension ≤ 5 days
- Reliability – 90 Days max capable power.

Major Scope

- Primary
 - Maintenance on approximately 30 valves
 - Special Lifting Device (SLD2) 10 Year ISI Inspection Requires Coatings removal, ISI Inspection, and Re-coating
 - Refueling Cavity side Up-ender push-off spring replacement
- Secondary
 - Auxiliary Saltwater Pump 1-1 Pump replacement.
 - Travelling Screen 1-3, 1-4, and 1-5 overhauls
 - Turbine Stop Valve FCV-144 Inspection
 - RCE Extent of Condition testing of Feedwater Heaters 1-3A, 1-4A, 1-4B, 1-4C, and 1-5C
- Electrical
 - Vital Bus F Maintenance Outage Window
 - Startup Transformer 1-1 and 1-2 Power Factor Testing

Schedule – critical path

- Outage starts March 2022
- Cooldown and depressurize
- Reactor disassembly – upper internals removal
- Vital bus F outage
- ECCS valve interlock testing
- Reload the reactor
- Reactor reassembly
- Plant heat up and testing
- Reactor startup and physics testing
- Roll main turbine and parallel to the grid

COVID contingency planning

- Plan is to complete full scope of work
 - Technical evaluations and contingency planning being performed in case of vendor support impacts
- Social distancing protocols developed
 - Includes in-processing as well as outage implementation
- Positive case protocols being developed
- Outage COVID team of senior leaders has been implemented to make strategic decisions concern pandemic impacts.
 - Focus on protecting our workers and ensure reliable plant operation for the next fuel cycle

Major partners

- Westinghouse
 - Fuel handling
- Siemens
 - Main Generator crawl-through inspection
 - Turbine Stop Valve FCV-144 Inspection

Thank you

Mike Quitter



December 7 and 8, 2021 Fact-finding Report

Per Peterson, Member (Remote), and Richard McWhorter, Consultant

- 1. Root Cause Evaluation for Failed Auxiliary Saltwater Pump Motor**
- 2. Transmission System**
- 3. Meet with Nuclear Regulatory Commission (NRC) Acting Senior Resident Inspector**
- 4. Trends in Plant Status Control Events**
- 5. Crane Program**
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Root Cause Evaluation for Failed ASW Pump Motor

- **Follow-up for July 5 Event – Ground Alarm During Start**
- **Motor Heater Degraded About One Year; Failed Week Prior; Repaired and Returned to Service About Three Days Later**
- **Heater Failure Allowed Buildup of Moisture and Minerals**
- **Primary Root Cause – Unrecognized Risk to Motor Reliability from Heater Failure Given the Operating Environment**
- **Actions Included Initiating a Periodic Review by Managers of New or Updated Preventative and Corrective Maintenance Activities**
- **Conclusion – RCE Was Comprehensive, and Appropriate Corrective Actions Were Initiated to Prevent Recurrence**



Transmission System Update

- **500kV and 230kV Systems in Good Health**
- **Issues Being Monitored:**
 - Open Phase Protection (U2 Complete; U1 Complete Spring 2022)
 - Minor Insulator Deficiencies
 - U2 C Main Transformer Undersized Motor Contactor
 - Transformers Monitored for Aging Effects; No Current Issues
- **Transmission Line High Voltage Issues:**
 - System Experiences Low VAR Loads, Abnormal Power Flows, and High Voltages
 - Grid Control Center Takes Actions
 - DCPD Revising Calculations to Extend Times Allowed for Responding
- **Conclusion – Health of Transmission Systems Was Good With Minor Problems Being Tracked for Resolution**



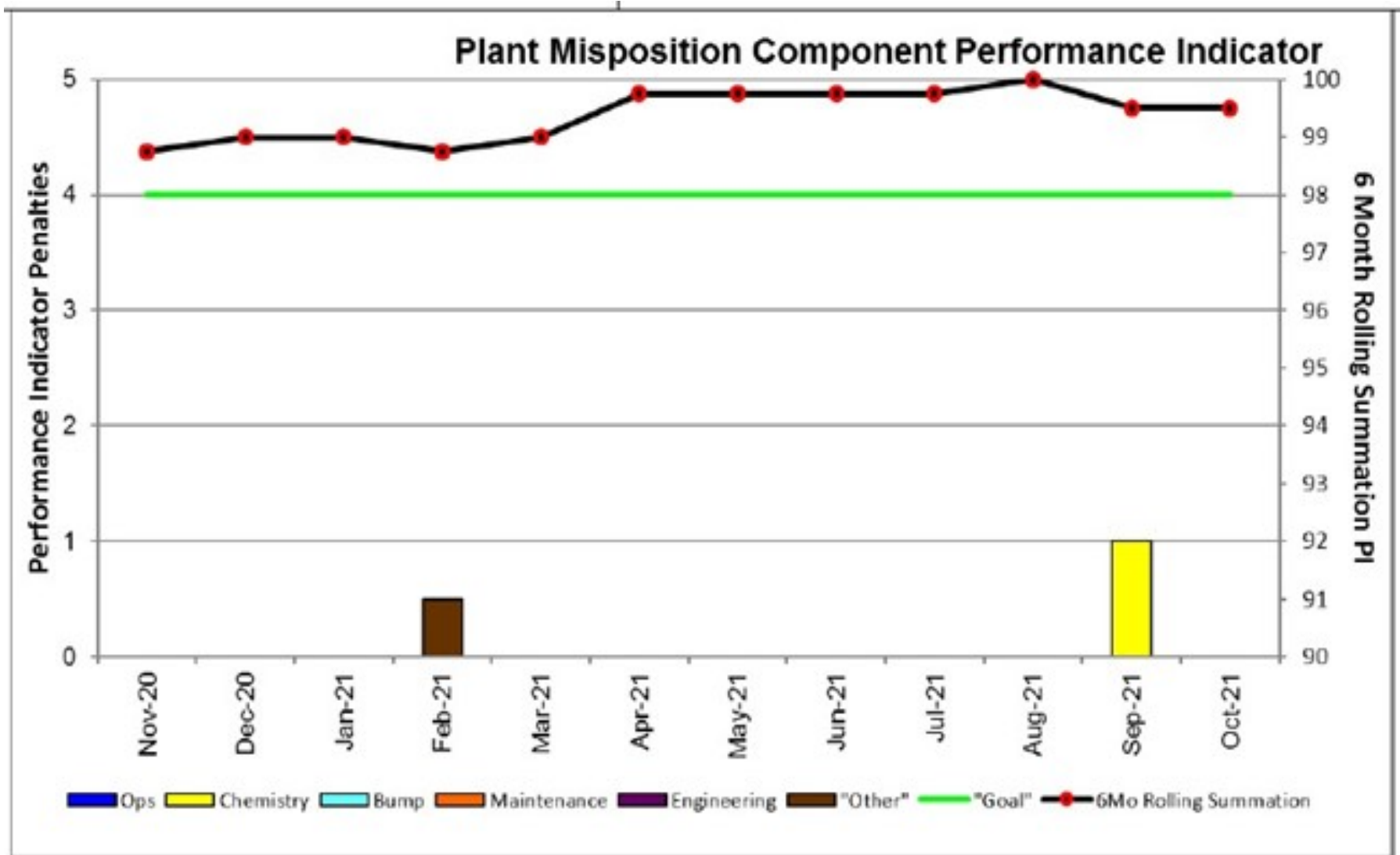
Meet with NRC Acting Senior Resident Inspector

- **NRC Inspector Staffing**
- **Unit 2's Recent Forced Outage to Repair a Feedwater Heater Leak**
- **Emergency Diesel Generator 2-3 Fuel Oil Leak (June 2021)**
- **Recent NRC Inspection Results and Concerns**



Trends in Plant Status Control Events

- **Plant Status Control Events Refers to Events When an Operator or Technician Manipulates the Wrong Component or Places a Component in the Wrong Position**
- **Performance Issues in 2018 and 2019; DCISC Reviewed**
- **Significant Improvement in Trends in 2020 and 2021**
- **Increased Number of Field Observations and Focus on Improving Operator Practices in the Plant**
- **Established Quarterly Leadership Team to Review Events**
- **Conclusion – DCCP's Corrective Actions for Past Problems in Plant Status Control Continue to be Effective**



Plant Misposition Component Performance Indicator



Crane Program

- **Six Major Cranes; Four Mobile Cranes; 22 Hoists**
- **Operations and Maintenance Managed by Dedicated Group in Maintenance Department**
- **Training Program Length of 30-36 Months**
- **Nuclear Safety Ensured Through Program to Restrict Movement of Suspended Loads**
- **Only One Minor Lifting Incident Since 2019**
- **Conclusion – DCCP's Crane Program Implemented Effectively; Lifting and Rigging Equipment in Good Condition**



Plant Tour (Consultant)

- **Areas Toured:**
 - **140' Turbine Building (Operating Deck)**
 - **119' Turbine Building (Unit 1 Moisture-Separator Reheaters, 4kV Electrical Room)**
 - **104' Turbine Building (Feedwater Heaters and Lube Oil Systems)**
 - **85' Turbine Building (Service Air Compressors, Heater Drain Pumps, 12kV Electrical Room, Component Cooling Water Heat Exchangers, Mechanical Maintenance Shop, and EDG Room 1-3)**
- **Conclusion – All Observed Areas Were Clean, Orderly, and Well Lighted with Equipment in Excellent Condition**

Unit 1 Turbine Building Crane



Turbine Building Crane Load Restricted Area

HEAVY LOADS RESTRICTED AREA
AS PER MAL-1014



Licensed Operator Simulator Training (Consultant)

- **Observed “As Found” Simulator Scenario; Most of Crew Held “Inactive” Licenses**
- **Events:**
 - **Nuclear Instrument N-43 fails high; High vibration on Main Feed Pump 1-2; rapid power reduction to 50% required**
 - **Tube rupture on Steam Generator 1-2; Reactor Trip and Safety Injection initiated**
 - **Safety valve fails open on Steam Generator 1-2; Safety Injection Phase A fails to automatically actuate**
 - **Turbine-Driven and Motor-Driven Auxiliary Feedwater Pump Failures**
- **Conclusion – Training Simulator Session Was Well Prepared, Contained Appropriate Objectives, and Was Professionally Conducted. Operators Performed Well in Responding to the Simulated Off-normal Events.**



Emergency Diesel Generator Follow-up Items

- **Follow-up on June 2021 Fuel Oil Leak on EDG 2-3**
- **Initial Cause Evaluation Completed – Loose Fastener on “Banjo Bolt” at Injector**
- **Additional Evaluations Prompted by NRC Questions In-Progress At Time of Meeting**
- **Follow-up on June 2021 Low Frequency Event on EDG 2-3 (Resulted in Licensee Event Report to NRC)**
- **Investigation and Actions Appropriate**
- **Conclusion – Initial Corrective Actions Appeared Appropriate; the DCISC Should Receive a Briefing on the Final Causes and Corrective Actions for the Fuel Oil Leak at an Upcoming Public Meeting.**



Plant Health Committee Meeting (Remote)

- **PHC Routinely Meets to Review Status of Equipment Issues and Action Plans**
- **Agenda:**
 - **Routine Items**
 - **Summer Readiness Review**
 - **Main Annunciator System Lifecycle Management**
- **Conclusion – The Plant Health Committee was Effectively Run with Clear Presentations and Good Participation by Attendees.**



Staffing Retention and Attrition Update

- **Follow-up on Specific Concern Regarding Losses at Time of First Tier 2 Retention Payment (Late November 2021)**
- **No Significant Increase in Employee Losses Around the Tier 2 Payment Date**
- **~1200 Participants in Tier 1 Program (2016-2020)**
- **~1150 Participants in Tier 2 Program (2021-2023)**
- **Conclusion – DCCP's Employee Retention Program Continues to be Well Managed and is Generally Proceeding as Expected.**



Meteorological Information and Dose Assessment System (MIDAS)

- **System Used to Predict the Path and Magnitude of Radiation Releases to the Surrounding Area from an Accidental Release into the Air**
- **No Major Software Changes; Significant Hardware Upgrades**
- **Reviewed Corrective Actions for Deficiency Identified in Software Usage During Last Emergency Preparedness Exercise**
- **Conclusion – DCPD Continues to Properly Maintain and Use the MIDAS Software System for Predicting the Magnitude and Path of Airborne Radioactive Releases.**



Meeting with Paula Gerfen, Site Vice President

- **Discussed Items from the Fact-Finding Meeting and Other Subjects of Interest**



December 7 and 8, 2021 Fact-finding Report **Per Peterson, Member, and Richard McWhorter, Consultant**

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Nuclear Generation Operating Plan Update

Diablo Canyon Power Plant

Shane Guess

Manager, Workforce Strategy & Assessment

February 15, 2022

2021 Operating Plan Results

Nuclear Generation: Looking Back at 2021

- NRC performance results in Diablo Canyon in the highest performance category: Column 1, Licensee Response
- Institute of Nuclear Power Operations (INPO) rating for Diablo Canyon Power Plant (DCPP) is “Exemplary and Improving”
- Completed the 2R22 refueling outage safely, on schedule, and within budget
- Continuance of hybrid work schedules, as appropriate, during the COVID-19 pandemic
- DCPP continues to maintain a skilled, proficient workforce as it heads into the second year of the Tier 2 retention period

2021 Operating Plan Results

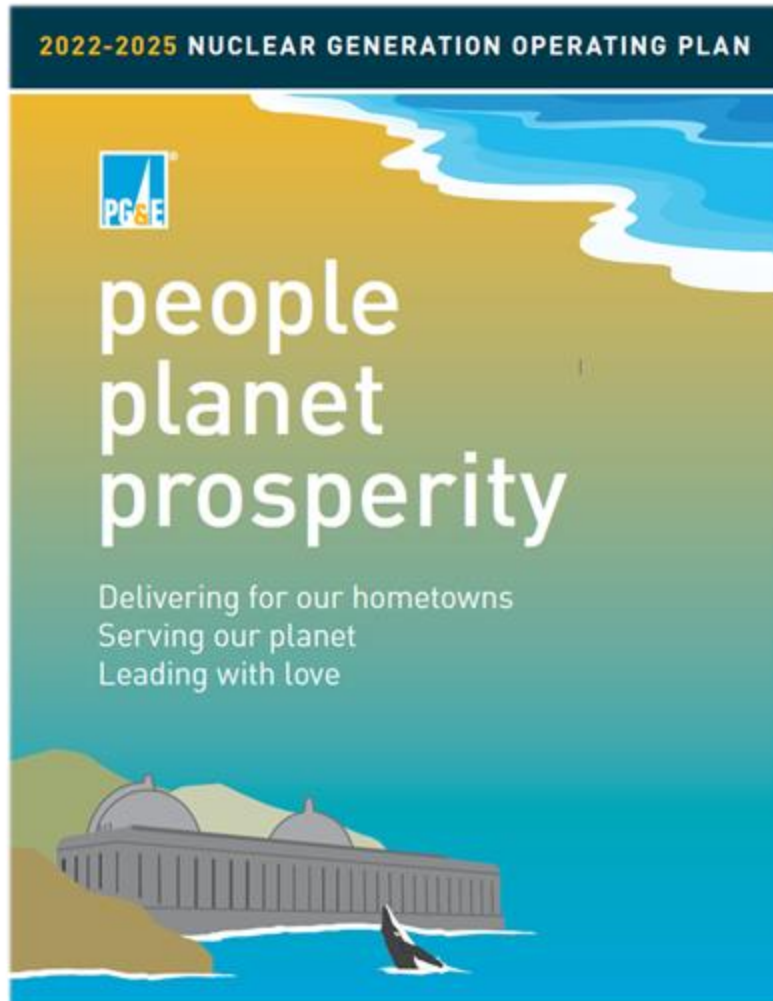
Measurable Results

Metric	Goal	Actual
DCPP Reliability & Safety Indicator	87.5	92.5
2R22 Outage Radiation Exposure	<13.3 REM	10.8 REM
Preventable Motor Vehicle Incidents	1 st quartile	1 st quartile
Days Away, Restricted, or Transferred Cases	1 st quartile	1 st quartile
Lost Work Day Cases	1 st quartile	1 st quartile
Regulatory Findings	No significant	No significant
NRC Reactor Oversight Process	Column 1 and no cross-cutting issues	Column 1 and no cross-cutting issues



Nuclear Generation Operating Plan

Our 2022–2025 Operating Plan is Nuclear Generation’s line-of-sight roadmap in providing our customers with reliable, affordable, and clean energy



Defining our future

Purpose: Why we exist

Our purpose statements are the goal we set for ourselves and the way we lead which we serve.

