

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

Report on

Fact-Finding Meeting at DCP on January 21 and 22, 2025

by

Najmedin Meshkati, Member, and Richard McWhorter, Consultant

1.0 SUMMARY

The results of the DCISC January 21 and 22, 2025, Fact-Finding Meeting at the Diablo Canyon Power Plant (DCPP) in Avila Beach, CA, are presented. The subjects addressed and summarized in Section 3 are as follows:

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

2.0 INTRODUCTION

This Fact-Finding Meeting at the DCP was held to evaluate specific safety matters for the DCISC. The objective of the evaluation was to determine if Pacific Gas and Electric's (PG&E's) performance is appropriate and whether any areas revealed observations which are important enough to warrant further review, follow-up, or presentation at a public meeting. These safety matters include follow-up and/or continuing review efforts by the Committee, as well as those identified as a result of reviews of various safety-related documents.

Section 4 – Conclusions, highlights the conclusions of the Fact-Finding Team (FFT) based on items reported in Section 3 – Discussion. These highlights also include the FFT's suggested follow-up items for the DCISC, such as scheduling future Fact-Finding Meetings on the topic,

presentations at future public meetings, and requests for future updates or information from DCPD on specific areas of interest, etc.

Section 5 – Recommendations, presents specific recommendations to the DCISC and PG&E proposed by the FFT. These recommendations will be considered by the DCISC. After review and approval by the DCISC, this Fact-Finding Report, including its recommendations, will be provided to PG&E. The Fact-Finding Report will also appear in the DCISC Annual Report.

3.0 DISCUSSION

3.1 FLEX Program

The DCISC FFT met with Bill Conklin, FLEX Program Manager, and Dallas Adams, Engineering Programs Manager, for an overview of DCPD's FLEX Program and an explanation of how FLEX procedures are organized and used. (FLEX is not an acronym but describes a strategy developed by the nuclear industry to provide diverse and flexible coping strategies to address the loss of safety-related systems due to beyond design basis events.) Deb Luchsinger, Jerry Bischof, Dauphine Hou, and Harpreet Bhalla from the California Department of Water Resources (DWR) participated remotely in the meeting. (DWR is the state agency charged with overseeing state funds allocated to facilitate the extension of DCPD power operations under Senate Bill 846.) The DCISC last reviewed the FLEX Program during its April 2022 Fact-Finding Meeting (Reference 6.1), when it concluded the following:

The DCPD FLEX Program was healthy thanks to tight controls on equipment status, maintenance, testing, and needed corrective actions. All FLEX equipment was in the status of "Operational and In Position."

Mr. Conklin provided an overview of the history and development of the FLEX Program at DCPD. Prior to the Fukushima accident in 2011, the nuclear industry responded to the Chernobyl accident and the September 11, 2001, terrorist events by developing guidelines for responding to Beyond Design Basis (BDB) Events. These initiatives resulted in the development of Severe Accident Management Guidelines and Extensive Damage Mitigation Guidelines for use at all U.S. nuclear power plants including DCPD. Following the Fukushima accident, the FLEX Program was initiated to procure additional (mostly portable) equipment to improve and consolidate plans and capabilities for the mitigation of possible BDB Events. DCPD's FLEX Program is based on the guidelines contained in Nuclear Energy Institute report 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide." The events considered in the design of the FLEX Program included a loss of all station power; a loss of the ultimate heat sink; natural events such as earthquakes, tsunamis, and local intense precipitation; and large-scale fires or explosions.

The FLEX Program is designed around three response phases as follows:

Phase 1 – Initial response using installed plant equipment and on-shift operations personnel. Examples of responses that may be taken during this phase are the stripping of

DC bus loads to prolong battery life and the alignment of the Feedwater Storage Tank to be a backup supply of water to the Condensate Storage Tank.

Phase 2 – Short-term responses using FLEX equipment stored on-site and additional on-shift personnel. Examples of responses that may be taken during this phase include the clearing of debris from access routes using FLEX equipment (front-end loaders), moving and connecting backup pumps and/or generators, and establishing alternate incident management and communications centers.

Phase 3 – Long-term responses to obtain additional resources using FLEX equipment stored at off-site response centers located in Arizona and Tennessee. DCPD is a part of and provides financial support to the nuclear industry's consortium, the Strategic Alliance for FLEX Emergency Response (SAFER) organization, which is an organization that was set up to provide supplemental emergency response personnel and equipment within 24 hours of receiving a request for assistance from a U.S. nuclear power plant. Examples of equipment that could be provided from offsite include very large (1 MW) portable generators, additional pumps with hoses, and electrical transformers with cables. All equipment is designed to be lifted by helicopter for transport to the site if needed.

In response to questions from the FFT, Mr. Conklin reported that DCPD maintains an inventory of approximately 30 days' worth of fuel for diesel generators on site and that FLEX equipment is redundant and diverse in function and storage location. The FLEX equipment can be used even if the Control Room is not available, and the building housing a portion of the FLEX equipment indoors is designed to withstand an earthquake of a magnitude up to 125% of the Design Basis (Hosgri) Earthquake.

The FFT inquired about how the procedures for FLEX responses integrate with Severe Accident Management Guidelines (SAMGs) and other BDB Event response procedures. Mr. Conklin explained that the accident mitigation and management strategies developed through those older initiatives have been converted into implementing actions and recommendations within four separate sets of procedures and guidelines for responding to BDB Events as follows:

- Emergency Operating Procedures (EOPs),
- Severe Accident Management Guidelines (SAMGs)
- Extensive Damage Mitigation Guidelines (EDMGs).
- FLEX Support Guidelines (FSGs)

These four sets of procedures and guidelines were related as shown in the following diagram:

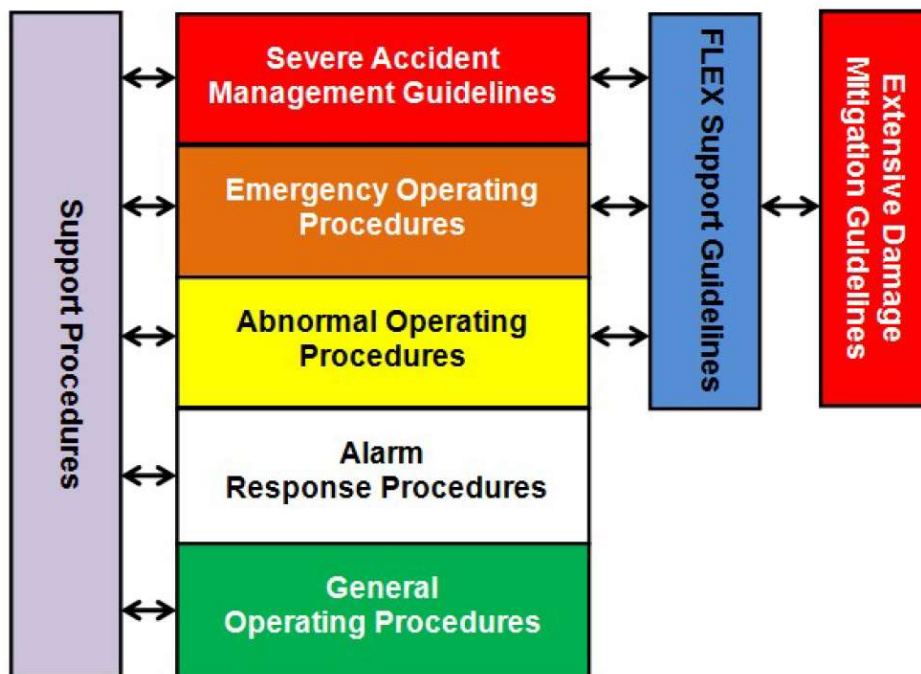


Diagram Showing the Hierarchy of Beyond Design Basis Event Response Procedures

For example, Mr. Conklin provided a copy of Emergency Operating Procedure ECA-0.0, “Loss of All Vital AC Power,” Revision 35, and showed the FFT how multiple steps in the procedure guided operators to enter the FLEX Support Guidelines when actions using installed plant equipment were insufficient to restore electrical power. He also provided copies of DCP’s “BDB Program Document,” Revision 2, which contained several tables listing all the links between the various FLEX Support Guidelines and the Abnormal Operating Procedures, Emergency Operating Procedures, and Extreme Damage Mitigation Guidelines. Lastly, he provided the FFT with a copy of a training presentation that was used to train emergency response personnel in the relationship and uses of the various procedures that could be used to respond to a BDB Event. The FFT appreciated the detailed overview of the FLEX Program and the cooperative attitude of the FLEX Program Manager. The FFT found that FLEX response procedures were appropriately integrated with other plant emergency response procedures.

