

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE**Report on****Fact-Finding Meeting at DCP
on March 18, 19 and 20, 2024****by****Robert J. Budnitz, Member, and Richard McWhorter, Consultant****1.0 SUMMARY**

The results of the DCISC March 18, 19 and 20, 2024, Fact-Finding Meeting at the Diablo Canyon Power Plant (DCPP) in Avila Beach, CA, are presented. Although the Fact-Finding Team (FFT) was on-site at DCP, portions of the meeting were held remotely. The subjects addressed and summarized in Section 3 are as follows:

1. Review of the Updated Seismic Assessment Required by Senate Bill 846
2. Radioactive Waste Management
3. Observe Outage Management Team Meeting
4. Auxiliary Feedwater System Health
5. Cyber Security Program
6. Plant Tour
7. Seismically Induced Systems Interactions Program Update
8. Cause Evaluation for Auxiliary Saltwater Pump 2-2 Failure
9. Maintenance Department
10. Meet with DCP Officer
11. Refueling Outage 2R24 Preparations and Outage Safety Plan
12. Meet with Nuclear Regulatory Commission (NRC) Senior Resident Inspector

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 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 FFT based on items reported in Section 3 – Discussion. These highlights also include the team'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 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

Note: This was the first regular meeting with DCPD's new liaison to the DCISC, Brandy Lopez, Strategic Initiatives Licensing Principal, who participated in all portions of this Fact-Finding Meeting.

3.1 Review of the Updated Seismic Assessment Mandated by Senate Bill 846

The DCISC FFT met with Jeff Bachhuber, Director, Geosciences; Albert Kottke, Principal Geotechnical Earthquake Engineer; Nathan Barber, Supervisor, Generation Risk Management; Chris Madugo, Geosciences Consultant; and Jearl Strickland, Consultant. Delphine Hou, Christian Arechavaleta, Deb Luchsinger, and Jerry Bischof 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.) Tom Jones, PG&E Senior Director, Regulatory, Environmental and Repurposing, and Ferman Wardell, DCISC Consultant, also participated remotely. The DCISC last reviewed a similar topic during its November 2023 Fact-Finding Meeting (Reference 6.1), when it concluded the following:

The independent seismic-safety assessment required by SB846 is well under way, and the DCISC will continue to follow this activity through its expected completion in early 2024, after which the DCISC will review it. The meeting on November 9, 2023 of the California Public Utility Commission's "Independent Peer Review Panel" (IPRP), charged with periodically reviewing the seismic safety at DCPD, has not yet resulted in a written report that, if issued, will be reviewed by the DCISC. The seismic section of the PG&E license-renewal application to the NRC, recently submitted, will also be reviewed by the DCISC. The DCISC will then re-visit its May 2023 evaluation of overall DCPD seismic safety, if appropriate, in light of insights and information from each of the above three documents.

Senate Bill 846 (SB846) that authorized extended operation for Diablo Canyon required PG&E to conduct an updated seismic assessment. That assessment was carried out during 2023 by a panel of experts under a PG&E contract, and the panel's final report was provided to the DCISC in February 2024, although it had not yet been released to the public at the time of this Fact-Finding Meeting. The DCISC has begun to perform its own independent review of the report, and the purpose of this meeting was to allow the FFT to clarify several technical issues that arose during the DCISC's initial review.

To focus the meeting's discussions, the FFT developed several technical questions that were shared with PG&E in advance to allow PG&E to gather the needed information to support useful discussions. This meeting was with a group of PG&E seismic experts, some of whom contributed to writing the report.

The FFT's inquiries began with a process discussion, namely a discussion about the rationale behind the selection of a SSHAC Level One process as the assessment's framework. The PG&E experts provided clarifications about that topic that were clear and understandable to the FFT. The fundamental rationale for selecting a SSHAC Level One process as the framework for the project was that this new assessment was understood to be an update of the earlier 2015 Seismic Hazard Screening Report that PG&E completed and then submitted to the NRC (Reference 6.2). That earlier assessment followed a SSHAC Level Three process. The guidance for updating an earlier SSHAC Level Three study with a Level One assessment is contained in the NRC's broad SSHAC methodology guidance, NUREG-2213 (Reference 6.3), and it was generally followed, indeed followed with a few enhancements where it made sense to do so.