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

Stands: What we stand for

At PG&E we have the position of being the best of the stands for you, you can say we are:

- Everyone and everything is always safe
- Catastrophic wildfires
- It is enjoyable to work
- A healthy environment
- Our work shall create

Virtues: Who we are

It's not enough to take a show who we are to our customers who we say we are:

- We are trustworthy – we are honest
- We are empathetic – we listen
- We are curious – we learn
- We are tenacious – we persevere
- We are nimble – to adapt
- We are the owners – we take responsibility

Serving our Customers

Everyone and everything is always safe

Serving our customers requires strategic actions.

Goal: Significantly improve the safety of everyone and everything and a reduction in our PMW as a result.

Strategic Action: Everyone and everything is always safe. When negative trends are identified, we will be successful through:

- Resolving issues in a timely manner
- Rigorous application of the standards
- All injuries are prevented
- Leadership is responsive
- We plan safety into our work
- We look out for each other

Continuing to promote a culture of safety

Key Work and Initiatives

- Leadership Field Time is the leadership to engage each workstandards, understand how we remove barriers to safety
- Incident Review Boards are in place and understand how we adjust workforce safety
- Compel safe driving behavior and safety exposures
- Injury Prevention Detective and electrical safety
- Implement pre-outage safety breakthrough 2-outage OSHA year

Finishing on Top

Pillars of Exemplary Performance

Top performers have overarching belief in continuous improvement in the pursuit of excellence in performance, and its central tenet that whatever gains are achieved must then be sustained. As nuclear professionals we must constantly assess our behaviors and focus daily on sustaining the gains we make towards continuously improving our performance.

In 2022 through 2025 our focus will be finishing the next four years at top performance. We will do this through:

- Safe and event-free operations
- Excellence in equipment reliability
- Use of Performance Improvement (PI) tools & the Corrective Action Program (CAP)

What's my role?

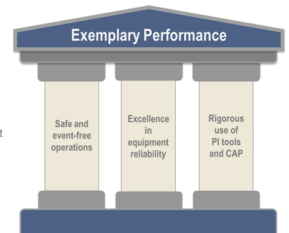
Each of us have a daily role in the safe and event free operation of Diablo Canyon. The strong foundation starts in our fundamental use Performance Improvement tools and proper use of the Corrective Action Program. Understanding how use of these tools supports work to achieve equipment reliability and event-free operations helps us deliver the operational excellence that leads the industry. Everything we do in our daily work is connected to the success of our departments, our organization, and ultimately the Company.

As you perform the functions of your job, ask yourself, what's my role in improving performance? For example:

- Planners plan and prepare work packages that meet or exceed our safety standards and include all information needed by the mechanic to perform their task.
- The mechanic utilizes their knowledge of fundamentals to execute the task and ensure the equipment functions how operators expect it to function.
- When equipment doesn't function as designed the operator enters the issue into CAP and Maintenance, Engineering or Performance Improvement team members evaluate and determine the cause of the problem, and we correct the cause, restoring the equipment design function.

Why does it matter to me?

When we all perform our jobs proficiently, adhering to the highest safety and regulatory standards, and meet the commitments we've agreed to, it can be measured in the success of our teams, departments, and organization.





Nuclear Generation Operating Plan

The Nuclear Generation 2022-2025 Operating Plan aligns with PG&E's Purpose

Why We Exist

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

What We Will Deliver

- People
- Planet
- Prosperity

Nuclear Generation Operating Plan

PG&E's True North Strategy Stands guide Nuclear Generation's key work initiatives for 2022



Everyone and everything is always safe



It is enjoyable to work with and for PG&E



Our work shall create prosperity for all customers



Catastrophic Wildfires shall stop

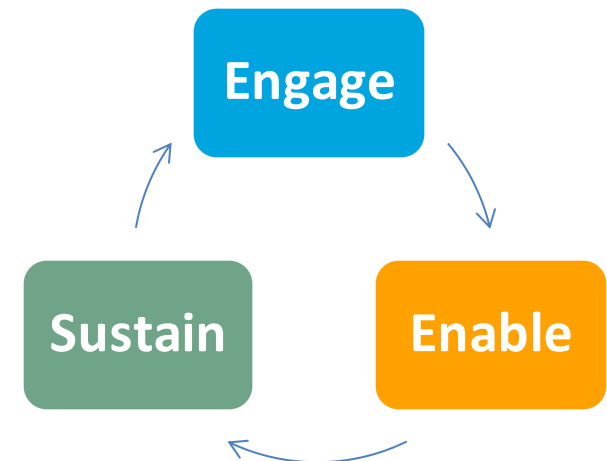
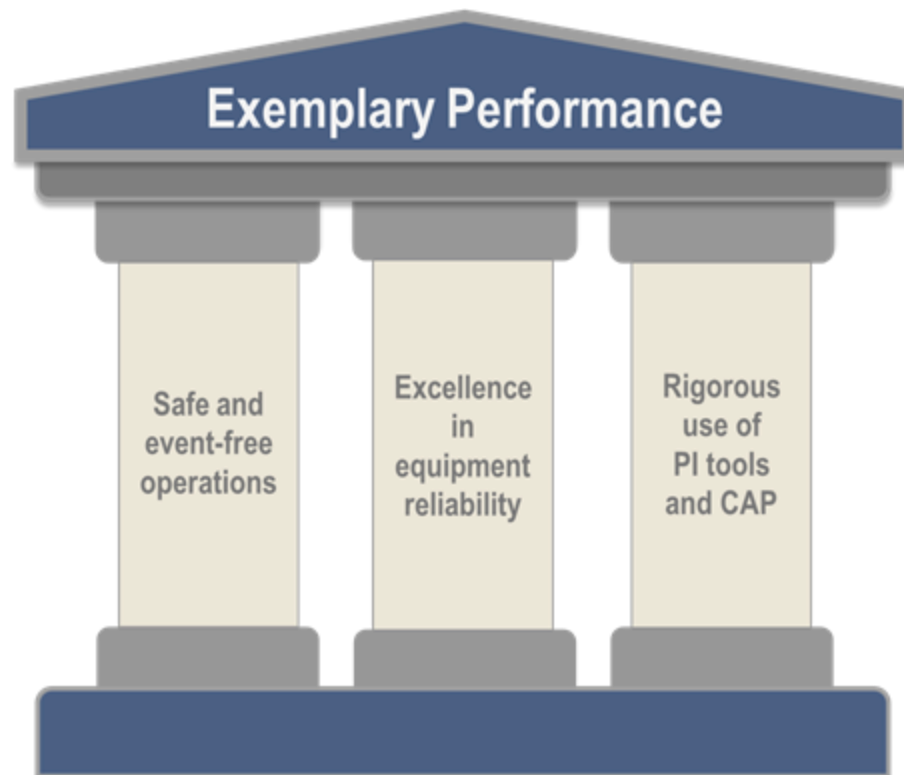


A healthy environment and carbon-neutral energy system shall be the reality for all Californians

Nuclear Generation Operating Plan

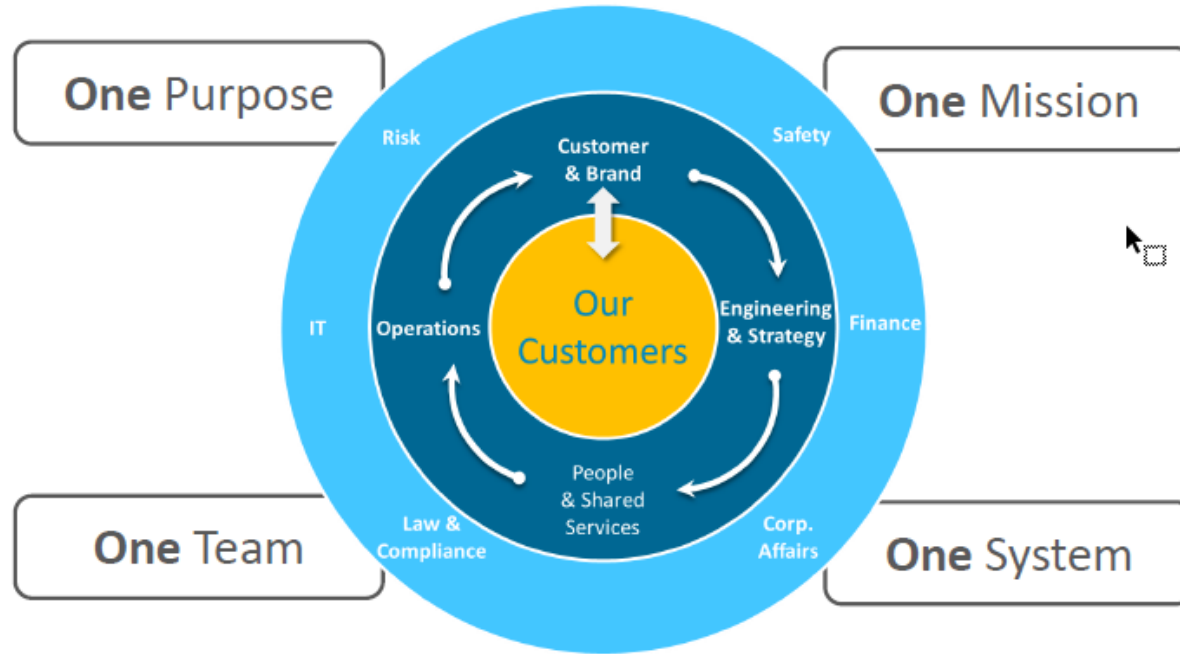
Finishing on Top

Our focus over the next four years is finishing at top performance



Nuclear Generation Operating Plan

Lean Operating System



Nuclear Generation Operating Plan

2022 Key Work Projects and Initiatives

- Maintain 1st quartile safety performance
- Provide reliable, clean energy by ensuring equipment reliability
- Execution of two refueling outages (1R23 and 2R23)
- Pathways Program: Retraining and Redeployment Plans
- Nuclear Regulatory Commission's Evaluated Emergency Planning Exercise

Questions?

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Workforce Retention Update

Diablo Canyon Power Plant

Shane Guess

Manager, Workforce Strategy & Assessment

February 15, 2022

DCPP's Retention Program

- Through the Joint Proposal Agreement, 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 is greater than approximately 95% participation
- DCPP recently began the second (of three) years in the Tier 2 retention period, which concludes in late 2023

Hiring and Staffing

- DCPD leadership reviews staffing adequacy on a weekly basis, and performs monthly “deep dives” of specific departments
- DCPD Operations hired its largest license class in 2019 and a new class of non-licensed operators in 2021 to prepare for expected attrition and ensure sufficient staffing levels through the end of the facility’s operating licenses
- DCPD maintains a pool of off-shift Senior Reactor Operators that can staff the required Operations positions required by the operating license
- Radiation Protection hired a new class of Chemistry and Radiation Protection technicians in 2021

Workforce Flexibility

- Pilot Hiring Hall Letters of Agreement were signed by PG&E and IBEW leaders for the following groups:
 - Decontamination Specialists
 - Electrical Maintenance Technicians
 - Instrumentation & Controls Technicians
 - Administrative Specialists

 Pacific Gas and Electric Company.	LETTER AGREEMENT NO. 21-57-PGE	 IBEW
PACIFIC GAS AND ELECTRIC COMPANY LABOR RELATIONS AND HUMAN RESOURCES DEPARTMENT 375 N. WIGET LANE SUITE 375 WALNUTCREEK, CA 94598 (925) 954-4851 MATT LEVY SENIOR DIRECTOR	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO LOCAL UNION 1245, I.B.E.W. P.O. BOX 2547 VACAVILLE, CALIFORNIA 95696 707-452-2700 BOB DEAN BUSINESS MANAGER	
December 13, 2021		
Mr. Robert Dean, Business Manager Local Union No. 1245 International Brotherhood of Electrical Workers, AFL-CIO P. O. Box 2547 Vacaville, CA 95696		
Dear Mr. Dean:		
The following agreement was piloted under the DCFP Project 2025 (P25) workforce flexibility effort and will supersede the previous pilot agreements at DCFP. This agreement will allow some departments and classifications at DCFP to be supplemented with temporary P25 Hiring Hall (HH) personnel if regular status employee positions are permanently vacated. The eligible DCFP Departments and classifications will be listed in Attachment 1. This will allow DCFP to maintain a qualified IBEW workforce to operate the plant safely and successfully until the end of operating license and minimize the number of permanent employees to be redeployed after the plant closure. HH employees employed under this agreement will be referred to as P25 HH employees as covered in Attachment 2. Traditional HH employees may still be used pursuant to R1-04-12 and will not apply to the rules governed in this agreement.		
It is not the intent of the parties to have P25 HH employees replace regular employees. All work normally performed by IBEW1245 employees will continue to be performed by IBEW1245 employees. Notwithstanding any other understanding between the parties, the Company shall not involuntarily lay off any regular employee for lack of work at DCFP while P25 HH employees are being utilized.		
The Physical Agreement shall apply to P25 HH employees unless otherwise specifically agreed to by the Company and Union in writing.		
Attached are the following: (1) DCFP Departments, Classifications, and Headcounts included in (part of) this agreement (2) P25 Hiring Hall Process and Procedures, (3) P25 HH Special Project Agreement form.		
Either the Company or the Union reserves the right to cancel this agreement by giving the other 30 days written notice.		

DCPP's Pathways Retraining Program

\$11.3M Funding Available from 2021 to 2025

Enhanced Education

Employee Retraining & Certificate Programs

International Brotherhood of Electrical Workers (IBEW) Union Apprenticeships

Employee Support Programs



**Pathways to
your Future**

Beyond the Tier 2 Retention

- DCPD leadership expects higher attrition following the end of the Tier 2 retention period
- The Senior Vice President and Chief Nuclear Officer, along with the PG&E executive leadership team, have committed to a coworker redeployment plan that provides an opportunity for all DCPD coworkers who want to continue working for PG&E past 2024/2025 to have a position within the company that aligns to their skill sets and qualifications
- 2022 Pathways goals include completing one-on-one conversations with all plant employees by the end of 1Q22 and personal redeployment plans for each employee by the end of 4Q22.