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

Recommendations to the DCISC or PG&E: None.

3.2 Institute of Nuclear Power Operations Relationship

(Because of its privacy agreement with DCP, the DCISC cannot share information regarding the details of INPO and WANO evaluations or subsequent corrective actions.)

The DCISC FFT met with Justin Rogers, Station Senior Director, for a briefing on the relationship between DCPD and the Institute of Nuclear Power Operations (INPO) and its associated international organization, the World Association of Nuclear Operators (WANO). The DCISC last reviewed the results of a recent WANO Peer Review during its November 2024 Fact-Finding Meeting (Reference 6.2), when it concluded the following:

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

Mr. Rogers explained that INPO was not a regulatory or compliance body but instead works to facilitate operational excellence in the nuclear industry. INPO conducts performance evaluations at U.S. nuclear power plants every four years using large teams comprised of both INPO employees and peers from other nuclear power plants. Similar evaluations, called WANO Peer Reviews, are also performed by WANO every four years and are offset with the INPO evaluations such that the station receives either an INPO or WANO evaluation every two years. INPO also prescribes and tracks a large number of quantitative performance indicators that are reported monthly by DCPD. In off years, INPO performs a smaller review that is focused on validating on-site observations of station performance against the performance indicators. Mr. Rogers briefed the FFT on the results of DCPD's most recent biennial performance evaluation which was completed in August 2024 by WANO. The results were generally positive overall with no significant new deficiencies identified.

INPO also serves as the organization that evaluates and accredits all station training programs. The INPO training program accreditation process has been endorsed by the NRC and completion of an INPO-accredited training program is a requirement for most employees serving in technical positions at the station including licensed operators. DCPD's last INPO training program accreditation review was successfully completed in November 2019, and its next training program accreditation review is planned to be completed in June 2025.

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

Recommendation to the DCISC or PG&E: None.

3.3 Review of Recent Root Cause Evaluation and Cause Evaluation

The DCISC FFT met remotely with Alex Brown, Performance Improvement Manager; Mike Moren, Engineering Fix-It-Now Team Supervisor; and John Serna, Secondary Systems Engineer, to inquire in more detail about portions of a Root Cause Evaluation (1-RV-8010B Leak-By) and a Cause Evaluation (XS-2-797 Steam Leak) recently completed at DCPD. Deb Luchsinger, Jerry Bischof, and Harpreet Bhalla from the California Department of Water Resources (DWR) participated remotely in the meeting. The DCISC last reviewed the two evaluations during its September 2024 Fact-Finding Meeting (Reference 6.3) and its November 2024 Fact-Finding Meeting (Reference 6.4), respectively, when it concluded the following:

The root cause of the leaking Pressurizer safety valve was determined to be contact and interference with its seismic support upon heatup of the unit. The support is in the process of being modified during an upcoming refueling outage to eliminate the contact, and the valve will be monitored for leakage to assess the effectiveness of the corrective action.

DCPP evaluated the causes of two secondary system steam leaks that occurred during plant startup following Refueling Outage 2R24, one of which required reactor power to be reduced and the generator removed from the grid to facilitate repairs. Appropriate corrective actions were identified and initiated.

The FFT forwarded several questions to DCPD in advance of this meeting and began the discussion by requesting a briefing on the process for deciding whether a Root Cause Evaluation or a Cause Evaluation would be required for equipment failures. Mr. Brown explained that the process was governed by procedure OM4.ID14, "Notification Review Team," Revision 38, dated November 12, 2024, a copy of which was provided to and reviewed by the FFT. The process begins when any individual at the station identifies any type of problem and enters it into the Corrective Action Program using PG&E's data management system referred to by the vendor's name, SAP. The identification of a problem in SAP is referred to as a Notification. Following entry into SAP, the Notification is reviewed by multiple entities as follows:

1. Initial Operability Determination – Shift operators review all Notifications periodically during the shift to determine if there is any immediate impact to the operability of equipment required for safety or emergency response.
2. Notification Review Team (NRT) – The NRT meets daily to review all Notifications submitted since the last review. The NRT performs an initial classification of Notifications into "DA," for conditions adverse to quality, or "DN" for work-only conditions not adverse to quality.
3. Daily Review Team (DRT) – The DRT meets daily to review all Notifications that involve plant maintenance activities and prioritize resolution of the issue in the plant's schedules for managing maintenance work.
4. Senior Leadership Team (SLT) – The SLT meets daily and provides senior management with an opportunity to review all classifications made by the previous day's NRT.
5. Corrective Action Review Board (CARB) – The CARB meets periodically primarily to review Cause Evaluations and corrective actions taken in response to Notifications, and it also reviews the classification of Notifications made by the NRT.

Following the above process, during the second step the NRT is the first team to review any equipment failures and decide the level of evaluation that should be initiated in response to the

problem. Per OM4.ID14, the classifications of evaluations ranging from the most significant and extensive to the least are as follows:

- Root Cause Evaluation (RCE)
- Cause Evaluation (CE)
- Work Group Evaluation (WGE)
- Close to Trend

Additionally, OM7.ID4, “Cause Evaluations,” Revision 55, dated September 16, 2024, adds the category of “Common Cause Evaluation” (CCE) for a type of evaluation that may be selected for responding to a Notification. In deciding the level of evaluation that should be performed, the NRT follows detailed guidance contained in OM4.ID14 that is intended to match the detail required for the evaluation with the significance of the equipment failure or other problems. The decisions and classifications of evaluations made by NRT are also routinely reviewed by the SLT.

Mr. Brown continued to explain that performance of the two highest-level evaluations was governed by procedures, OM7.ID4 (Cause Evaluations) and OM7.ID3, “Root Cause Evaluation,” Revision 56, dated September 16, 2024, copies of which were provided to and reviewed by the FFT. The CARB is also involved in the process of reviewing and approving plans for performing RCEs as well as reviewing and approving the completion of all RCEs and CEs. Mr. Brown explained that the CARB is typically very critical in its reviews and approvals of cause evaluations, and the DCISC has observed such critical reviews during its past observations of CARB meetings. He also reported that guidance for detailed performance of such evaluations is contained in a station Cause Evaluation Manual, a copy of which was provided to and reviewed by the FFT.

The FFT inquired about how the need to identify and evaluate any causal impacts from deficiencies in safety culture or management were included in the requirements. Mr. Brown explained that both the Cause Evaluation and Root Cause Evaluation procedures required completion of an “Organizational Learning Tool” (OLT) document, but only the Root Cause Evaluation procedure further required the completion of a “Safety Culture Assessment” document. The OLT consisted of a form with a series of evaluation questions designed to investigate organizational, programmatic, leadership, or team contributors that lead to a consequential event. The Safety Culture Assessment was a similar tool that asked a series of evaluation questions specifically designed to identify possible safety culture attributes associated with the event. The basis and use of both tools were discussed in the Cause Evaluation Manual.