The meeting then discussed several technical topics that were each related to understanding the seismic safety of the power plant, mostly focused on understanding the seismic hazard. These topics, each of which is covered in more detail by analyses and discussion in the updated seismic assessment report, included the following:

- Uncertainties in the assessment's analyzed values for seismic-initiated core-damage frequency and large early-release frequency – questions were discussed regarding comparing the uncertainties in the new analysis to those in the 2015 Seismic Hazard Screening Report.
- The use of scaling as an approximation in comparing the results of the new analysis with the results of PG&E's 2015 analysis – questions were discussed regarding whether the approximations when using the scaling approach are important or unimportant to the final results.
- The evaluation of site factors using both the analytical and the empirical site-factor approaches – questions were discussed regarding comparing the site factors in the new analysis to those in the 2015 report.
- Uncertainties in the Equivalent Poisson Hazard Ratio (EPHR) analysis – questions were discussed regarding whether the EPHR factors, in light of uncertainties, are genuinely as small as the new analysis finds them to be.
- The importance of directivity effects – questions were discussed regarding the fact that these effects were not included in the study and how much confidence there is that these effects are small.
- Uncertainties in the assessment's treatment of vertical-motion effects – Questions were discussed regarding how much confidence there is that these effects are only modest.

- Issues with the use of an on-fault deformation model – questions were discussed regarding how much difference it would make if this model was used.
- The importance of dip angles in potential faults near the power plant site – questions were discussed regarding whether the hypothesis of smaller dip angles, if used, would make an important difference to the results.
- The use of long-term slip rates as a major basis for analyzing seismicity in the vicinity – questions were discussed regarding how firm is the conclusion that slip rates over a very long prior time period are not applicable to the current tectonic framework.

For each topic, the FFT was seeking clarifications or further in-depth information that would support the DCISC’s review of the report. The substance of the specific discussions is not detailed in this report because the DCISC will be doing further work to complete its review of these topics as discussed below. However, almost all the clarifications provided by PG&E in responding to the FFT’s questions were in line with preliminary understandings and conclusions that the FFT had made earlier but for which additional information was being sought.

Having assimilated the clarifications and other information received during this meeting, the DCISC’s next step is to continue developing its review of the updated assessment report. It is expected that that review could be available for presentation and discussion by the DCISC during its public meeting in late June 2024. That discussion at the public meeting, including input from the public, could then become the basis for the DCISC to take a position on the updated seismic assessment report. However, whether that schedule can be met depends, in part, on some future events beyond the DCISC’s control. One example could be useful input about the updated seismic assessment report from various other experts. Another example is whether input will be received soon from the California Public Utilities Commission’s Independent Peer Review Panel for seismic safety.

Conclusions: PG&E provided information addressing each of several DCISC questions on the updated seismic assessment required by SB846. The clarifications were helpful and in sufficient depth to provide the needed information. The DCISC should continue its work to develop its own independent review of the updated seismic assessment report.

Recommendations: None.

3.2 Radioactive Waste Management

The DCISC FFT met with Clint Miller, Principal Radwaste Engineer, and Craig Sutton, Radiation Protection Manager, for an update on the Liquid Radwaste System (LRS) and the disposal of solid radioactive waste. The DCISC last reviewed this topic during its November 2020 Fact-Finding Meeting (Reference 6.4), when it concluded the following:

DCPP's Liquid and Solid Radwaste Processing Systems are effective in minimizing the volumes and radioactivity levels discharged or sent to licensed storage facilities.

The purpose of the LRS is to collect liquid containing radioactive waste from various sources and process the waste to reduce the radioactivity to environmentally- and regulatory-acceptable levels prior to discharge. Except for equipment inside each unit's Containment Building, DCPD Units 1 and 2 share common collection and processing equipment. The LRS performs the following functions:

- Collect radioactive liquid wastes generated by plant operation and provide adequate surge volume and processing capability to assure plant availability is not limited,
- Reduce and limit the radioactivity of the liquid effluent to acceptable levels,
- Maintain safe LRS operating conditions and system integrity, and
- Provide adequate collection of radioactive liquids during both normal plant operations and postulated flooding conditions following equipment failure.

Major sources of liquid radioactive waste to the LRS include the following:

- Reactor Coolant Drain Tanks
- Containment Sumps
- Demineralizer Overflows
- Steam Generator Blowdown
- Laundry and Hot Shower Drain Tanks
- Post-Accident Sample System
- Resin Sample System
- Residual Heat Removal Pump Sumps
- Auxiliary Building Sumps
- Radwaste Filters

The system processes approximately 1.5 million gallons of liquid per year. Collected liquids are stored in tanks, processed by filtration and/or ion exchange, and recycled or sampled, diluted, and discharged through the Auxiliary Saltwater (ASW) System into the Pacific Ocean. The ASW discharge to the ocean is provided with a radiation monitor-controlled valve to assure liquid releases are below prescribed levels.