Thank you

Shane Guess

Manager, Workforce Strategy & Assessment

DCPP Strategy, Policy, & Engagement

Unit 2 Feedwater Heater Root Cause Evaluation

Dennis Petersen, Station Director

Matthew Birkel, Manager Performance Improvement
and Corrective Action

&

Root Cause Team Lead

February 15, 2022

Problem Statement

Object:

- Unit 2 Feedwater Heater (FWH) 2-5B

Defect:

- Heat exchanger tube failure

Consequence:

- High-out-of-sight FWH 2-5B level requiring manual Unit 2 trip offline to a forced outage (2Y23)

Problem Statement

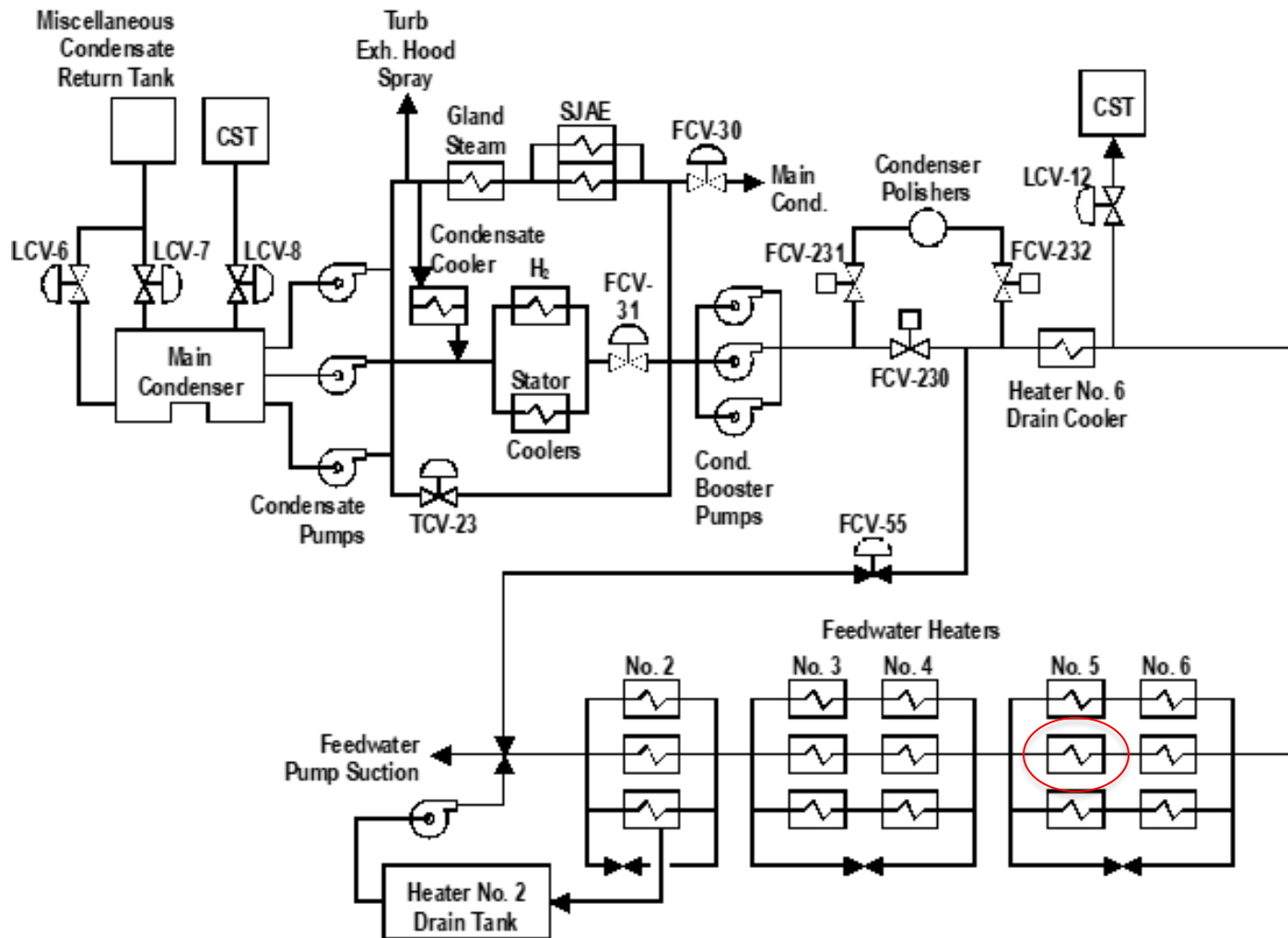
A Root Cause Evaluation (RCE) was conducted to address this problem:

Root Cause Evaluation: A formal investigation that uses industry-accepted analysis methods to determine the root cause(s) of a problem.

This event followed our same RCE process, however the inability to access the FWH failure points required the team issue a Probable Cause versus a Root Cause:

Probable Cause: A highly likely cause based on information such as circumstantial evidence, non-verifiable evidence, limited available facts, industry operating experience, or cause evaluation techniques that could indicate a cause but are inconclusive.

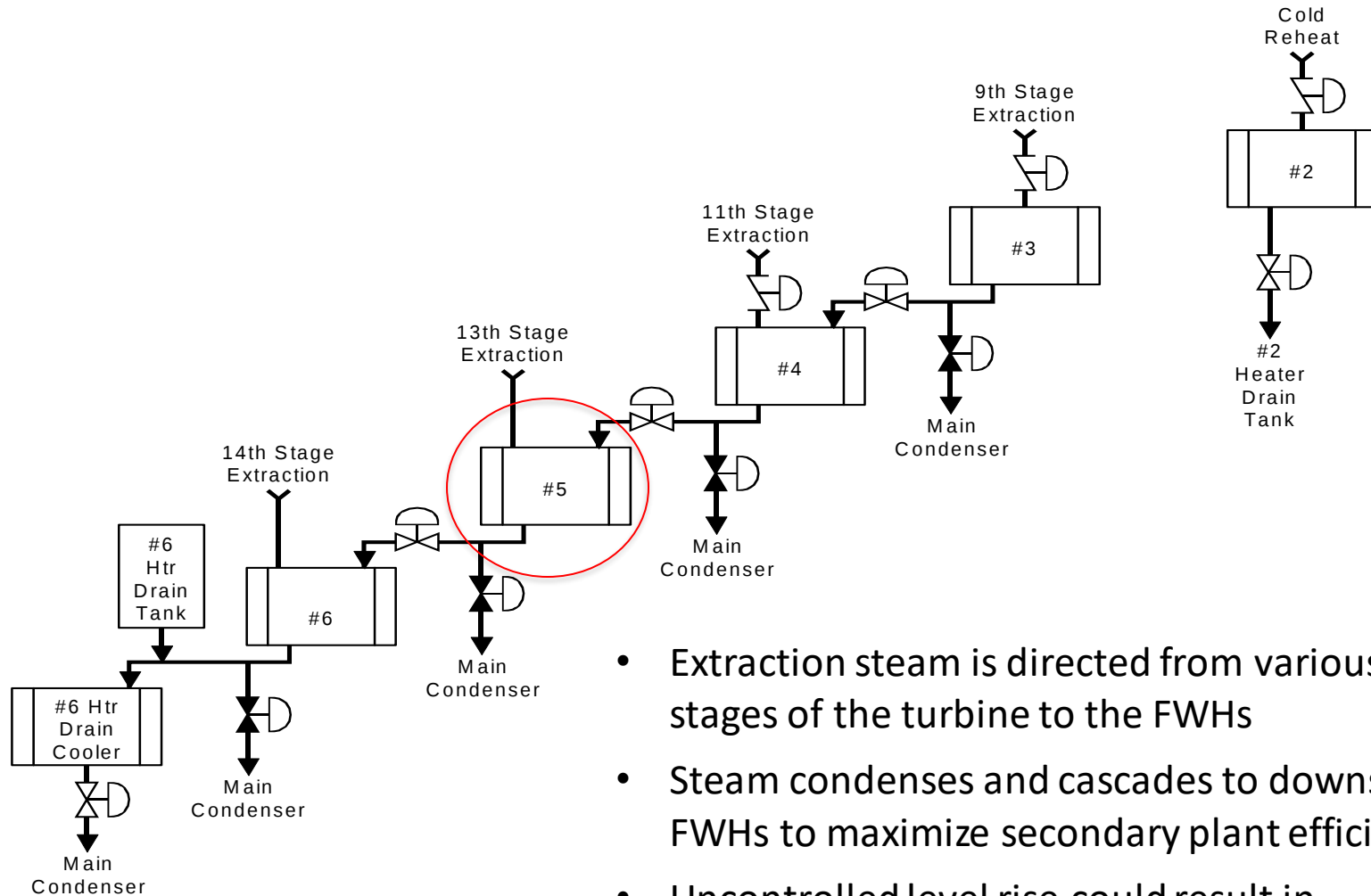
Condensate System



Each unit has 18 FWHs to pre-heat feedwater which enters the steam generators.

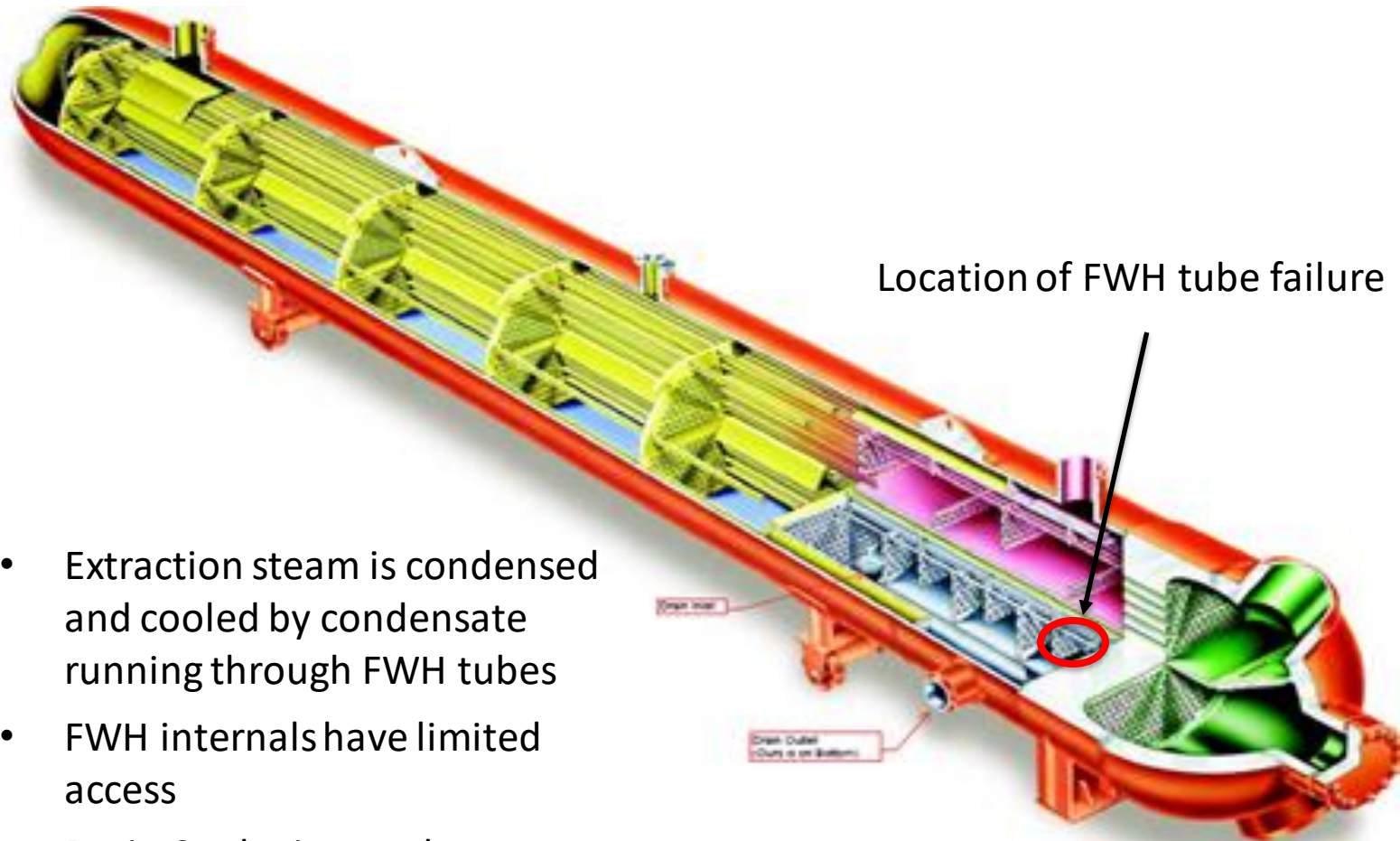
Note: No. 1 FWH are downstream of Feedwater Pumps and are not shown

Extraction Steam – FWH Cascade



- Extraction steam is directed from various stages of the turbine to the FWHs
- Steam condenses and cascades to downstream FWHs to maximize secondary plant efficiency.
- Uncontrolled level rise could result in condensate backing up into the extraction steam line, potentially leading to main turbine damage

Feedwater Heater Overview



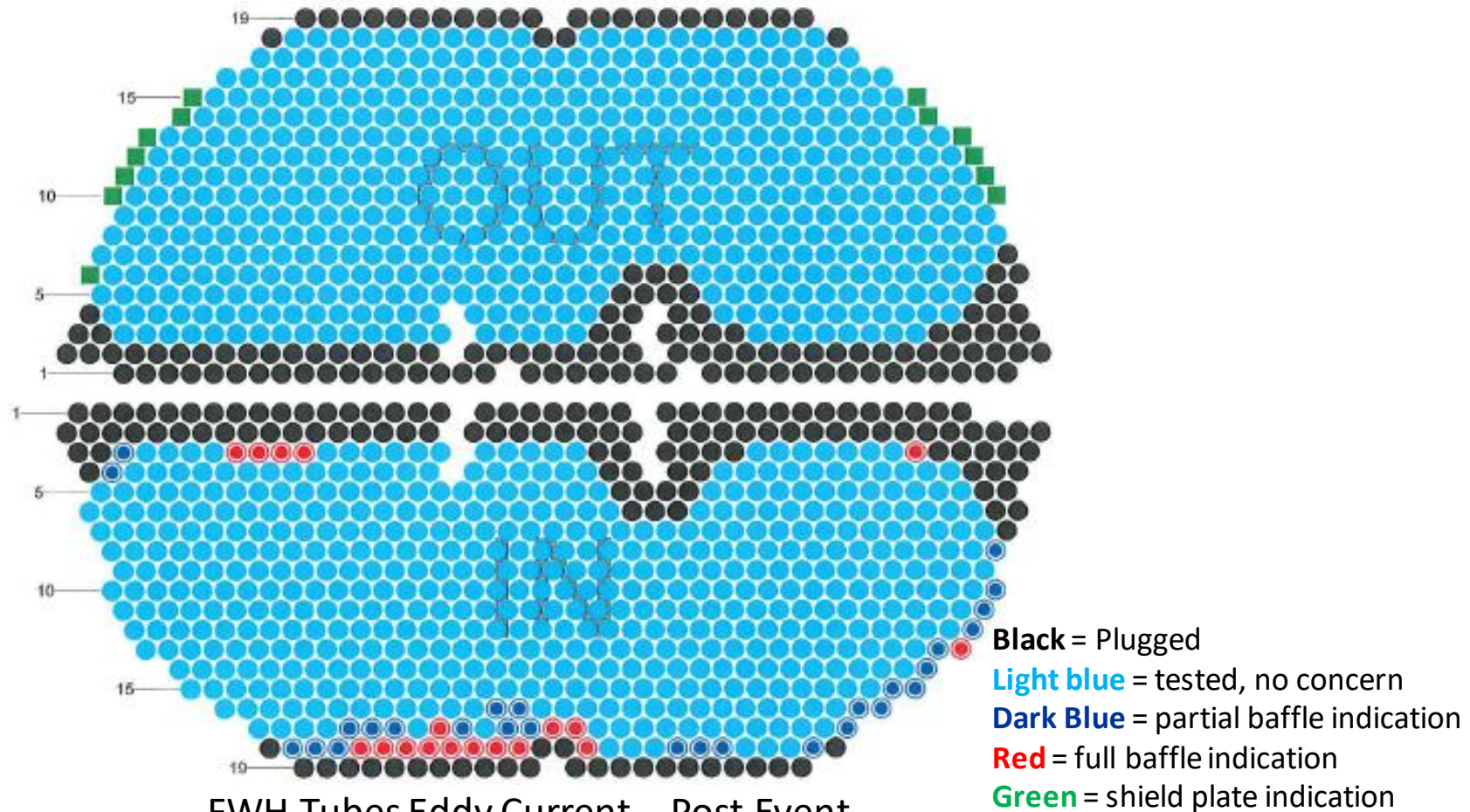
- Extraction steam is condensed and cooled by condensate running through FWH tubes
- FWH internals have limited access
- Drain Cooler internal water-water HX