The FFT reviewed a Root Cause Evaluation (RCE), “1-RV-8010B Leak-By,” and a Cause Evaluation CE, “XS-2-797 Steam Leak,” recently completed by DCPD with regards to their identification of deficiencies in safety culture, human performance, and management practices. The FFT found that the documents aligned with the procedural requirements in that both the RCE and CE contained an OLT document and the RCE contained an additional Safety Culture Assessment document. The FFT inquired about the source of the questions asked and areas evaluated by the OLT and Safety Culture Assessment, and DCPD reported that they were based primarily upon two documents, INPO 12-012, “Traits of a Healthy Nuclear Safety Culture,” and NRC Inspection Manual Chapter 0310, “Aspects Within the Cross-Cutting Areas.”

The FFT asked the DCP staff several detailed questions regarding the XS-2-797 CE with regards to the sequence of events and why multiple failures were combined into one evaluation. Mr. Serna explained that there were three separate failures as follows:

1. On May 23, 2024, during startup following Refueling Outage 2R24, a large steam leak occurred at the body to bonnet gasket for valve XS-2-797. The unit was ramped down from 83% power to allow the Main Generator to be taken offline. Once offline, the gasket was replaced and the unit power ascension was restarted.
2. On May 25, 2024, during the restart power ascension, a second steam leak was identified at a reducer upstream of valve LCV-171. A crack was found on the reducer, and a temporary patch was installed. Power ascension continued and the unit successfully achieved full power.
3. On July 9, 2024, personnel performing a routine inspection of the temporary repair near LCV-171 discovered a crack on the yoke of the valve (a non-pressure boundary component). The valve actuator was replaced at a later date.

Later during the FFT's visit, Mr. Serna provided the FFT with a plant tour in the area of the above three failures showing how all three were a part of the same steam drain line and located within a few feet of each other. The DCP staff members explained that the scope of the XS-2-797 CE was based on the conclusion that all three failures were caused by a common cause which was concluded to be significant and possibly multiple water hammer events on the associated drain line caused in part by a failure of a pressure switch that controlled the operation of Control Valve LCV-171. Although this conclusion could not definitively be proved by technical analysis, it was clearly the most likely cause and supported by most of the data that was captured for analysis. They believed that the most important lessons learned and corrective actions initiated by the CE were appropriately focused on preventing the recurrence of secondary system water hammer events by increasing the sensitivity of station personnel in reporting and evaluating such events via the Corrective Action Program so that corrective actions would be initiated prior to damage occurring in the future.

The FFT also inquired about how the results of the OLT contained in both the CE and RCE reviewed by the FFT as well as the Safety Culture Assessment contained in the RCE were integrated and dispositioned. The DCP staff reported that observations captured by those documents should feed into the development of appropriate corrective actions recorded in the evaluations. The FFT found that capturing of the observations from the OLT and the Safety Culture Assessment and developing appropriate corrective actions was not clear and appeared lacking in some areas. For example, several OLT questions were answered "yes" with explanations pointing to organizational "misalignments" and deficiencies; however, the FFT could not always identify corrective actions tied to addressing those organizational deficiencies. The DCISC concluded that this was a possible weakness in that the evaluations failed to ensure that appropriate corrective actions were initiated for all deficiencies observed in the OLT and the Safety Culture Assessments, and the DCISC recommends that PG&E take appropriate action to review this possible weakness.

Lastly, the FFT inquired if DCPD reviewed and analyzed the OLTs' findings contained in RCEs and CE for trends across the multiple evaluations performed at the station. The DCPD staff acknowledged that it did not currently perform any trend reviews for the OLTs contained in CEs and such an initiative could be of value. Notification 51269205, "Evaluate Trend Cause Evaluations for Common Trends," was initiated to bring this question into the Corrective Action Program for further evaluation. The DCISC recommends that DCPD implement periodic trend reviews for OLTs and Safety Culture Assessments performed as a part of the CE and RCE process.

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

Recommendations to the DCISC: The DCISC should review the Organizational Learning Tool and Safety Culture sections in all Root Cause Evaluations and Cause Evaluations conducted in 2024. (D1/25FF-3.3)

Recommendations to PG&E:

PG&E should review its cause evaluation processes and initiate actions to ensure that deficiencies observed via the Organizational Learning Tool and Safety Culture Assessment are captured and tied to the initiation of appropriate corrective actions. (P1/25FF-3.3A)

PG&E should review its cause evaluation processes and initiate actions to ensure that periodic trending is performed across the multiple Organizational Learning Tools and Safety Culture Assessments that are performed as a part of Cause Evaluations and Root Cause Evaluations. (P1/25FF-3.3B)

3.4 Major Project Planning Update

The DCISC FFT met with Mark Sciacca, Nuclear Projects Director, for an update on the status of major project planning. Deb Luchsinger, Jerry Bischof, and Dauphine Hou from the California Department of Water Resources (DWR) participated remotely in the meeting. The DCISC last reviewed major project planning as a part of its larger "Comprehensive Review of Equipment Long-Range Planning and Maintenance" during its August 9, 2023, Fact-Finding Meeting (Reference 6.5), when it concluded (in part) the following:

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 DCP. The DCISC did not find any upgrades necessary to ensure nuclear safety that were not already being planned by DCP.

Following the passage of Senate Bill 846, DCP initiated an effort to review the long-range maintenance and project plans for station equipment. The effort was named the PMO++ Program, and it began in December 2022 with initial reviews completed by the end of March 2023. Approximately 250 projects were identified in the PMO++ Program team for consideration of prioritization for implementation during the extension of operations. The 250 projects were ranked with reviews and refinement of the rankings planned to continue through implementation. The preliminary results called for about 50 projects to be completed within the next three years with about half to be performed during the then upcoming Refueling Outages 1R24 and 2R24 in the fall of 2023 and spring of 2024, respectively.

Mr. Sciacca briefed the FFT on recent projects completed since the DCISC's 2023 reviews. Approximately 30 major projects were successfully completed in the last two years including:

- High Voltage Transformer Improvements
- Intake Traveling Screen Frame Replacements
- Main Control Room Digital Chart Recorder Upgrades
- Main Condenser to Expansion Joint Replacements
- Main Generator Inspections (Unit 2)
- Major License Renewal Inspections
- Intake Cove Dredging
- Air Compressor and Dryer Upgrades
- Emergency Diesel Generator Governor Upgrades (two not completed before 2023)

A copy of DCP's Project Dashboard was provided to and reviewed by the FFT. (The Project Dashboard was also regularly reviewed by the DCISC as a part of the monthly documents provided by PG&E.) The dashboard concisely listed all projects currently planned for implementation at DCP sorted by planned installation date shown as "Daily" (non-outage) or with an associated outage number. The dashboard also showed the status of key aspects of each project (scope, schedule, cost, material, engineering, and construction) with a color-coded indicator. The majority of projects and their aspects were shown as green (on plan), a few were shown as yellow (off plan with recovery in place), and a very small number were shown as red (off plan with no recovery yet in place). Two projects currently scheduled for implementation during the upcoming Refueling Outage 1R25 (spring 2025) were shown as red – 500kV tie-line relay replacements and Fuel Transfer Cart and Upender upgrades. The station was working to resolve issues but might have to defer the projects to a later outage if the issues could not be resolved in time to support the outage schedule. Projects currently planned for the upcoming Refueling Outages 1R25 and 2R25 included:

- Hi-Pressure Turbine Internal Steam Path Replacements
- 500kV Tie-line Relay Replacements
- Fuel Transfer Cart and Upender Upgrades
- Main Condenser Waterbox and Tubesheet Coatings