Note, this a generic FWH representation, FWH 2-5B is similarly designed

Event Summary – What Happened

- The morning of October 15th 2021, during normal 100% power operations, initial control room alarm indicated an issue with the Unit 2 Feedwater System
- Per plant procedures Operations investigated the FWH level alarm for level control malfunctions and assessed for a FWH tube leak
- During isolation activities FWH level rose high out-of-sight, losing positive indication of FWH level, which drove a procedurally required manual reactor trip, to mitigate potential turbine damage

Feedwater Heater Tube Cross-section



FWH Tubes Eddy Current – Post Event

- Eddy current measurements are taken along the 39' straight upper and lower length of the U-tube (690 tubes total – condensate flow on inside, steam flows on outside)

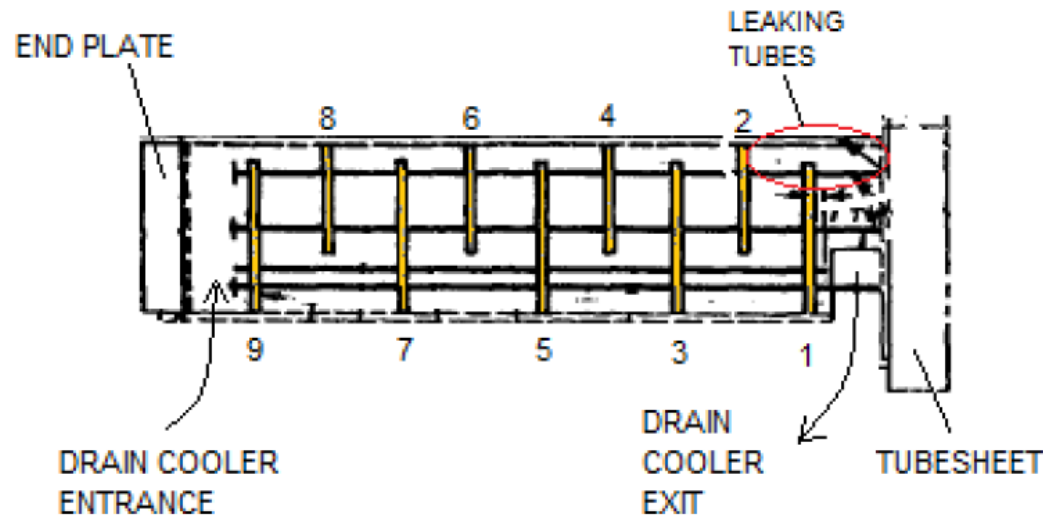
Immediate Mitigating Actions

- Unit 2 was shut down, lowering FWH level and preventing risk of main turbine damage
- Dimple plug, eddy current and borescope inspections performed to identify source of leak and extent of damage
- Corrective and preventative tube plugging performed on FWH 2-5B
- Extent of condition inspections performed on FWH 2-5A & 2-5C. No similar adverse condition or degradation was identified

Causes

Probable Cause

PC1 - Excessive unsupported tube lengths caused by a breach in the drain cooler (DC) shroud led to fatigue fracture of the FWH tubes



Baffle Plate Configuration

Corrective Actions (CA)

CAs to address and mitigate Probable Cause:

CA1 - With external peer support, determine which FWH(s) require additional inspections or preventative tube plugging and implement during upcoming unit outages (Unit 1 - April, Unit 2 – October)

CA2 - Implement additional FWH system monitoring based on industry expertise and consultant guidance to identify a potential drain cooler (DC) shroud breach

CA3 - For most vulnerable FWH(s) identified in CA 1, implement additional monitoring to enhance early leak detection

Extent of Condition

- Extent of condition assessed similar heat exchangers for concerns related to tube failure or level control
- All Extent of condition actions have been completed with no similar uncontrolled level concerns identified
- Support of external peer FWH expert has been utilized to ensure appropriate identification of and understanding of Extent of Condition

The PGA logo is a blue square with a white diagonal line from the top-left to the bottom-right. The letters 'PGA' are in white, and 'E' is in blue, positioned to the right of the diagonal line.

Thank You

Dennis Petersen



Diablo Canyon Power Plant: State of the Plant Update

Dennis Petersen
Station Director
February 15, 2022



Station Update

Station Update

Key Upcoming Activities



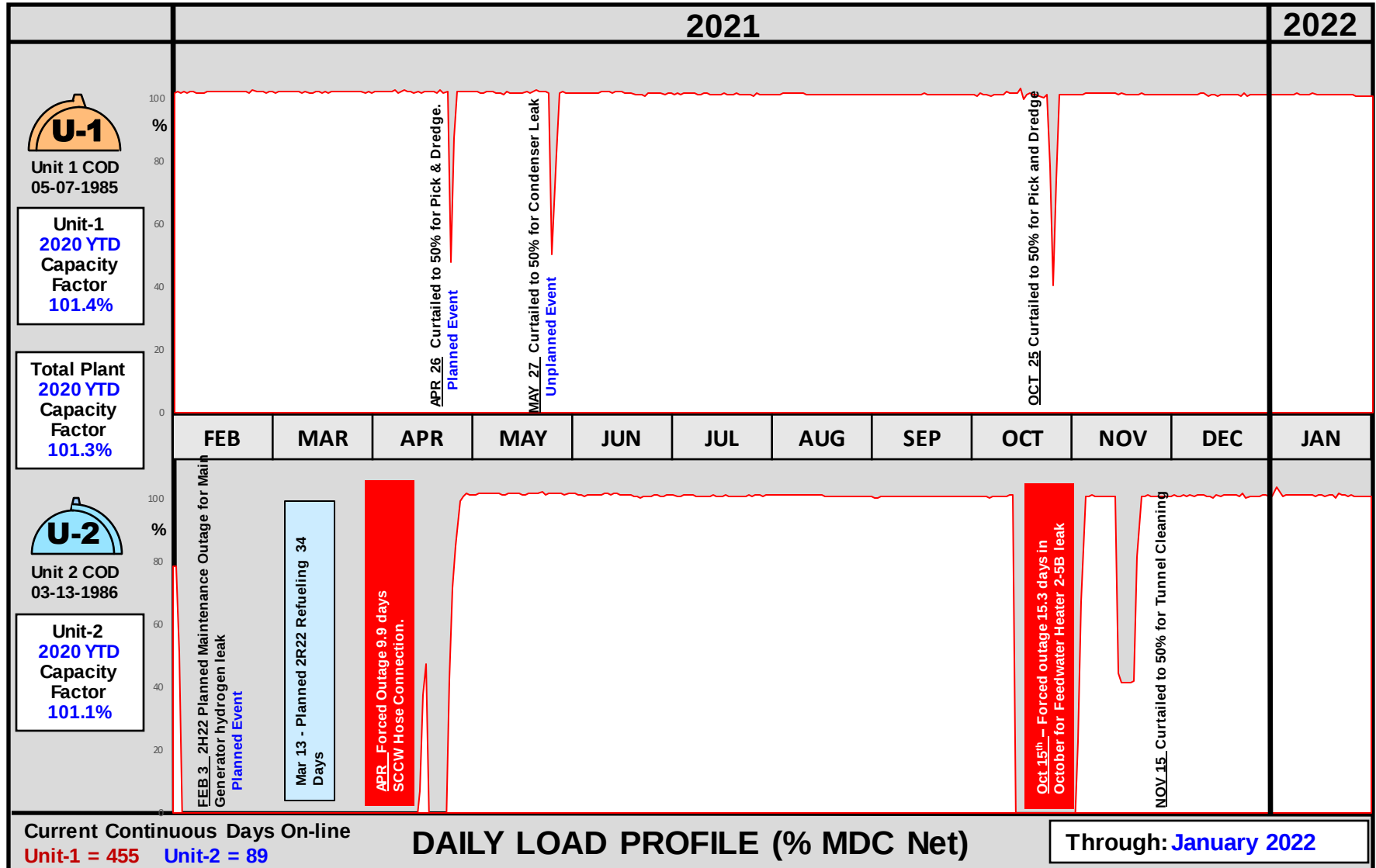




Diablo Canyon Power Plant

Daily Load Profile: Past 12 Months

Daily Capacity Factor Power History Curves



COVID-19 Update

- No impact on Diablo Canyon Power Plant safe operations
- Case numbers dropping in conjunction with state and local case numbers
- Maintaining a remote working posture during Omicron variant spike
- Secured additional testing resources in preparation for the upcoming U-1 outage

Organizational Changes

Senior Leadership Team Changes

- Senior VP and Chief Nuclear Officer – Paula Gerfen
- VP Decommissioning & Technical Service – Maureen Zawalick
- Site VP – Adam Peck
- Station Director – Dennis Petersen
- Directors
 - Operations – Sam Williams
 - Maintenance – Mike Brass



The logo for PG&E features the letters 'PG' in white on a blue background, followed by an orange ampersand, and the letter 'E' in white on a blue background. The text 'Thank You' is written in orange over the ampersand.

Thank You

Dennis Petersen

Diablo Canyon Power Plant Decommissioning

Decommissioning Planning & Spent Nuclear Fuel Storage Update

Presented by
Tom Jones, Director, Strategic Initiatives

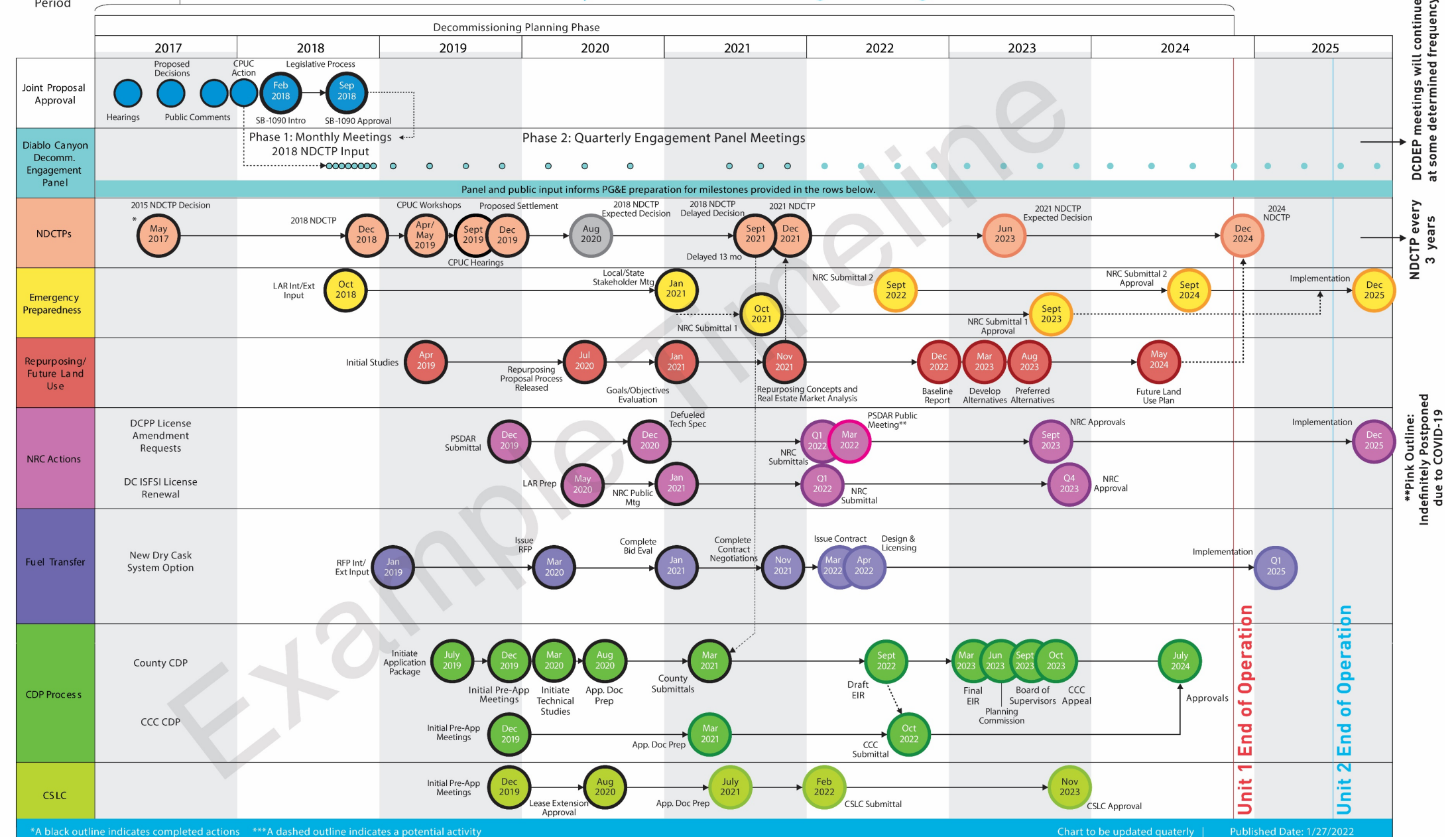
February 16, 2021



Review Current Decommissioning Schedule of Key Activities

- Overall schedule and interdependencies of regulatory processes
 - Key permitting and license actions in 2022
- Update on Diablo Canyon (DC) Independent Spent Fuel Storage Installation (ISFSI) License Renewal Application
 - Update on submittal timeframe and inspections
- Update on new/updated spent nuclear fuel storage system
- Questions from the Committee

Diablo Canyon Decommissioning Planning Path



ACRONYMS:

CCC – California Coastal Commission
CDP – Coastal Development Permit
CSLC – California State Lands Commission

CPUC – California Public Utilities Commission
DCPP – Diablo Canyon (DC) Power Plant
EIR – Environmental Impact Report

ISFSI – Independent Spent Fuel Storage Installation
LAR – License Amendment Request
NDCTP – Nuclear Decommissioning Cost Triennial Proceeding

NRC – Nuclear Regulatory Commission
PSDAR – Post-Shutdown Decommissioning Activities Report
RFP – Request for Proposal



Key Take-aways: Decommissioning Planning Path

Regulatory approvals are being sought early to support direct transition into decommissioning

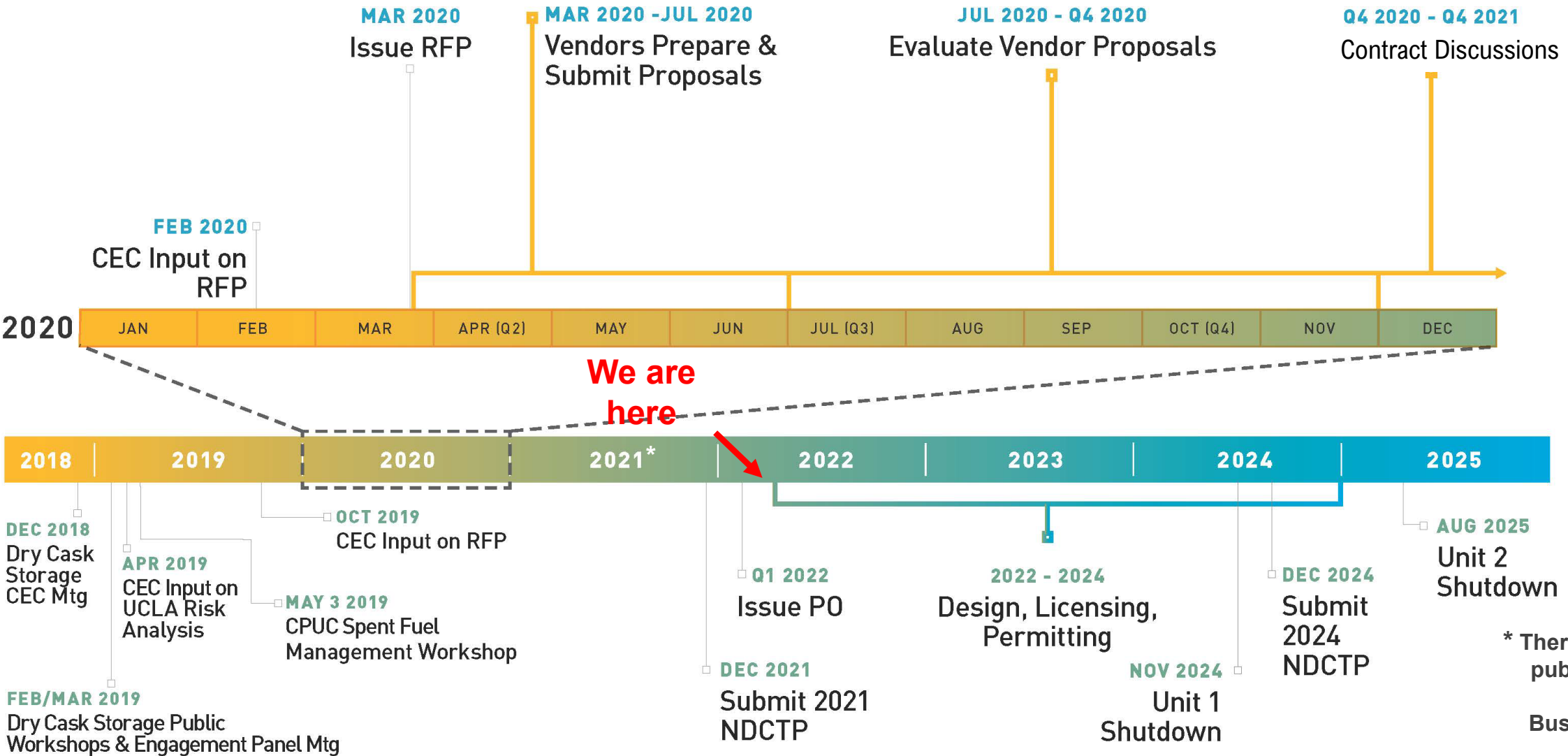
- Based on lessons learned from the industry (including San Onofre)
- Schedule also informed by PG&E's previous permits and licensing activities
- Early planning results in costs savings and includes significant public participation sought by PG&E and the community

All permit and licensing actions are on time or early

- County is drafting the Environmental Impact Report
 - Principle document used for evaluating applications
- NRC post shutdown decommissioning activities report public meeting rescheduled – TBD
- CA State Lands Commission and CA Coastal Commission submissions also occur in 2022
- Diablo Canyon ISFSI license renewal request will be submitted in March, 2022



Dry Cask Storage Request for Proposal Timeline



PG&E will use a request-for-proposal process to develop a holistic GTCC waste and SNF storage strategy.

* There is no anticipated public participation in 2021 due to the Business Confidential portion of the RFP process.

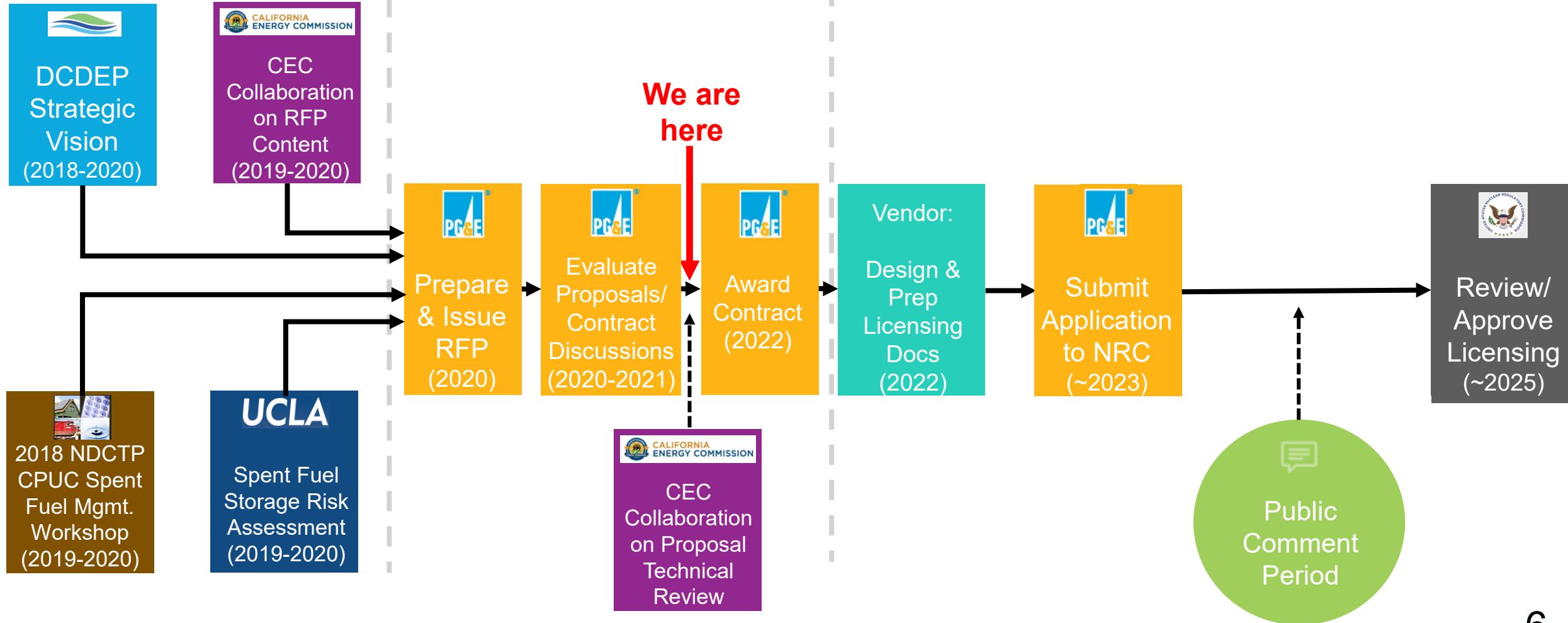


Dry Cask Storage Request for Proposal Process

Public Input: ~2 yrs

Confidential Review: ~2 yr

Design and NRC Approval: 4 yrs





Key Take-aways: Dry Cask Storage Request for Proposal

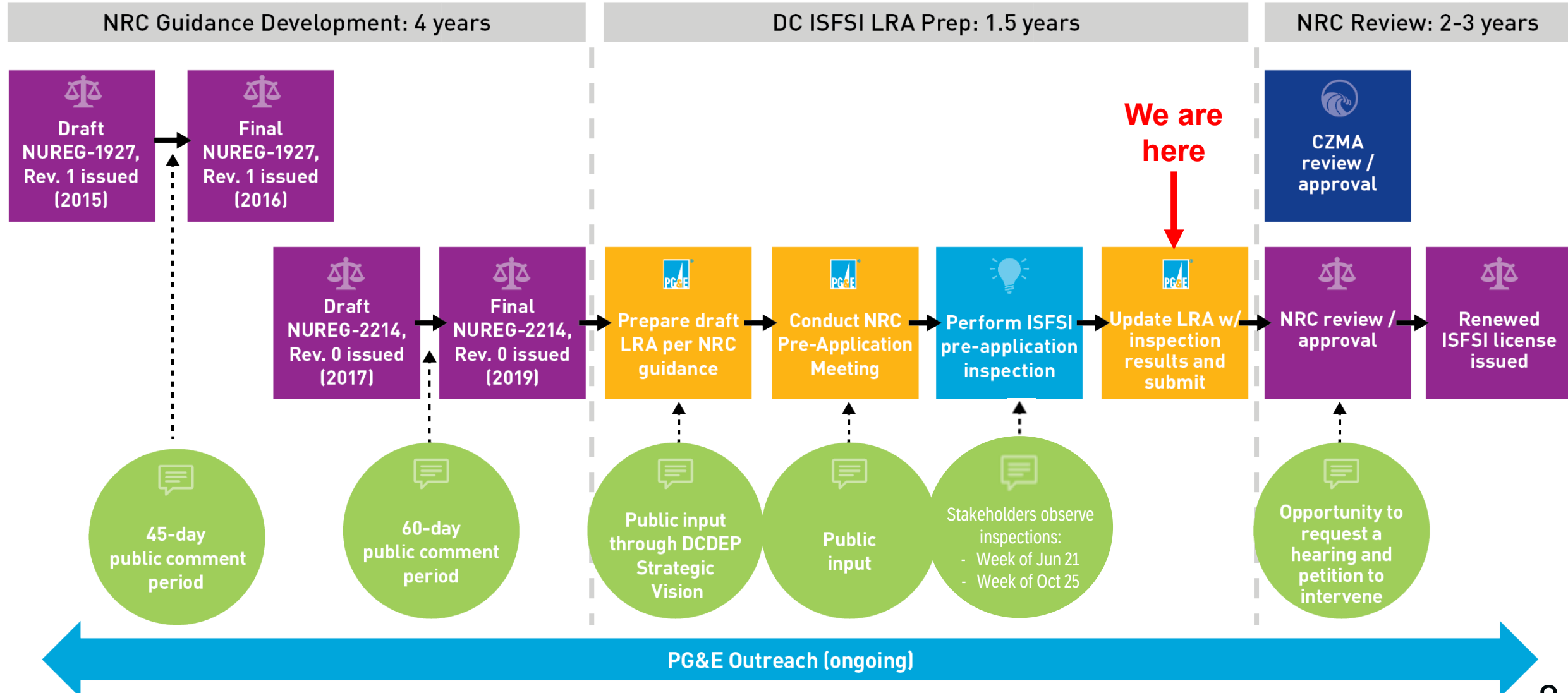
A new or modified dry cask storage system allows PG&E to comply with the 2018 Nuclear Decommissioning Cost Triennial Proceeding (NDCTP) Decision to safely complete final spent fuel offload within 4 years of each unit shutdown

Significantly reduces spent fuel storage time in spent fuel pools:

- Current system technical specifications offload time is estimated up to 13 years
- All proposed current systems will satisfy 4 years as specified in the NDCTP settlement

Spent Fuel Management is the focus of the March 30 Diablo Canyon Decommissioning Engagement Panel Public Meeting

DC ISFSI License Renewal Process





California Coastal Commission CZMA Letter for Humboldt Bay ISFSI / Applicability to DC ISFSI

- PG&E has initiated consultation with the California Coastal Commission for DC ISFSI license renewal
- Expect to use the same process as used for the Humboldt Bay ISFSI license renewal

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY GAVIN NEWSOM, GOVERNOR

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885
WWW.COASTAL.CA.GOV



March 20, 2019

Mark Krausse
Director, State Agency Relations
Pacific Gas and Electric Company
1415 L Street, Suite 280
Sacramento, CA 95814

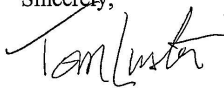
VIA EMAIL:

RE: Request for consistency certification – Nuclear Regulatory Commission license renewal of Pacific Gas & Electric’s (“PG&E’s”) Humboldt Bay Independent Spent Fuel Storage Installation (PG&E Letter HIL-18-007)

Dear Mr. Krausse:

Thank you for your follow-up request regarding PG&E’s July 10, 2018 letter seeking the Coastal Commission’s concurrence that the above-referenced license renewal is consistent with the California Coastal Management Program (“CCMP”) and the federal Coastal Zone Management Act (“CZMA”). We understand that PG&E proposes no new development as part of the license renewal and plans to continue operating the facility as it has since the Coastal Commission first found it consistent with the CCMP and CZMA on September 15, 2005. Pursuant to 15 CFR 930.62, the Commission’s concurrence is presumed if we do not provide a response within six months of the request. You may therefore consider this letter as acknowledgement of the Commission’s concurrence.

Please contact me at 415-904-5248 or tluster@coastal.ca.gov if you have any questions.