- Main Condenser Expansion Joint Replacements
- Digital Rod Position Indication System Replacements
- Reactor Vessel Internal Inspections
- Remaining License Renewal Inspections and Supporting Activities
- Pressurizer Safety Valve Inlet Box Support Modifications (Unit 1)

Projects currently planned for implementation after the upcoming series of refueling outages included:

- Feedwater Heater Replacements
- Main Annunciator System Replacements
- 230kV Relay Replacements
- Main Generator Relay Replacements/Refurbishments

The FFT inquired about the plan for the Feedwater Heater replacements, and a proposed schedule was provided to and reviewed by the FFT. The schedule called for the replacement of all twelve of the Fourth Point and Fifth Point Feedwater Heaters with three each being replaced during the 1R26, 2R26, 1R27, and 2R27 Refueling Outages. The order of the replacements was based upon the paths needed for removal of the old heaters and insertion of the new heaters inside of the Turbine Building. Movement path plans were still being developed, but it currently appeared that the Third Point Heaters may need to be removed to accommodate replacements of the Fourth and Fifth Point Heaters.

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

Recommendations to the DCISC or PG&E: None.

3.5 Emergency Preparedness Plan and Facilities Tour

The DCISC FFT met with Jordan Tyman, Risk and Compliance Director; Andy Warwick, Emergency Planning Manager; and Cameron Christensen, Senior Emergency Planning Coordinator, to receive an overview of DCP's Emergency Plan and functions of the Emergency Response Organization along with a tour of Emergency Preparedness Facilities. This topic was requested primarily to assist the DCISC's newest Member, Dr. Meshkati, in becoming familiar with DCP's Emergency Plan and facilities. The DCISC last reviewed Emergency Preparedness during its September 2024 Fact-Finding Meeting (Reference 6.6), when it concluded the following:

The DCP July 31, 2024, NRC-Evaluated Emergency Exercise was performed successfully based on DCISC observation and PG&E critique measures.

Mr. Warwick provided an overview and explanation of the following aspects of Emergency Preparedness at DCP:

- External Planning Standards (NRC and Federal Emergency Management Agency)
- PG&E's Responsibilities for Emergency Preparedness
- DCP's Relationship with San Luis Obispo County and other external entities
- Classifications and notifications for emergency events
- Use of Beyond Design Basis procedures in emergency response
- Emergency Response Organization Staffing and Training
- Protection of personnel responding to emergency events
- Functions of emergency response facilities and teams.

The FFT toured the following Emergency Response Facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility (Offsite)
- Unified Dose Assessment Center (Offsite)

While touring the Emergency Operations Facility, Mr. Christensen provided a detailed briefing on the capabilities and use of the Meteorological Information and Dose Assessment System (MIDAS), a computer software program that is used to predict the path and magnitude of radiation releases to the surrounding environment caused by an accidental radiation release into the air from the plant. The FFT found the briefings to be very informative and that the facilities were all in good condition.

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

Recommendations to the DCISC or PG&E: None.

3.6 Plans for a New Artificial Intelligence Process (Atomic Canyon)

The DCISC FFT met with Matt Birkel, Performance Improvement Director, and Erin Bowe, Performance Improvement Supervisor, for a review of DCP's plans regarding the potential application of Artificial Intelligence (AI), an area in which DCP is working with the company "Atomic Canyon." The DCISC last reviewed AI during its December 2024 Fact-Finding Meeting (Reference 6.7), when it concluded the following:

DCP's move to study and use an Artificial Intelligence platform developed by Atomic Canyon, for document and data search, retrieval, and reporting is positive. It has great potential for improving human performance in data analysis and reporting.

Mr. Birkel and Ms. Bowe briefed the FFT that the use of Atomic Canyon, a document data search and retrieval engine, was aimed at providing cost savings and improved operational efficiency. Regulatory agencies and operational demands require reactor operators to manage huge amounts

of technical documentation contained in multiple systems, and plant personnel spend large amounts of time and resources retrieving, sorting and organizing data and documents. The initial focus in using the Atomic Canyon application will be to augment the staff's capabilities to search databases to find information. The new system will be integrated with current DCPD systems such as SAP, which has been used as the foundation for the DCPD Corrective Action Program. Use of these types of AI systems could mean dramatic reductions in human effort and the time required for performing data and document searches, organizing results, and developing reports. There are no current plans to use Generative AI (which creates new content) which alleviates many of the potential safety concerns with the use of AI at DCPD. Instead, the system will be based on a process called Retrieval Augmented Generation which does not generate any new information. Potential areas for use would be retrieving historical documents to support the Corrective Action Program or for retrieving historical design documentation. As a part of this initiative, DCPD staff members are participating in several industry AI working groups sponsored by the NRC and other organizations.

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

Recommendations to the DCISC: As recommended in its December 2024 Fact-Finding Report, the DCISC should frequently review the use of Artificial Intelligence. (D12/24FF-3.4)

Recommendations to PG&E:

3.7 Meet with NRC Resident Inspectors

The DCISC FFT met with Mahdi Hayes, NRC Senior Resident Inspector; Eli Garcia, Resident Inspector; and Elias Hazzard, Reactor Engineer (on five-week rotational assignment) for an update. The DCISC meets regularly with the NRC Resident Inspectors and last met with them during its December 2024 Fact-Finding Meeting (Reference 6.8), when it concluded the following:

The meeting with the NRC Senior Resident Inspector was beneficial, and the DCISC should continue the meetings.

The items discussed in this meeting included the following:

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

Conclusion: The meeting with the NRC Resident Inspectors was beneficial, and the DCISC should continue the meetings.

Recommendations to the DCISC or PG&E: None.

3.8 Meet with DCPD Officer

The DCISC FFT, along with Consultant Andrew Kadak attending remotely, met with Maureen Zawalick, Vice President, Business and Technical Services, for an update. The DCISC last met with a DCPD director or officer during its Fact-Finding Meeting in December 2024 (Reference 6.9) when it concluded the following:

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

As is the usual practice when meeting with company officers, the group discussed the fact-finding meeting agenda items and other items of mutual interest.

Additionally, the FFT provided correspondence ahead of the meeting requesting a discussion on how PG&E's Board of Directors and its Safety and Nuclear Oversight (SNO) Committee establishes, reinforces, and communicates corporate policies and priorities regarding Nuclear Safety Culture both at the Board level and throughout the DCPD organization. In response to the FFT's request, Ms. Zawalick provided a briefing on the relationship between the site and corporate governance. Specifically, she discussed how the PG&E corporate organization differs greatly today from the organization in years past, and changes that have occurred since the 2019 bankruptcy declaration. As evidence of these changes, she offered the following information:

- The leadership style of Ms. Patti Poppe as CEO differed significantly from past corporate leaders. This included the "True North" initiative which is a 10-year strategy that includes focused efforts to rebuild trust along with public and worker safety.
- Several former senior DCPD staff members now held major positions within PG&E's non-nuclear safety organization. Examples included Mr. Matt Hayes serving as the company's Chief Safety Officer and Mr. Russ Prentice serving as the company's Vice President of Enterprise and Operational Risk.
- Ms. Poppe and other senior corporate leaders visit DCPD regularly and work to be informed of plant concerns.
- The SNO Committee included two members that were particularly focused on DCPD and its concerns, Ms. Cheryl Campbell, the SNO Chair, and Adm. Mark Ferguson, a former senior officer in the nuclear navy. Both regularly visit DCPD and review matters at the station.
- Positive observations in Nuclear Safety Culture have been recently provided by external organizations, including INPO during its recent evaluations.

The FFT and Consultant Kadak discussed with Ms. Zawalick various details regarding the above information. The FFT received a comprehensive briefing from Ms. Zawalick on the current state and favorable external assessments of the corporate Nuclear Safety Culture. However, to gain a more complete understanding, the FFT requested a meeting with the chair and members of the SNO Committee. PG&E acknowledged this request and committed to arranging such a meeting.

Conclusion: The regular meetings between the DCISC and DCPD Officers and Directors continue to be beneficial for both organizations. Discussions regarding the status of the current Nuclear Safety Culture at the corporate level were generally positive.

Recommendation to the DCISC: The DCISC should meet with members of the Safety and Nuclear Oversight Committee of the PG&E Board to review matters related to Nuclear Safety Culture at the corporate level. (D1/25FF-3.8)

Recommendations to PG&E: None.

3.9 Station Nuclear Safety Culture and Employee Concerns Programs

The DCISC FFT met with Craig Sutton, Radiation Protection Manager; Karen Karner, Organizational Effectiveness Principal; and Donna Wells, Employee Concerns Program Manager, for a review of DCPD's Nuclear Safety Culture Program and Employee Concerns Program. The DCISC last reviewed both topics during its August 9, 2023, Fact-Finding Meeting (Reference 6.10), when it concluded the following:

The DCPD Nuclear Safety Culture appears healthy and effective in assuring nuclear safety. Additionally, NRC inspections of DCPD's Safety Culture conclude that DCPD has a Safety Conscious Work Environment and an effective Employee Concerns Program.

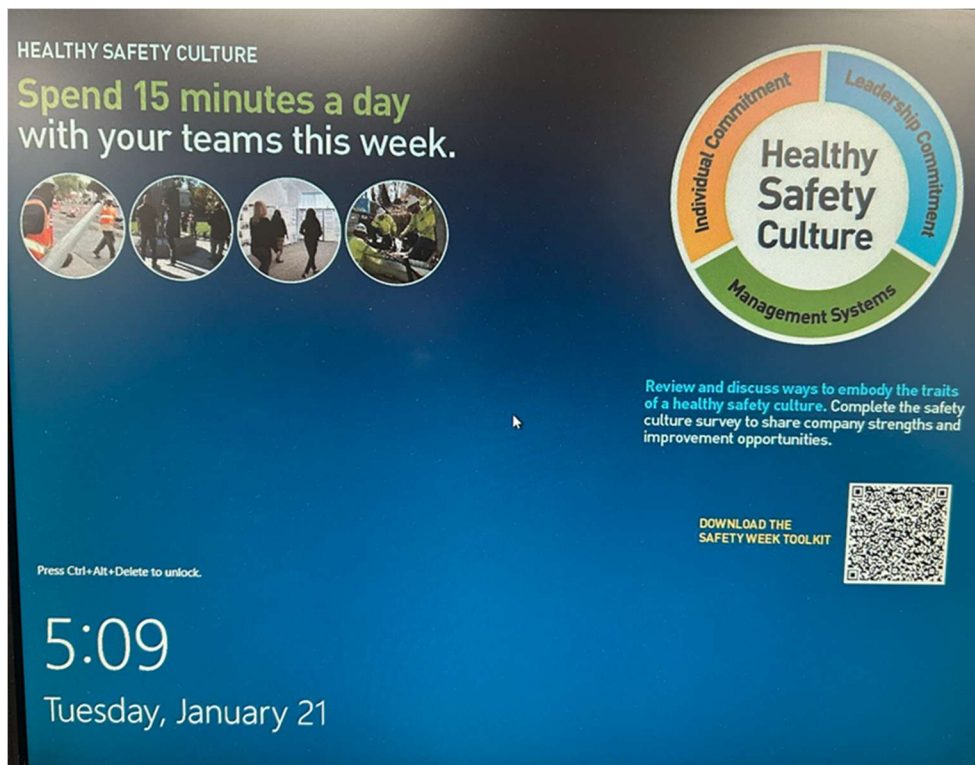
The DCPD Employee Concerns Program appeared to function effectively in receiving and investigating employee concerns in a confidential manner. During 2022, as in past years, and to-date in 2023, there were no significant concerns regarding nuclear safety.

Nuclear Safety Culture is defined by DCPD as being the 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. DCPD has a formal program for monitoring Nuclear Safety Culture as delineated in procedure OM16.ID2, "Nuclear Safety Culture Health Monitoring," Revision 12, a copy of which was provided to and reviewed by the FFT. Mr. Sutton explained that the program was based on Nuclear Energy Institute (NEI) guidance document 09-07, "Fostering a Healthy Nuclear Safety Culture," and INPO guidance document 12-012, "Traits of a Healthy Nuclear Safety Culture." The program recognizes that while it is difficult to directly measure culture, there are aspects of plant events and issues which can be trended to help determine if Nuclear Safety Culture themes exist.

Mr. Sutton explained that a core feature of the program at DCP is the Nuclear Safety Culture Monitoring Panel (NSCMP) for which he was serving as its current chair. The NSCMP is a cross-functional panel that monitors and assesses process inputs indicative of the health of the DCP Nuclear Safety Culture to identify potential issues or trends in the work environment that merit additional attention by the organization. The NSCMP meets at least three times per year plus convenes ad hoc meetings as needed and often following refueling outages. The NSCMP provides reports of its assessments and any recommendations to the Safety Culture Leadership Team which is comprised of members of the senior leadership team who review NSCMP information and assess Nuclear Safety Culture health to discern subtle trends and early indications of Nuclear Safety Culture challenges. At the FFT's request, PG&E provided copies of the two latest NSCMP meeting reports for May and December 2024. The FFT reviewed the reports and found them to be satisfactory.

At the time of the FFT's visit, a safety culture survey for the whole PG&E company was underway, and Mr. Sutton reported that results would be available in about two months. The FFT considered that it would be beneficial for the DCISC to review the results of the PG&E employee safety culture survey following its completion.

The FFT also observed that the desktop on most company personal computers was currently displaying a safety culture message for employees along with a reminder to complete the survey, as shown below:



PG&E Personal Computer Desktop on Safety Culture

The FFT inquired regarding how information contained in the Organizational Learning Tools (OLTs) contained in Cause Evaluations and Root Cause Evaluations would be reviewed for safety

culture impacts. Mr. Sutton responded that the OLTs were primarily trended by the Performance Improvement group; however, the NSCMP would review any such identified trends for possible applicability to assessing the safety culture at the station. The FFT also inquired how contract employees were incorporated into the safety culture of the station, and DCPD reported that in-processing training for new contract employees included instruction about the safety culture of the station and the expectation that all contract employees would be held to the same standards as PG&E employees. Additionally, most major nuclear contractors (such as Holtec or Siemens) had their own Nuclear Safety Culture programs.

Ms. Wells then explained the organization and functions of the Employee Concerns Program (ECP). It provided an alternate venue for employees to report concerns; that is, a program independent of line management. The ECP may be used by individuals to report nuclear safety concerns dealing with harassment, intimidation, retaliation, or discrimination without fear of retribution. Employees may submit concerns into the ECP via a 24/7 hotline, drop box, email, mailbox, or by direct contact with ECP personnel. If an employee requests confidentiality, the ECP strives to keep confidential the employee's identity, but does so with recognition that it has a higher priority to do whatever is necessary to fully investigate all potential safety concerns. Employees may also submit concerns directly to the NRC, which terms such concerns as "allegations." The NRC may choose to directly investigate an allegation or may refer the allegation to PG&E under a Request for Information letter for PG&E to investigate and report back its findings.