Sincerely,

Tom Luster
Energy, Ocean Resources, and Federal Consistency Division



ISFSI Pre-Application Inspections Update

First inspection completed 2021

- Inside 8 overpacks to examine the inner multi-purpose canister that holds spent nuclear fuel
- Results entered into CAP and will accompany NRC license renewal application
- Industry leading sample size ensures a representative sample of all iterations of cask materials were inspected

Second Inspection – lifting of the overpack

- Delayed until May 2022
- Not required as part of NRC process
- Results will be shared with the DCISC, NRC, and publicly available

Delay related to crane lifting mechanism

- Entered into the Corrective Action Program (CAP)
- PG&E working to procure over 200,000 lb test weight to ensure full-load testing prior to lifting overpack
 - DCISC, Diablo Canyon Engagement Panel, and other key stakeholders will be invited to observe
- Procuring steel and working with specialty contractor to finalize test protocol
- Will occur after Unit 1 refueling outage

Pre-Application Inspection Locations

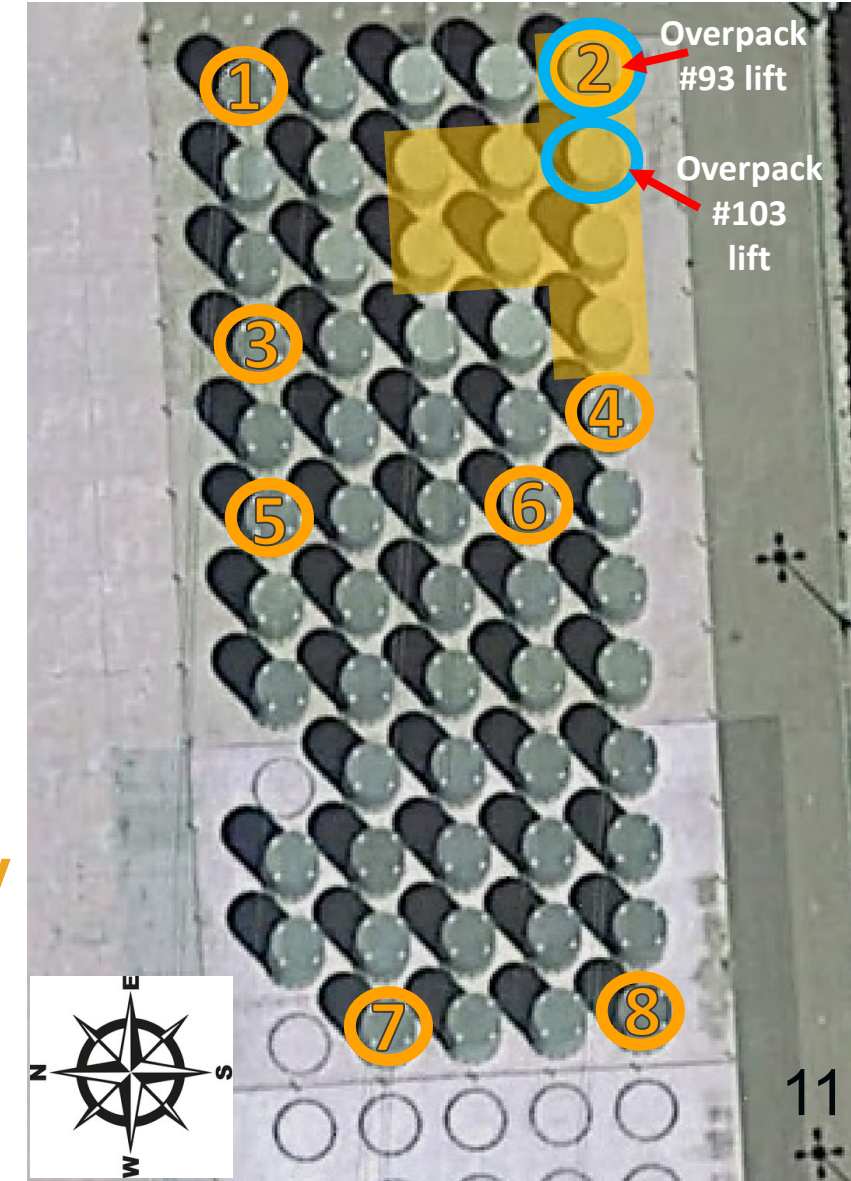
2 overpacks from the 1st loading campaign are scheduled for lifting and underside inspection

- Some of the oldest systems on the pad
- Receive the least sun exposure on the pad
- All campaign 1 overpack bottoms are the closest to the pad surface
 - Less air circulation means they are the most likely to retain moisture/age

If conditions warrant, additional overpack lifts and inspections can be scheduled for a future week

Process ensures PG&E is a transparent and exemplary ISFSI operator

- Overpacks loaded in Campaign 1 (oldest systems)
- MPCs/overpacks inspected in June 2021
- Proposed overpack lifts/inspections in May 2022





Key Take-aways: DC ISFSI License Renewal

ISFSI license renewal process ensures structures and components can safely perform as intended for an additional 40 years

Public is invited to provide input throughout the process

Stakeholder observation of ISFSI inspection activities:

- Inspection part 1: June 2021
- Inspection part 2: scheduled for May, 2022

Once submitted to NRC, the entire application will be immediately sent to DCISC and be publicly available:

- PG&E website, Diablo Canyon Decommissioning Engagement Panel website, and ADAMS

Questions?

Tom Jones

Tom.Jones@pge.com





DIABLO CANYON
Decommissioning Engagement Panel

DCISC

Decommissioning Panel Update: Linda Seeley February 16, 2022





DIABLO CANYON
Decommissioning Engagement Panel

New Panelists on DCDEP

- Patrick Lemieux, Cal Poly professor of Mechanical Engineering (Morro Bay)
- Tim Auran, M.D., Interventional Radiologist (Avila Beach)
- Bill Almas, Retired Real Estate Manager, Chevron (San Luis Obispo)
- Mariam Shah, Community Activist and former Grover Beach City Council Member (Arroyo Grande)



DIABLO CANYON
Decommissioning Engagement Panel

Strategic Vision

- In 2018 , PG&E submitted is Nuclear Decommissioning Cost Triennial Proceeding to the CPUC.
- The DCDEP included their Strategic Vision as a supplement to the Triennial Report
- The Panel is updating the Strategic Vision Annually



DIABLO CANYON
Decommissioning Engagement Panel

Pathways for Public Input

- Public meetings
- Public workshops
- Public comment at meetings
- Public comment kiosk
- Panel website
- Email the panel
- In-person discussions

Engagement
Panel



PG&E



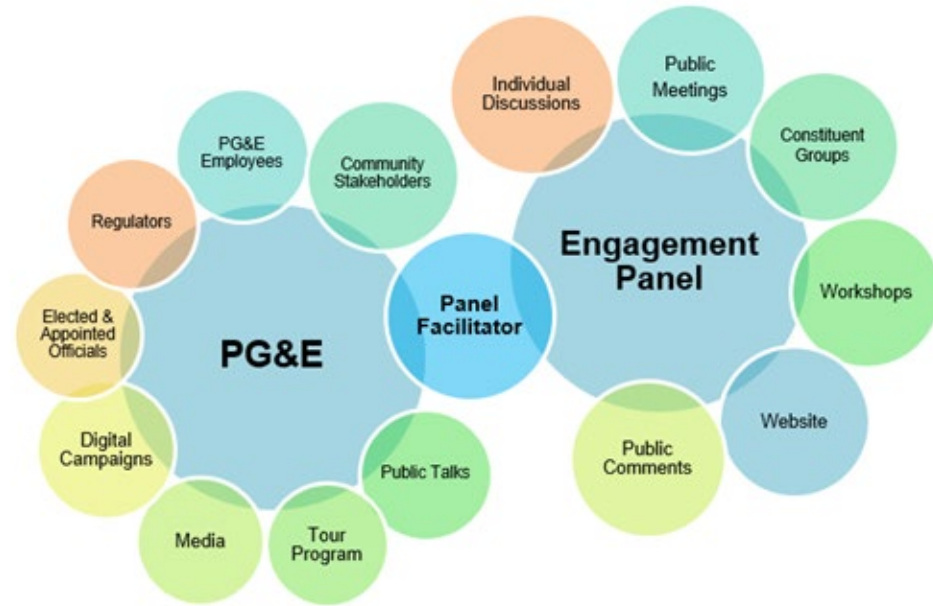
**PG&E's
Decommissioning
Estimate to CA
Public Utilities
Commission**



DIABLO CANYON
Decommissioning Engagement Panel

Public Outreach

- 20 DCDEP public meetings and 7 days of workshops
- 2018 – January 2022:
 - 286 tours with nearly 6,121 participants
 - Website visits
 - Speaker bureau:
 - 242 presentations
 - 15,052 people reached
- Tribal outreach is ongoing
 - yak tityu tityu yak tiłhini (Northern Chumash)
- COVID-19 mitigations:
 - Developed virtual tours: approximately 32,408* views
 - ✓ Pecho Coast Trail and Lighthouse; Lands; Marina; ISFSI
 - Enhanced website launched Feb. 12, 2021
 - Virtual presentations and public meetings
- **Includes YouTube impressions*



**Over 50,800
Total
Contacts**



DIABLO CANYON
Decommissioning Engagement Panel

Public Meetings

2021 Meetings Held

- May 26:
 - Spent Nuclear Fuel Management Update
 - Decommissioning Project Application and the CEQA process
- August 25:
 - Explanation of the CPUC proposed decision on the 2018 NDCTP
 - Update on Repurposing at Diablo Canyon (Offshore Wind, Desalination, Real Estate)

November 3:

Strategic Vision Update

Project Application/CEQA Update



DIABLO CANYON
Decommissioning Engagement Panel

Public Meetings

2022 Topics

- March 30 – Spent Nuclear Fuel Management
- May 25 – Topic to be Determined*
- August 24 – Topic to be determined*
- Nov 9 – Engagement Panel Strategic Vision

* Based on Community and Panel Input



DCISC Post-Shutdown Planning

- **Review Second Restated Charter**
- **Overview of Phases and Timeline Between Unit Shutdowns and All Fuel Moved to ISFSI**
- **Review Previous Post-Shutdown Roles Matrix in View of Timeline and DCISC Amended Charter**
- **Review of Possible Modifications to Open Items List for Post-Shutdown Use**
- **Suggested Steps Forward**



DCISC Post-Shutdown – Second Restated Charter

I.A.(1) – Safety of operations shall mean activities in connection with generation of electricity by Diablo Canyon and/or the operation of the Diablo Canyon Spent Fuel Pools and related support systems and the Diablo Canyon Independent Spent Fuel Storage Installation (ISFSI), including the transport of nuclear fuel to and from Diablo Canyon's Spent Fuel Pools and the storage of nuclear fuel within the Spent Fuel Pools and the transport and storage of nuclear fuel to and within the ISFSI or elsewhere at Diablo Canyon.



DCISC Post-Shutdown – Second Restated Charter (Con't)

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

III.(1) – The Committee will terminate its review of safety of operations upon further order of the CPUC or upon the date of successful completion of the transfer of all nuclear fuel from both Diablo Canyon Spent Fuel Pools to the ISFSI.



DCISC Post-Shutdown – Phases and Timeline

Phases

Phase	1	2	3	4	5	6
Approximate Timeframe	Until Unit 1 Shutdown November 2, 2024	November 2, 2024 Until Unit 2 Shutdown August 26, 2025	September 2025	September 2025 to Early 2027	Early 2027 to Late 2029	Beyond 2029
Plant Conditions	Two Units Operating	Fuel Removal from U1 One Unit Defueled One Unit Operating	Fuel Removal from U2 Final Transfers into SFPs	Fuel in ISFSI and SFP Risk of Zr Fire	Fuel in ISFSI and SFP No Risk of Zr Fire Cask Loadings/Transfers *	All Fuel at ISFSI
Emergency Plan	Current Emergency Plan			Post-Shutdown Emergency Plan		ISFSI-Only Emergency Plan

* Cask Loadings/Transfers Could
Possibly Begin in Phase 4

Timeline of Phases

1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26	3Q26	4Q26	1Q27	2Q27	3Q27	4Q27	1Q28	2Q28	3Q28	4Q28	1Q29	2Q29	3Q29	4Q29
1				2			3	4					5										

----- Assumes Four-year Period for Offload to ISFSI ----->



DCISC Post-Shutdown – Previous Roles Matrix

		Phases Following Cessation of Operations			
		Phase A <i>(New 2 & 3)</i>	Phase B <i>(New 4 & 5)</i>	Phase C <i>(N/A)</i>	Phase D <i>(N/A)</i>
		Reactors Shutdown with Fuel Remaining in Reactors. Spent Fuel Pools Operational. Limited Decommissioning ISFSI Operational	Fuel Removed from Both Reactors. <i>(2025)</i> Spent Fuel Pools Operational. Decommissioning in Progress ISFSI Operational Cask Loadings and Transfers DCISC Oversight Ends when SFPs Empty (~2029)	Spent Fuel Pools Empty Decommissioning in Progress. ISFSI Operational	Decommissioning Complete. ISFSI Operational and/or spent fuel being shipped from site
Plant Status → Areas for DCISC Review ↓					
1	Health of Safety Systems	All Systems*	SFP-Related Systems	No	No
2	Health of Electrical and Other Supporting Systems	All Systems*	SFP-Related Systems	No	No
3	Operator Staffing, Training, and Licensing	Yes	Yes; Limited to Fuel Handlers	No	No
4	Regulatory Compliance	Yes	Yes; for ISFSI/SFP	TBD** No	No
5	Offsite Emergency Preparedness	Yes	Yes; Phased Reduction	TBD** No	No
6	Quality Verification and Related Activities	Yes	ISFSI/SFP-Related Systems	No	No
7	Engineering & Other Programs	Yes	ISFSI/SFP-Related Systems	No	No
8	Human Performance	Yes	Yes; Limited to ISFSI/SFP Operations	No	No
9	Performance Improvement and Corrective Action Programs	Yes	Yes; Limited to ISFSI/SFP Operations	TBD** No	No
10	Fire Protection	Yes	SFP-Related Systems	No	No
11	Beyond Design Basis & FLEX	Yes	SFP-Related Systems	No	No



DCISC Post-Shutdown – Previous Roles Matrix (Continued)

Plant Status → Areas for DCISC Review ↓		Phases Following Cessation of Operations			
		Phase A (<i>New 2 & 3</i>)	Phase B (<i>New 4 & 5</i>)	Phase C (<i>N/A</i>)	Phase D (<i>N/A</i>)
		Reactors Shutdown with Fuel Remaining in Reactors. Spent Fuel Pools Operational. <i>Limited</i> Decommissioning ISFSI Operational	Fuel Removed from Both Reactors. (<i>2025</i>) Spent Fuel Pools Operational. Decommissioning in Progress ISFSI Operational <i>Cask Loadings and Transfers</i> <i>DCISC Oversight Ends when SFPs Empty (~2029)</i>	Spent Fuel Pools Empty Decommissioning in Progress. ISFSI Operational	Decommissioning Complete. ISFSI Operational and/or spent fuel being shipped from site
12	ISFSI Operations	Yes	Yes	TBD** <i>No</i>	No
13	ISFSI Storage Cask Aging Management	Yes	Yes	TBD** <i>No</i>	No
14	Management of Risk from External Hazards	Yes	<i>ISFSI/SFP-Related Systems</i>	TBD** <i>No</i>	No
15	Decommissioning Planning and Execution	Yes	SFP-Related Systems	No	No
16	Nuclear Safety Culture and Employee Concerns Programs	Yes	Yes; <i>Limited</i>	TBD** <i>No</i>	No
17	Radiological Protection and Health Physics, including Worker Radiation Safety and Annual Reports	Yes	Yes; <i>Limited to ISFSI/SFP Operations</i>	TBD** <i>No</i>	No
18	Interface Between Security and Safety	Yes	Yes; <i>Limited to ISFSI/SFP Operations</i>	TBD** <i>No</i>	No
19	Plans and Execution of Spent Fuel Shipments Departing DCPD for Long-Term Storage or Disposal	No	No	No	No



DCISC Post-Shutdown – Future Open Items List

Open Item Type:

M= Monitor

F = Follow-up

I = Issue

ITEM NO.	TYPE	OPEN ITEM CATEGORY/DESCRIPTION	Last Actions	Next Action
CO		Conduct of Operations (CO)		
CO-7	M	Review DCPD storm response experience and strategy every two years [or as necessary] during or after annual winter storm season.	5/17FF 3/21FF	As necessary
CO-8	M	Monitor all reactor trips — automatic and manual — and forced outages. (review trip LERs at public meetings).	8/20FF 11/20FF 1/21FF	Post-trip FFs & PMs
CO-9	F	Reactivity Management for SFP operations — review every 18 months.	List at end of OIL	Regularly 4Q22FF
CO-10	M	Mispositioning Errors (Equipment Status for SFP operations) — monitor the status of mispositioning errors and actions to resolve.	4/20FF 7/20FF 12/20FF	12/21FF
CO-11	M	Operator concerns and issues — review periodically the status of operator concerns and issues.	12/18FF 4/20FF 5/21FF	3Q22FF
CO-13	M	Review any implementations of the CAISO load following policy that result in DCPD transients. Review any initiatives to operate DCPD in different modes, such as load following due to renewable energy fluctuations, during its final years of operation. Include 230kV voltage stability issues.	5/19FF 12/19FF	12/21FF As necessary
CO-14	F	The DCISC team found the operator (fuel handlers) retention project to be effectively managed but the Committee should follow this issue closely with reference to licensed operators and well as the station in general.	9/20FF 6/21PM 9/21FF	2Q22FF
	M	Monitor Certified Fuel Handler performance.		
CM		Conduct of Maintenance (CM)		
CM-7	I	Review PG&E's progress in complying with (1) the amendment to 10CFR50.55a, which provides the requirements for ISI of containment structures (degradation) and (2) ASME Code requirements for steel liner weld inspections.	7/12FF 8/17FF 11/19FF	Each Pair of RFOs 3Q21FF