Ms. Wells reported that during 2024, the ECP received the following numbers of concerns:

<u>Category</u>	<u>2024</u>
Concerns, formal investigation not required	33
Concerns, formal investigation performed	2
Anonymous Notifications	88
NRC Allegations referred to PG&E	1

In general, the FFT concluded that both programs were performing well, and no major safety concerns were being currently addressed by either program. The FFT noted that the number (provided after the in-person meeting) of anonymous Notifications was higher than 2023 and recommends that the DCISC follow up with PG&E about any themes or concerns that may have arisen from that large number.

Conclusion: DCPD's Nuclear Safety Culture and Employee Concerns Programs were performing well with no major safety concerns having been recently identified.

Recommendations to the DCISC:

The DCISC should review the results of a PG&E employee safety culture survey following its completion. (D1/25FF-3.9A)

The DCISC should further review the higher than typical numbers and nature of anonymous Notifications received in 2024 for any significant themes or concerns. (D1/25FF-3.9B)

Recommendations to PG&E: None.

3.10 Human Performance Program

The DCISC FFT met with Matt Birkel, Performance Improvement and Innovations Director; Blair Jones, Chief of Staff to the Chief Nuclear Officer; and Alex Brown, Performance Improvement Manager, for an update on Human Performance (HU) at DCP. The DCISC last reviewed Human Performance during its August 2024 Fact-Finding Meeting (Reference 6.11), when it concluded the following:

DCP's Corrective Action Program was performing well in that issues at the station were being effectively identified, evaluated, and tracked for resolution. DCP's Human Performance Programs effectively incorporated human error prevention and analysis tools. The DCISC should follow up on the question of what would trigger a Human Factors Analysis and Classification System (HFACS) review to be initiated following human errors related to operations and maintenance activities.

In follow-up to the DCISC's August 2024 Fact-Finding Meeting, the FFT inquired regarding what would trigger a Human Factors Analysis and Classification System (HFACS) evaluation to be initiated in response to HU events related to operations and maintenance activities. Mr. Birkel explained that the procedure previously provided to the DCISC (OM6.ID1, "Injury and Illness Prevention Program") drove the use of an HFACS evaluation for all events involving injuries. Separately, the larger process for reviewing Notifications at the station and assigning corrective actions (discussed in Section 3.3, above) contained other triggers for use of the HFACS evaluation. He provided a copy of procedure OM15.ID11, "Human Performance Event Response," Revision 11, and explained how the procedure required several responses to an HU event and how that document would guide the Notification Review Team when reviewing and responding to a Notification that reported an HU event. The procedure contained references to the station's Cause Determination Manual as well as procedure OM7.ID7, "Emerging Issue and Event Investigation," which together outlined the use of the HFACS evaluation as one of many tools that could be used for responding to HU events. The FFT considered this a satisfactory answer to its question.

The FFT also inquired about whether any human factors reviews of the Main Control Room layout had been recently performed at DCP. Mr. Birkel responded that none had been performed in recent years. However, several upgrades (such as digital chart recorders and some digital controls) have enhanced human factors. Also, the Main Annunciator (alarm) system was planned to be converted to a digital system during the 1R26 and 2R26 Refueling Outages. That upgrade would allow the future use of digital Alarm Response Procedures, which would be a significant improvement in human factors for responding to alarms. Mr. Birkel also described how peer checks were extensively used in the Control Room to help avoid human errors, and there had been no HU events in the Control Room in recent years.

Conclusion: DCPD satisfactorily answered the DCISC’s questions regarding uses of the Human Factors Analysis and Classification System evaluation tool.

Recommendations to the DCISC or PG&E: None.

3.11 Observe Listening and Learning Session

The DCISC FFT joined plant employees in observing an all-employee remote meeting, called a “Listening and Learning Session,” facilitated by Suzanne Hosn, Communications Senior Manager, with the DCPD Senior Leadership Team. The DCISC last observed an all-employee meeting during its September 2022 Fact-Finding Meeting (Reference 6.12), when it concluded the following:

The “all hands” meeting of DCPD employees with top PG&E executives and Board of Directors appeared successful in providing beneficial firsthand communications for all participants.

Topics discussed in the meeting and their presenters included:

- Safety Conscious Work Environment, presented by Justin Rogers, Station Senior Director
- Upcoming NRC Force-on-Force Evaluation, presented by Shawn Kirven, Security Director
- Refueling Outage Planning, presented by Erik Werner, Outage Planning Director
- 2024 Performance, presented by Justin Rogers, Station Senior Director
- 2025 “Roadmap,” presented by Maureen Zawalick, Vice President Business and Technical Services
- Joy at Work, presented by Adam Peck, Site Vice President
- Question and Answer Session

The FFT observed that the meeting appeared to provide beneficial information to the participants.

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

Recommendations to the DCISC or PG&E: None.

3.12 Tsunami Hazard Evaluation

The DCISC FFT met with Jeff Bachhuber, Director, Geosciences; Albert Kottke, Principal Geotechnical Earthquake Engineer; and Jearl Strickland, Consultant, for an update on Tsunami Hazard Evaluations for DCPD. Deb Luchsinger, Jerry Bischof, and Harpreet Bhalla from the California Department of Water Resources (DWR) participated remotely in the meeting. The

DCISC last reviewed topics related to tsunami hazards during its August 2022 Fact-Finding Meeting (Reference 6.13), when it concluded the following:

The DCPD procedure for response to a tsunami warning appeared appropriate for directing personnel actions to protect the plant and personnel in the event of a tsunami. This included response for tsunamis greater than the design basis tsunami.

Mr. Strickland began the discussion by providing an overview of the history for Tsunami Hazard Evaluations at DCPD. Throughout the plant's history, the primary safety-related area potentially subject to impact from a tsunami was the Auxiliary Saltwater (ASW) System pumps and piping located in the Intake Structure. Historical design basis analyses focused on protecting the ASW System from damage from the probable maximum tsunami, as follows:

- 1967 – The original input to the design basis for DCPD was a probable maximum tsunami height of 17.4 feet,* in reference to the 1964 Anchorage, Alaska, earthquake. At that time, PG&E assumed 20 feet as its original design basis tsunami height.
- 1982 – A major Pacific storm damaged the Intake Structure. Additional three-dimensional modeling was performed that provided a new probable maximum tsunami height of 34.6 feet. Modifications were made to the Intake Structure and surrounding areas to improve their resistance to tsunamis and other wave action. Additionally, the ASW Pump enclosure snorkels were modified to have a minimum inlet opening height of 48.5 feet. Plant operation then began in 1984.
- 2011 – Following the tsunami at the Fukushima Power Station in Japan, the NRC required that all U.S. nuclear power plants reassess their design bases for external hazards, including tsunamis. In response to this requirement, PG&E performed detailed modeling of the Pacific coastline and the types of tsunamis that could be received at DCPD. It was generally found that onshore, close offshore, and distant offshore earthquakes were not major contributors to the tsunami hazard at DCPD. Instead, nearby offshore underwater slumps or slides around the continental shelf (also known as “submarine mass failures”) were determined to provide the largest contributions to DCPD’s tsunami risk. Analysis based on several conservative assumptions concluded that a probable maximum tsunami height of 32.8 feet was appropriate for use as the design basis at DCPD. Adding the results of models for tidal and other wave height variations resulted in a maximum water surface elevation of 47.7 feet for use in the design basis. This updated analysis was submitted to the NRC in 2016 (Reference 6.14) and reviewed and approved by the NRC in 2017 (Reference 6.15).
- 2024 – Following the 2023 submission of a License Renewal Application, the California Coastal Commission (CCC) issued an Incomplete Consistency Certification

* Unless otherwise noted, all sea level heights are referenced to the North American Vertical Datum of 1988 (NAVD88).

Letter, requesting comprehensive information on tsunami hazards, waves, coastal storms, coastal erosion, and the influence of sea level rise on them. In response, PG&E developed and published an assessment of these topics in 2024, drawing on previous DCPD studies and publicly available data (Reference 6.16).

Mr. Strickland explained that the 2024 study prepared for the CCC (a copy of which was provided to the FFT) concluded that the previous (2016) estimations of the maximum water surface elevation remained valid and were highly conservative. This study also considered factors to account for projected sea level rise out to 2045 as well as possible sea cliff erosion and shoreline retreat. The FFT reviewed the report and concluded that none of the new information contained in it challenged any previous assumptions or conclusions from the 2016 analyses of DCPD's design basis for the risk from a probable maximum tsunami at DCPD.

The FFT also asked about how a tsunami could impact the Discharge Structure and the use of FLEX procedures if the Discharge Structure was unavailable for use. Following the meetings, PG&E provided a copy of a structural drawing for the Discharge Structure to the FFT which showed that the Auxiliary Saltwater (ASW) System piping discharged into the upper portion of the structure. The FFT observed that at that location in the structure, the piping outlets appeared to be covered by a protective structure with earthen fill. PG&E also reported to the FFT that there was not any existing FLEX guidance for providing an alternate discharge for the ASW System should the concrete outfall not be available due to an extreme event, but the water could be discharged to any available location. The FFT reviewed the DCPD Updated Final Safety Analysis Report (Reference 6.17, Section 9.2.7) and found that a possible collapse of the structure onto the ASW discharge piping was discussed but appeared to be considered an event outside of the design basis. The FFT concluded that the FLEX Program should possibly have considered developing FLEX procedures for providing an alternative discharge path for the ASW System following a Beyond Design Basis event that caused a collapse of the Discharge Structure. The FFT recommends that the DCISC review this question in more detail during a future Fact-Finding Meeting.

Conclusion: None of the information contained in a 2024 PG&E report to the California Coastal Commission regarding tsunami and other sea level hazards challenged any previous assumptions or conclusions contained in DCPD's 2016 design basis analysis of the risk from a maximum probable tsunami at DCPD.

Recommendation to the DCISC: The DCISC should further review if DCPD should have considered developing FLEX procedures for providing an alternative discharge path for the Auxiliary Saltwater System following a Beyond Design Basis event that may cause a collapse of the Discharge Structure. (D1/25FF-3.12)

Recommendations to PG&E: None.

3.13 Refueling Outage 1R25 Preparations

The DCISC FFT met with Erick Werner, Outage Director, to discuss planning and scheduling for the upcoming Refueling Outage 1R25. Deb Luchsinger, Jerry Bischof, and Harpreet Bhalla from the California Department of Water Resources (DWR) participated remotely in the meeting. The DCISC last reviewed outage preparations during its March 2024 Fact-Finding Meeting (Reference 6.18), when it concluded the following:

DCPP's preparations for Refueling Outage 2R24 were progressing satisfactorily with some planning activities behind schedule due to the large volume of planned work.

Refueling Outage 1R25 was planned to begin in mid-April 2025 with a planned duration of 40 days. Major outage activities included:

- Reactor Refueling
- Reactor Vessel Internal Inspections (including the removal of "Capsule B")
- Corrective and Preventive Maintenance work needed to support 18 months of operation
- Completing the remaining License Renewal-related inspections and activities
- Completing major projects (See Section 3.4 above)

Based on information provided to the DCISC in its monthly documents received from PG&E, outage preparations appeared on schedule. Additionally, the FFT discussed with Mr. Werner the planned completion of corrective actions associated with the internal leakage of Pressurizer Safety Valve 1-RV-8010B (See Section 3.3 above), schedule critical path activities, outage engineering walkdowns, and overtime limits for outage workers as required by NRC regulations.

Conclusion: DCPP's preparations for Refueling Outage 1R25 appeared to be progressing satisfactorily.

Recommendations to the DCISC or PG&E: None.

3.14 Corporate Nuclear Safety Culture

The DCISC FFT, along with Consultant Andrew Kadak attending remotely, met with Blair Jones, Chief of Staff to the Chief Nuclear Officer, and Brian Ketelsen, Business and Technical Services Director, for an update on PG&E's Corporate Safety Culture. This meeting supplemented discussions held with Ms. Zawalick in the meeting discussed in Section 3.8 above. The DCISC last reviewed Corporate Safety Culture during its August 2024 Fact-Finding Meeting (Reference 6.19), when it concluded the following:

DCPP provided a briefing on the organization and functions of DCPP's major departments and programs. PG&E personnel satisfactorily answered several questions regarding station safety culture including the relationship between station safety culture and the larger PG&E corporate culture. The DCISC should follow up on several additional questions related to corporate governance, the

Board's Safety and Nuclear Oversight Committee, and lessons learned from past major corporate safety events.

The FFT and Consultant Kadak asked the DCPD staff members to review how the station is funded and the effect of corporate management on safety culture and funding decisions at DCPD. Mr. Ketelsen explained that under Senate Bill 846, which authorized the extension of power operations at DCPD, a new balancing account ratemaking mechanism was established. Under this new ratemaking structure, funding is obtained through an annual California Public Utilities Commission (CPUC) rate case that collects funds from across all the state's electricity customers and allocates the funds directly to DCPD. This structure limits the company's ability and incentive to unilaterally impose limits on operations or capital spending because any cost underruns are passed directly back to California customers and not available to fund other company operations or shareholder profits.

Additionally, DCPD has access to a forgivable loan from the State of California made available via Senate Bill 846 and which is managed by the California Department of Water Resources (DWR). These funds are intended to be used for operational and project costs incurred in preparation for extended operations and may ultimately be forgiven if the applicable terms are met. Finally, some of those loan funds could be repaid to the State of California from proceeds of the U.S. Department of Energy (DOE) Civil Nuclear Credit program. In January 2024, DCPD was deemed eligible for the program, and a Credit Award Payment agreement (contract) was executed by both PG&E and DOE. Funds received under this program would not be additive to the DWR funding and would not be retained by PG&E but rather would be paid to the State of California following receipt by PG&E.

The FFT and Consultant Kadak discussed with Mr. Jones various aspects of the interaction of the station with corporate management. The FFT learned that the Safety and Nuclear Oversight (SNO) Committee of the Board meets four times per year, coinciding with full Board meetings. At the SNO Committee meetings, DCPD staff members regularly provide station update presentations. It was also noted that the SNO Committee does not focus exclusively on nuclear operations but also has an oversight role for safety across non-nuclear portions of the company. Additionally, there is regular interaction with the SNO Committee members and the site, as previously discussed with Ms. Zawalick. The FFT asked if the SNO Committee made any recommendations to the station, and Mr. Jones reported that they did not make formal recommendations; however, they sometimes shared advice based on their extensive experiences. As an example, a SNO Committee member recently provided advice to the station regarding the avoidance of risks inherent to the use of Artificial Intelligence.