DCISC Post-Shutdown – Future Open Items List (continued)

CM-10	M	On-line Maintenance: review the implementation of on-line maintenance bi-annually, including the 12-week Rolling Maintenance Schedule about how well it is working & impacting risk. Review trend of amount of on-line maintenance. DCPD Assessment of Maintenance Risk and On-Line Maintenance Risk Procedures have been substantially upgraded with the addition of an Integrated Risk Review Team.	See list at end of OIL	Regularly 2Q22FF
CM-13	M	Review Maintenance Department performance measures, staffing, etc. approximately annually.	1/20FF 3/21FF	1/22FF
	M	Monitor Maintenance Department performance in areas related to spent fuel storage and Emergency Preparedness.		
EN		Engineering Programs (EN)		
EN-16	F	DCPD Systems – review a system (or structure or component), system health, long-term plan, Maintenance Rule performance & walkdown with System Engineer at FFs. [Note: Systems reviewed are listed with dates at the end of this Open Items List. <i>(Consider moving smaller number of items from end to body of list.)</i>]	See list at end of OIL	Regularly
EN-19	F	Review every 12-18 months major Engineering Programs, including Configuration Management, Management, System Engineering (system health & long-term plans), Valve Testing, Margin Management, Staffing, etc. [Note: Programs reviewed are listed with dates at the end of this Open Items List. <i>(Consider moving smaller number of items from end to body of list.)</i>]	See list at end of OIL	Regularly
EN-20	F	Each Member should review or observe Plant Health Committee, Notification Review Team, Corrective Action Review Board, Performance Review Quarterly Meeting, and other regular meetings.	See list at end of OIL	Regularly 12/21FF
HP		Human Performance: Human Errors and Improving Safety & Efficiency of Plant Performance		
HP-1	M	Review human performance & human behavior items (including error reduction programs, HP PIs, aberrant behavior statistics, FFD, stress reduction programs, Personnel Accountability Policy, Human Performance Steering Committee & Subcomm, Centers of Excellence, Org. Development). Review biennially operator aging, physical fitness, "no solo" issues, attention enhancement, stress management, & incentives for operator focus.	10/19PM 3/20FF 12/20FF 4/21FF	2Q22FF
HP-25	M	Further observations and improvements in the Management Observation Program should be reviewed by DCISC.	4/19FF 7/21FF	1 or 2Q23FF
HS		Health, Nuclear Safety and Safety Conscious Work Environment		
HS-6	F	Follow DCPD progress in establishing/improving its safety culture (and its subset Safety Conscious Work Environment, including Safety Culture Monitoring Panel, and including Employee Concerns & Differing Professional Opinion Programs).	8/19FF 8/20FF 8/21FF	10/21PM 3Q22FF
PI		Performance Improvement Programs		
PI-1		DCPD Performance Improvement Programs: Corrective Action, Self-Assessment, Operating Experience [and line use of OE], Benchmarking, etc. Programs reviewed are listed with dates at the end of the Open Items List. <i>(Consider moving smaller number of items from end to body of list.)</i>]	See list at end of OIL	At least once per year 9/22FF



DCISC Post-Shutdown – Future Open Items List (continued)

EP		Emergency Preparedness (EP)		
EP-2	M	Attend and observe DCPD emergency drills and exercises annually [including Hostile Action Based Exercises], paying special attention to JIC communications to the media and public, including radiation release communications to the public, use of social media, coordination of information release with SLO County, and extension of drills to better exercise FMTs & JMC.	11/18FF 9/21FF	10/21PM 9/22FF Next evaluated exercise (FFPM)
RA		Risk Assessment and Management (RA)		
RA-5	M	Review overall [non-seismic] PRA program annually. Include Fire PRA Upgrade & Shutdown Analysis in next review. Much work underway (including plant specific shutdown risk analysis). Review PRA Group resources/capabilities. Turbine Bldg. (CCW & Condenser) internal flooding. Include external flooding and tsunami risk (see SC-6).	9/20FF 9/21FF	3or4Q22 FF RJB
NS		Nuclear Safety Oversight and Review (NS)		
NS-5	M	Monitor NSOC meetings periodically to observe their processes and their review of nuclear safety issues.	11/20FF 3/21FF 7/21FF	Next meeting [see FFPM]
NS-9	M	Monitor DCPD's program to track INPO Areas for Improvement. Review with DCPD Coordinator.	7/20FF 1/21FF 8/21FF	3Q22FF
		Monitor any activities of external oversight entities as applicable (MSRC, INPO, etc.)		
RP		Radiation Protection (RP)		
RP-3	M	Regularly review outage RP performance.	12/19FF 12/20FF 7/21FF	Each RFO
RP-12	M	Review annual DCPD radioactivity release report (or other documents) each year. Review at Summer or Fall FFs.	7/20FF 2/21PM 7/21FF	2or3Q22 FF
QP		Quality Programs (QP)		
QP-3	M	Review the activities, organization and results of QV audits as well as PG&E's outside biennial audits, including timeliness of corrective actions. Review annually – include 4 th quarter QPAR with yearly results.	3/21FF 5/21FF	2Q22FF
QP-9	E	Software QA Program	See list at end of OIL	Regularly



DCISC Post-Shutdown – Future Open Items List (continued)

NF		Nuclear Fuel Performance (NF)		
NE-9	M	Nuclear Fuel Performance & Issues (review after RFOs).	12/19FF 3/21FF	Each RFO
ER		Equipment Reliability and Life Cycle Management (ER)		
ER-5	M	Monitor the Equipment Reliability Process approximately annually. The indicators for Deficient Critical Components Backlog and Operational Work-arounds rated as needing improvement and the DCISC should continue its review of this item in the future.	See list at end of OIL	Annually
OE		Organizational Effectiveness & Development (OE)		
OE-1	F	Review DCCP Operating Plan each January after development.	2/21PM 3/21FF	2/22PM
OE-2	F	Station Excellence Plan & Station Oversight Committee (4th Thursday of every month at 9:00am)	3/21FF	10/21PM
SE		System and Equipment Performance/Problems (SE)		
SE-39	F	Review and tour the inspections and repairs of concrete Intake Structures following selected refueling outages.	12/19FF 8/21FF	3Q22FF
SE-40	F	Monitor the status of transformers & leakage, failures, corrective actions. Follow status of transformer protection barrier.	See list at end of OIL	Regularly 2Q22FF
SE-49	F	Emergency Diesel Generators (EDGs)	See list at end of OIL 7/21FF	Regularly
SE-50	F	Maintenance Rule Functional Failures	See list at end of OIL	Regularly 2Q22FF
OM		Outage Management (OM)		
OM-3	M	During outages, monitor Outage Coordination Center, Control Room, and containment walkdown/inspection (end of outage). Review outage turbine work. Review Steam Generator performance metrics and inspection results.	3/20FF 11/20FF	Each RFO 3/22FF
OM-4	M	Review Outage Safety Plan, safety margin trends, outage results, including clearances, following each outage at FFs and PMs.	12/19FF 9/20FF 7/21FF	Each RFO 3/22FF
OM-5	F	DCCP has determined that it needs to do a better job of foreign material exclusion (FME) and this resolution appeared satisfactory to the DCISC team. [Note: FME Program review dates at the end of the Open Items List.]	See list at end of OIL	Each RFO 2Q22FF



DCISC Post-Shutdown – Future Open Items List (continued)

SEC		Security (SEC)		
SEC-3	M	Monitor interaction of Security and Operations, Engineering, Maintenance, and Emergency Preparedness for effects on nuclear safety. Plant security per se not reviewed but reviewed only in the context of impact on plant operation.	12/19FF 12/20FF	4Q21FF
SEC-4	M	Review DCCP progress in implementing their cyber security program in compliance with NRC schedule. Implementation complete.	3/19FF 11/20FF 9/21FF	10/21PM 3Q23FF
SF		Independent Spent Fuel Storage Installation – ISFSI (SF)		
SF-1	M	Monitor ISFSI operations, including cask transfer. Review following next campaign.	10/20PM 5/21FF	2Q22FF
SF-2	M	Follow technical advances of relative risks of cask and pool storage. NRC Staff study and Commissioners' vote. Monitor aging management plans and needs for opening casks to inspect fuel. Monitor SONGS & Humboldt Bay spent fuel transfer plans. Include corrosion of metals	12/19FF 4/21FF	2Q22FF
SF-3	M	Review the seismic adequacy of ISFSI in its license extension. Use latest seismic analysis.	6/18PM 10/19PM	2Q22FF RJB
	M	Monitor the licensing and procurement of new Spent Fuel Casks.		
SC	M	Seismic, Tsunami and Other External Events		
SC-3	M	Long-Term Seismic Program: review periodically. Review significant seismic events as they occur. Reviewed at 6/09 PM.	8/16FF 3/19FF	3Q22FF RJB
SC-12	E	Workplace seismic safety	5/19FF 12/19FF 12/20FF	12/21FF PFP
	M	Monitor the seismic adequacy of SFP and ISFSI and any changes in seismic analysis. Coordinate with IPRP.		
FP		Fire Protection (FP)		
FP-5	M	Review NFPA-805-based Fire Protection Program and Systems every two-three <u>years</u> , including QV audits and NRC triennial inspections relative to spent fuel storage and Emergency Preparedness. Review the health and correction of degraded systems every six months. Monitor fire doors (Plant Door Life Cycle Management Plan) for correction of impairments	1/19FF 3/19FF 5/21FF	Regularly 3Q22FF
LD		Learning & Development Programs (LD)		
LD-3	M	Review <u>non-license</u> technical, operations & accredited training programs at least annually.	7/19FF 5/20FF 1/21FF	1/21FF



DCISC Post-Shutdown – Future Open Items List (continued)

LD-6	F	Observe operator license re-qualification classes periodically in FF meetings.	9/20FF 1/21FF	1/21FF
	M	Review Certified Fuel Handling Operator initial and requalification training programs		
NR		Nuclear Regulatory Commission Items (NR)		
NR-3	M	Monitor the Non-Cited Violation Tracking & Trending Program annually at the Jan/Feb Public Meetings.	3/year	Each PM
NR-4	F	Meet with NRC Resident Inspectors regularly.	Most FFs	Regularly
	M	Monitor termination of Part 50 license and renewals of Part 72 license with regards to Spent Fuel handling and storage.		
DEC	F	Decommissioning		
DEC-1	F	Review DCPD decommissioning plans periodically as a result of the Joint Proposal plant shutdown in 2025. Review the timing of spent fuel transfer from wet to dry storage and when the spent fuel pools are decommissioned the plant will lose the capability to open multipurpose canisters for inspection. DCISC should actively review the decommissioning plans for DCPD because of the potential impact on staffing and future options with respect to managing spent fuel. Dr. Peterson observed there have been multiple approaches taken to decommissioning in terms of rate and timing and the DCISC will need to review and discuss with its appointing entities whether and to what extent it will engage in a review of PG&E's decommissioning plans for DCPD. He [Mr. Jones] reported part of the preplanning efforts to meet the charge from the CPUC is the completion of a fuel study that is now in its second draft for review to determine how DCPD can move past the ten-year window to achieve a seven-year window. Dr. Budnitz reported the DCISC will wait and watch the report which comes out of that evaluation.	2/19PM 10/19PM 10/20PM	10/21PM
DEC-3	F	DCISC is at this time principally interested in decommissioning due to the potential impacts during the period of plant operation and will seek clarification about whether the DCISC should play a role post-shutdown.	2/20PM 10/20PM	Close?
DEC-4	F	Emergency preparedness during decommissioning.	8/19FF 2/20PM 10/20PM	10/21PM
	M	Monitor Post Shutdown Decommissioning Activities Report (PSDAR) as to SFP and ISFSI activities.		
	M	Monitor Nuclear Decommissioning Cost Triennial Proceedings as to SFP and ISFSI activities.		
O		Other Items (O)		
O-1	F	Perform observations of evolutions (work processes) within the plant periodically. Continue with these about annually. Work process observations: Observe in the plant work processes important to nuclear safety, such as operator rounds, Control Room shift turnover, surveillance tests, preventive and corrective maintenance, system modifications, system walk downs with system engineers, outage activities, etc.	12/19FF 1/20FF 7/21FF	Regularly 11/21FF 12/21FF
O-2	F	COVID-19 response/initiatives/practices.	1/21FF 5/21FF	1/22FF



DCISC Post-Shutdown – Future Open Items List (continued)

DCPP Systems/Components Reviewed Periodically
(suggest moving systems to body of list above)

~~4 kV – Jan 2020~~
~~230 kV & 500 kV – Dec 2019~~
~~Aux Feedwater – Sep 2021~~
~~Aux Saltwater – Mar 2020~~
~~Aux Bldg Ventilation – Apr 2021~~
~~Chemical & Volume Control System and High Pressure Injection – Jan 2021~~
~~Component Cooling Water – Apr 2020~~
~~Compressed Air – Jul 2020~~
~~Condensate & Feedwater – Sep 2019~~
~~Containment Structure – Nov 2019~~
~~Containment Spray – Aug 2019~~
~~Containment Ventilation and H2 Purge – Aug 2020~~
~~Control Room Simulator – Nov 2020~~
~~Control Room Ventilation ?? – Jan 2021~~
~~Digital Systems – Sep 2018~~
~~DC Power – Apr 2019~~
~~EDG – Jul 2021~~
~~Fire Protection & Detection Systems for Spent Fuel – Aug 2020~~
~~Nuclear Instrumentation & In-core Instrumentation – Sep 2020~~
~~Plant Protection System – Mar 2021~~
~~Radiation Monitoring for Spent Fuel – Apr 2021~~
~~Radwaste Processing – Nov 2020~~
~~Reactor Coolant System & Pumps – Aug 2021~~
~~RCS Process Control System – May 2020~~
~~Refueling Equipment – Dec 2018~~
~~RHR – Jan 2021~~
~~Rod Control & Indication – Sep 2020~~
~~Safety Injection Pumps – Jan 2021~~
~~Spent Fuel Pool Cooling & HVAC – July 2021~~
~~Steam Generators – Aug 2020~~
~~Special Protection System – Mar 2020~~
~~Turbine-Generator – Dec 2020~~

Electric Power to Spent Fuel and EP Systems
Cooling Water to Spent Fuel Systems
Ventilation for Spent Fuel and EP Systems
Spent Fuel and Cask Handling Systems



DCISC Post-Shutdown – Future Open Items List (continued)

DCPP Programs Reviewed Periodically

(suggest moving programs to body of list above)