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

Recommendations to the DCISC or PG&E: None. (See also Section 3.8)

4.0 CONCLUSIONS

- 4.1 DCP's FLEX Response Procedures were appropriately integrated with other procedures for responding to emergency events and severe accidents.**
- 4.2 DCP provided a briefing on its relationship with the Institute of Nuclear Power Operations and an overview of the results of their recent evaluation which was mostly positive.**
- 4.3 DCP's programs for performing Cause Evaluations and Root Cause Evaluations were appropriate in classifying the evaluations to be performed and conducting technical analyses to identify and correct the causes of equipment failures. However, possible weaknesses were identified in how insights gained in the use of Organizational Learning Tools and Safety Culture Assessments were captured and integrated with appropriate corrective actions initiated for organizational issues.**
- 4.4 The DCISC found that PG&E's planning for upcoming major plant projects was being effectively managed and projects important to safety were being pursued for implementation.**
- 4.5 DCP provided a briefing on Emergency Preparedness planning, and facilities used for responding to emergencies were toured and observed to be in good condition.**
- 4.6 DCP's initiative to study and use an Artificial Intelligence platform developed by Atomic Canyon for document and data search, retrieval, and reporting is positive. There were no safety concerns associated with DCP's current plans for the possible use of Artificial Intelligence at the station.**
- 4.7 The meeting with the NRC Resident Inspectors was beneficial, and the DCISC should continue the meetings.**
- 4.8 The regular meetings between the DCISC and DCP Officers and Directors continue to be beneficial for both organizations. Discussions regarding the status of the current Nuclear Safety Culture at the corporate level were generally positive.**
- 4.9 DCP's Nuclear Safety Culture and Employee Concerns Programs were performing well with no major safety concerns having been recently identified.**
- 4.10 DCP satisfactorily answered the DCISC's questions regarding uses of the Human Factors Analysis and Classification System evaluation tool.**
- 4.11 The "Listening and Learning Session" held by DCP senior leadership for all employees appeared successful in providing beneficial information for participants.**
- 4.12 None of the information contained in a 2024 PG&E report to the California Coastal Commission regarding tsunami and other sea level hazards challenged any previous**

assumptions or conclusions contained in DCP's 2016 design basis analysis of the risk from a maximum probable tsunami at DCP.

- 4.13 DCP's preparations for Refueling Outage 1R25 appeared to be progressing satisfactorily.
- 4.14 Discussions regarding the status of safety culture at the corporate level and its effects on DCP were generally positive.

5.0 RECOMMENDATIONS

Recommendations to the DCISC:

- 5.1 The DCISC should review the Organizational Learning Tool and Safety Culture sections in all Root Cause Evaluations and Cause Evaluations conducted in 2024. (D1/25FF-3.3, Section 3.3)
- 5.2 The DCISC should try to meet with members of the Safety and Nuclear Oversight Committee of the PG&E Board to review matters related to Nuclear Safety Culture at the corporate level. (D1/25FF-3.8, Section 3.8)
- 5.3 The DCISC should review the results of a PG&E employee safety culture survey following its completion. (D1/25FF-3.9A, Section 3.9)
- 5.4 The DCISC should further review the higher than typical numbers and nature of anonymous Notifications received in 2024 for any significant themes or concerns. (D1/25FF-3.9B, Section 3.9)
- 5.5 The DCISC should further review if DCP should have considered developing FLEX procedures for providing an alternative discharge path for the Auxiliary Saltwater System following a Beyond Design Basis event that may cause a collapse of the Discharge Structure. (D1/25FF-3.12)

Recommendations to PG&E:

- 5.6 PG&E should review its cause evaluation processes and initiate actions to ensure that deficiencies observed via the Organizational Learning Tool and Safety Culture Assessment are captured and tied to the initiation of appropriate corrective actions. (P1/25FF-3.3A, Section 3.3)
- 5.7 PG&E should review its cause evaluation processes and initiate actions to ensure that periodic trending is performed across the multiple Organizational Learning Tools and Safety Culture Assessments that are performed as a part of Cause Evaluations and Root Cause Evaluations. (P1/25FF-3.3B, Section 3.3)

6.0 REFERENCES

- 6.1 “Diablo Canyon Independent Safety Committee Thirty-Second Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2021 – June 30, 2022,” Approved October 18, 2021, Volume II, Exhibit D.8, Section 3.2, “Flex Program Update.”
- 6.2 “Diablo Canyon Independent Safety Committee Thirty-Fifth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2024 – June 30, 2025,” Scheduled for approval at the October 2025 DCISC Public Meeting, Volume II, Exhibit D.4, Section 3.10, “World Association of Nuclear Operators Peer Review Results.”
- 6.3 Ibid., Exhibit D.3, Section 3.7, “Pressurizer Safety Valve Root Cause Evaluation.”
- 6.4 Ibid., Exhibit D.4, Section 3.12, “Causes and Corrective Actions for Secondary System Steam Leaks.”
- 6.5 “Diablo Canyon Independent Safety Committee Thirty-Fourth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2023 – June 30, 2024,” Approved October 10, 2024, Volume II, Exhibit D.2, Section 3.9, “Comprehensive Review of Equipment Long-Range Planning and Maintenance.”
- 6.6 “Diablo Canyon Independent Safety Committee Thirty-Fifth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2024 – June 30, 2025,” Scheduled for approval at the October 2025 DCISC Public Meeting, Volume II, Exhibit D.3, Section 3.9, “Results of July 31, 2024, Evaluated Emergency Preparedness Exercise.”
- 6.7 Ibid., Exhibit D.5, Section 3.4, “Plans for a New Artificial Intelligence Process (Atomic Canyon).”
- 6.8 Ibid., Section 3.8, “Meeting with NRC Senior Resident Inspector and Resident Inspector.”
- 6.9 Ibid., Section 3.9, “Meet with Senior Vice President and Chief Nuclear Officer.”
- 6.10 “Diablo Canyon Independent Safety Committee Thirty-Fourth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2023 – June 30, 2024,” Approved October 10, 2024, Volume II, Exhibit D.2, Section 3.5, “Employee Concerns Program,” and Section 3.6, “Nuclear Safety Culture.”
- 6.11 “Diablo Canyon Independent Safety Committee Thirty-Fifth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2024 – June 30, 2025,” Scheduled for approval at the October 2025 DCISC Public Meeting, Volume II, Exhibit D.2, Section 3.6, “Corrective Action Program and Human Performance.”
- 6.12 Diablo Canyon Independent Safety Committee Thirty-Third Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2022 – June 30, 2023,”

Approved September 13, 2023, Volume II, Exhibit D.3, Section 3.3, “Observe All Hands Meeting with PG&E Chief Executive Officer and Board of Directors.”

- 6.13 Ibid., Exhibit D.2, Section 3.5, “Tsunami Warning Response.”
- 6.14 “Updated Response to Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 Flooding,” submitted to the Nuclear Regulatory Commission as an enclosure to PG&E Letter DCL-16-016, February 8, 2016, NRC ADAMS Accession Number ML16039A366.
- 6.15 “Diablo Canyon Power Plant Unit Nos. 1 and 2 – Staff Assessment of Response to 10 CFR 50.54(f) Information Request – Flood-Causing Mechanism Reevaluation,” US Nuclear Regulatory Commission, Letter Dated December 18, 2017, NRC ADAMS Accession Number ML17024A207.
- 6.16 “DCPP CCC NOI Response Support, Sea Level Rise, Tsunami, Wave and Erosion,” Report Dated July 23, 2024, Prepared by ERM for PG&E, Reference Number 0670597.
- 6.16 “Submittal of Updated Final Safety Analysis Report, Revision 28,” submitted to the Nuclear Regulatory Commission as an enclosure to PG&E Letter DCL-24-105, November 18, 2024, NRC ADAMS Accession Number ML24323A240 (Part 1) and ML24323A242 (Part 3).
- 6.18 “Diablo Canyon Independent Safety Committee Thirty-Fourth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2023 – June 30, 2024,” Approved October 10, 2024, Volume II, Exhibit D.7, Section 3.11, “Refueling Outage 2R24 Preparations and Outage Safety Plan.”
- 6.19 “Diablo Canyon Independent Safety Committee Thirty-Fifth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2024 – June 30, 2025,” Scheduled for approval at the October 2025 DCISC Public Meeting, Volume II, Exhibit D.2, Section 3.4, “Station Organization and Major Programs.”