~~10CFR50.59 Program – July 2021~~

~~ALARA – Sep 2019~~

~~Air Operated Valves – Dec 2020~~

~~Benchmarking – Nov 2018~~

~~Boric Acid Corrosion Control – Apr 2021 (review biennially)~~

~~Buried Piping & Tanks – Jul 2020~~

~~Chemistry – Aug 2021~~

~~Spent Fuel Cranes – Sep 2019~~

~~Configuration Management – May 2019~~

~~Corrective Action – CARB – Apr 2021~~

~~Emergency Preparedness Exercises – Sep 2021~~

~~Employee Concerns Program – Aug 2020~~

~~Equipment Environmental Qualification – Mar 2020~~

~~Equipment Reliability – Sep 2021~~

~~Fire Doors & Door Life Cycle Mgmt. Plan – Mar 2019~~

~~Fire Protection Program (NFPA-805) – May 2021~~

~~FLEX Program ?? – Apr 2019~~

~~Flow Accelerated Corrosion – Apr 2019~~

~~Foreign Material Exclusion – Dec 2020~~

~~In-service Inspection Program – Apr 2019~~

~~Integrated Risk Assessment Program – Apr 2020~~

~~Large Motors – Jan 2019~~

~~Long Term Capital Planning Process – Dec 2016~~

~~MIDAS – Aug 2018~~

~~Maintenance Rule – Apr 2021~~

~~Margin Management Program – May 2020~~

~~Motor Operated Valves – Dec 2020~~

~~Notification Review Team – Mar 2020~~

~~Nuclear Fuel Program – Mar 2021~~

~~On-Line Maintenance – Apr 2020~~

~~Operating Experience – Aug 2018 (review biennially)~~

~~Operability Assessment Program – Mar 2017~~

~~Operational Decision Making – Sep 2020~~

~~PRA Programs (non-seismic) – Sep 2021~~

~~Performance Improvement – Apr 2019~~

~~Performance Review Quarterly Meeting – Apr 2021~~

~~Plant Health Committee – Aug 2021~~

~~Reactivity Management – May 2021~~

~~Safety-Security Interface – Dec 2020~~

~~Self-Assessment – Aug 2020~~

~~Single Point Vulnerabilities – Sep 2019~~

~~Seismic PRA – Sep 2017~~

~~Seismically Induced System Interactions – Nov 2020~~

~~Software QA – Aug 2021~~

~~Spent Fuel Management – May 2021~~

~~System Engineering – Nov 2019~~

~~Transformers, Large – Jan 2021~~

~~Troubleshooting – Jan 2020~~

~~Tsunami Hazard Analysis – Sep 2017~~

~~Vibration Monitoring – Mar 2021~~

~~Fuel and Cask Aging Management~~



Suggested Steps Forward

By End of 2022:

- **Create and Start Regular Updates to Separate Post-Shutdown Open-Items List**

Starting in 2023:

- **Review/Modify Both Open-Items Lists (Operational and Post-Shutdown) to Plan 2023-2025 Activities**
- **Consider Future Relationship and Possible Synergies with DCDEP and IPRP**

By End of 2024:

- **Consider Post-Shutdown Meeting Frequencies**
 - **Fact-Finding Meetings**
 - **Public Meetings**

Diablo Canyon Station Oversight Monitoring

Matt Hayes

Senior Director, Organizational Effectiveness & Training

February 2022

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 – Oversight

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:

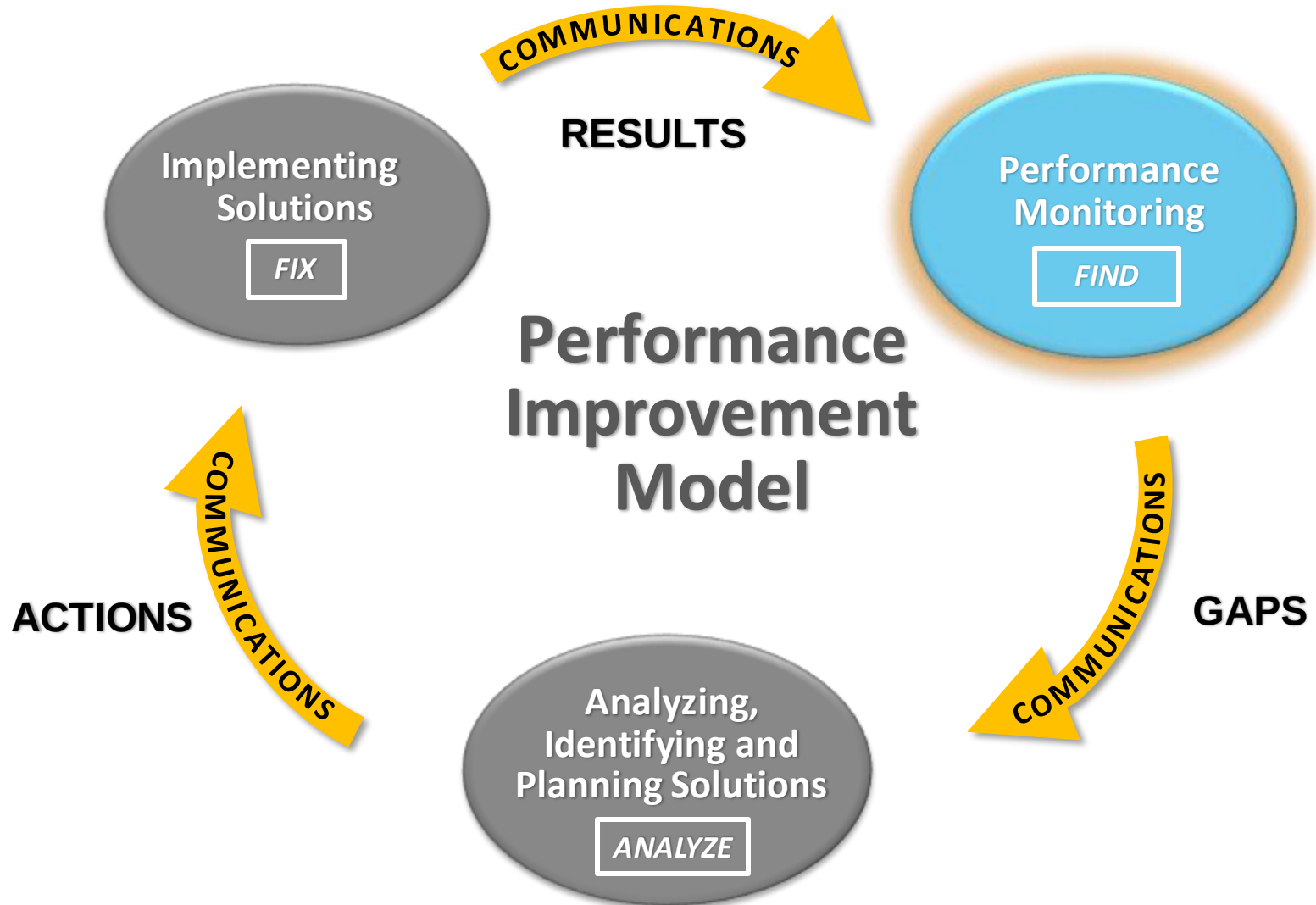
- Self-Assessments and Benchmarks
- Corrective Action Review Board
- Observation Review Meetings
- Management Review Meetings
- Operating Review Meetings
- Performance Review Meetings
- Plant Health Committee
- Equipment Reliability Executive Oversight Board
- Station Oversight Committee

Operating Review Meetings

Lean Operating System



Performance Improvement (PI) Model



Self-Assessments & Benchmarks 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
- Reviewed and approved by CARB

Self-Assessments 2021

39

Benchmarks 2021

21

Performance Monitoring – Oversight

It is vital 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
- Management Review Meetings
- Performance Review Meetings

Performance Monitoring – Oversight

The tactical and strategic look at equipment health and functionality and are vital. and forums to enable station leadership to review behaviors, roles, and responsibilities necessary to create station wide excellence in equipment reliability.

- Plant Health Committees
- Equipment Reliability Oversight



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 at the Station Oversight Committee

Station Oversight Committee

The Station Oversight Committee (SOC) provides oversight of station and department excellence plans in addition to other inputs:

- Monthly review of department excellence plans
- Station safety performance
- 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 Hayes



January 11-12, 2022 Fact-finding Meeting (Remote)

Robert J. Budnitz, Member and R. Ferman Wardell, Consultant

- **Meet with DCPD Officer Maureen Zawalick**
- **Review Operator Rounds Procedures and Experience**
- **Independent Spent Fuel Storage Installation Cask Inspections**
- **Meet with Acting NRC Senior Resident Inspector**
- **COVID-19 Update**
- **Refueling Equipment Health**
- **Fire Doors and Door Life Management**
- **Plant Health Committee Meeting**
- **Meet with DCPD Officer Adam Peck**
- **Single Point Vulnerabilities**
- **Operability Determination Program**
- **Feedwater Heater Tube Failure Root Cause Evaluation**



Meet with DCPD Officer Maureen Zawalick

- **This Fact-finding Agenda**
- **Other Items of Mutual Interest**



Review Operator Rounds Procedures and Experience

- **Met with Control Operator, Shift Foreman, and Shift Supervisor**
- **Discussion:**
 - **Procedure, “Operator Routine Plant Equipment Inspections”**
 - Performing Rounds
 - General Area Checks
 - Security Checks
 - Environmental Checks
 - Electronic Round Use
 - Performing Containment Rounds
 - Rounds Minimum Frequency
 - Comments to Be Tracked
 - Adjusting Parameters
 - Operator Round Sheet

(Continued)



Review Operator Rounds, Cont'd.

- **Operator Rounds on Turbine 85-foot (Lowest) Level**
 - Condensate Polishing
 - Condensate Booster Pumps
 - Condensate Pumps
 - Main Feedwater Pumps
 - Condensate Cooler
 - Oily Water Separator
 - Letdown Storage Tanks
 - Condenser Water Box
 - Plant Air Compressors
 - Component Cooling HX
 - Emergency Diesel Gens.
- **Operator Rounds Procedure and Practice Appeared Satisfactory**



Independent Spent Fuel Storage Installation **(ISFSI) Cask Inspection Results**

- **June 22, 2021 Visual Inspection of Eight Casks* for Indications of Stainless Steel Stress Corrosion Cracking**
 - **Also Inspected Cask Overpacks and Concrete Pad**
 - **Diverse Set of Casks Selected:**
 - **Various Alloys of Stainless Steel**
 - **Various Ages**
 - **Various Locations**
 - **Result: “ISFSI Is in Good Condition” – No SCC Indications**
- * Multi-Purpose Canisters (MPCs)**



Meeting with Acting NRC Senior Resident Inspector

- **DCISC History and Role**
- **This DCISC Fact-finding Agenda**
- **Seismic Workplace Safety**
- **Adequacy of DCPD Staffing to Operate DCPD Safely**
- **Feedwater Heater Forced Outage**
- **Meetings with NRC Resident Inspectors Are Beneficial**



DCPP COVID-19 Update

- **DCPP Has Seen Recent Increase in COVID Positives**
- **Most Not While Working at Plant**
- **DCPP Has Lower Incidence Rate Than Most Plants**
- **PG&E Corporate Announced New Guidelines January 4**
 - **Only “Critical” Work Can Be Performed In-Person**
 - **Workers Should Work From Home Where Possible**
 - **Prior COVID-19 Prevention Standards In Effect**
- **DCPP COVID-19 Standards and Guidelines Appropriate**



Refueling Equipment Health

- **Refueling Equipment Problems Have Caused Outage Delays**
- **DCPP Performing the Following:**
 - **Augmented Maintenance**
 - **Control/Hardware Upgrades**
 - **Pre-Outage Checkouts**
 - **Assigned Dedicated High Impact Team**
- **Outage 2R22 Fuel Movement Went Smoothly**
- **DCPP Refueling Equipment Is in Good Health**



Fire Doors and Door Life Management

- **DCPP Has 967 Power Block Doors:**
 - **414 Equipment Control Guideline (ECG) Doors**
 - **280 Fire Doors**
 - **26 High Energy Break Doors**
 - **4 Flood/Fire Doors**
- **Doors Become Impaired with High Use**
- **Prior DCPP High Impairments & Delayed Repairs/Replacements Issues Corrected in 2015**
- **Since 2016, and Now, DCPP Door Program Healthy**



Observe Plant Health Committee **(PHC) Meeting (Remote)**

The PHC Is a Management Team Responsible for:

- **Continual Review of System & Program Health Issues**
- **Monitoring Plant Health Issues for Action Status & Completion**
- **Review/Approval of Plans to Address Plant Health Issues**
- **Performing Preventive Maintenance Oversight functions**
- **Approving PHC Budget for Solutions to Plant Health Issues**
- **Approving System, Component, & Program Long Range Plans**

(Continued)



PHC, Cont'd. - Agenda

- **Fan Belt Issues**
 - **Aux. Bldg. HVAC Fan Belts Failing Prematurely**
 - **Vendor Quality Problem**
 - **Replacing Belts from Another Vendor Whose Belts Have Performed Well**
- **Condensate Polisher Resin Problem**
 - **Supplier Performing Tests**
- **Maintenance Performance Indicators – Improving**
- **Conclusion – The Plant Health Committee was Effectively Run with Clear Presentations and Good Participation by Attendees.**



Meeting with Adam Peck, **Site Vice President**

- **Discussed Items from the Fact-Finding Meeting and Other Subjects of Interest**



Single Point Vulnerability (SPV) Update

- **A Single Component Is an SPV if its Failure (Alone) Could Result in a Reactor Trip, Turbine Trip, or Plant Decrease in Power Greater Than Two Percent Full Power.**
- **DCPP's Identified SPVs Were Eliminated By Modification or Provided Augmented Preventive Maintenance in 2015.**
- **Revised SPV Scope Is Now: 1) Reactor Trip or 2) Turbine Trip**
- **There Are No DCPP SPVs Currently**



Operability Determination Program (ODP)

- **An Identified Problem Is Input Into the Corrective Action Program (CAP) and Reported to the Shift Manager (SM)**
- **The SM Assesses the Problem's Impact on Operability Using Procedural Guidance**
- **An Evaluation is Performed to Determine if Continued Operation is Safe and Compliant with Regulations**
- **An ODP Self-Assessment Found the Program in Compliance with NRC Requirements**
- **There Is New Guidance from the Nuclear Energy Institute, which DCPD Will Adopt & DCISC Should Review**
- **Conclusion: DCPD's ODP Is Implemented Satisfactorily**



Feedwater Heater (FWH) Tube Failures **Root Cause Evaluation**

- **Unit 2 FWH 2-5B Exhibited Tube Leak Indications**
- **Unit 2 Power Lowered and Then Shut Down for Repairs**
- **Following Repairs, Unit 2 Back To 100% Power**
- **FHW 2-5B Leakage Increased and Unit 2 Shut Down**
- **Tube Failures Found and Repaired**
- **Unit 2 Back to 100% Power and Remains There**
- **Root Cause Evaluation: Probable Cause Was Fatigue Fracture of Tubes (DCPP Presentation in This Public Meeting)**



January 11-12, 2022 Fact-finding Meeting (Remote)

Robert J. Budnitz, Member and R. Ferman Wardell, Consultant

- **Meet with DCPD Officer Maureen Zawalick**
- **Review Operator Rounds Procedures and Experience**
- **Independent Spent Fuel Storage Installation Cask Inspections**
- **Meet with Acting NRC Senior Resident Inspector**
- **COVID-19 Update**
- **Refueling Equipment Health**
- **Fire Doors and Door Life Management**
- **Observe Plant Health Committee Meeting**
- **Meet with DCPD Officer Adam Peck**
- **Single Point Vulnerabilities**
- **Operability Determination Program**
- **Feedwater Heater Tube Failure Root Cause Evaluation**