Mr. Miller reported that in 2023, the activity of DCPD's total liquid radioactive waste discharged was less than 17 millicuries (mCi), excluding tritium, which was the third lowest ever annual amount and put the station in the second quartile for the industry. [The DCISC further reviews the quantities and activities of liquid radioactive waste discharges annually following PG&E's submission of the Annual Radioactive Effluent Release Report in late spring, and last reviewed the 2022 report in August 2023 (Reference 6.5).] Most liquid radioactive waste is processed first through an ion-exchange system and then through a reverse osmosis system to reduce activity significantly prior to discharging. Activity captured by mechanical filters and resins in the ion-exchange system is later disposed of as solid waste.

Mr. Miller reported that the LRS was classified as a Tier 2 system and health reports for the system

were no longer required; however, he provided a copy of the third quarter system journal for the LRS and reviewed recent system problems with the FFT. Mr. Miller reported that LRS reliability was generally good, but Reactor Cavity sump pump failures were a recurring problem. One of the Unit 2 pumps was recently replaced with a new design; however, the new pump failed to prime correctly and work orders were in place to troubleshoot the issue during the next Unit 2 Refueling Outage. The other Unit 2 pump continued to work, and both Unit 1 pumps were currently working. The system was occasionally challenged by having to process higher than desired volumes of groundwater that leaked into the Auxiliary Building during heavy rains via leaking building expansion joints. Joint repairs were currently not being pursued as it cost less to process the extra water volume than to perform the extensive amount of work necessary to repair the expansion joints. All Auxiliary Building sump pumps were recently replaced, and the new pumps were performing well. With regards to system instrumentation, the system's Human-Machine Interface computer system was functioning well.

Regarding solid Radwaste, DCPD has worked to minimize the generation of all solid waste. Mr. Miller reported that DCPD currently sends most of its Class A Low Level Waste (LLW, lowest category of radioactivity and half-life less than five years) to an NRC-licensed facility in Tennessee for processing and sorting. The Tennessee facility removes any material which may be disposed of in a local landfill licensed for the burial of slightly radioactive material, thereby significantly reducing the volume of solid radioactive waste to be disposed elsewhere. The remaining Class A LLW and all Class B or C LLW (categories with higher radioactivity) are sent to an NRC-licensed radioactive waste disposal site in Texas. Occasionally, solid waste may also be sent for processing or repackaging at an NRC-licensed facility in Utah.

Conclusions: DCPD's Liquid and Solid Radwaste Processing Systems were effective in minimizing the volumes and radioactivity levels discharged or sent to licensed storage facilities.

Recommendations: None

3.3 Outage Management Team Meeting

The DCISC FFT met with Brandy Lopez, Strategic Initiatives Licensing Principal and DCISC Liaison, to observe the March 19, 2024, meeting of the Outage Management Team (OMT). The DCISC last attended an OMT meeting in December 2023 (Reference 6.6), when it concluded the following:

The December 12, 2023, Outage Management Team meeting was conducted efficiently and effectively, and the DCISC should consider observing more of these meetings in the future.

The OMT is governed by Procedure AD8.ID1, "Outage Planning and Management," Revision 32, a copy of which was provided to and reviewed by the FFT. According to AD8.ID1, the OMT is a group of station senior leaders whose purpose is to discuss pre-outage planning and outage implementation preparedness, and the OMT typically reviews:

- Projects, tasks, or evolutions in jeopardy of not being fully prepared for outage implementation
- Outage planning issues that rise to the level of needing Senior Leadership Team review
- Outage scope additions or appeals
- Risk decisions
- Forced loss rate due to interruptions in generation
- Single point vulnerabilities
- Major project, High Impact Team, department, process, or regulatory readiness
- Recovery plans for problem areas
- Decisions on bridging strategies and contingency planning
- Change management
- Large cost items

This meeting was focused upon preparations for Refueling Outage 2R24 scheduled to begin in March 2024 and was facilitated by Casey Weir, Outage Manager. The agenda included the following:

- Safety Review
- Review Purpose and Desired Outcomes
- Verify Quorum
- Review Previous Action Items
- Review Previous Meeting Pluses/Deltas
- Review Major Scope Changes
- Review Refueling Outage 2R24 Anion Retention Tank Repair
- Review Refueling Outage 2R24 Condenser Water Box Work
- Review New Action Items
- Review Meeting Results
- Meeting Evaluation

The bulk of the meeting time was dedicated to reviewing the two agenda items above regarding major work items that were a part of the scope for the upcoming Refueling Outage 2R24. First, managers reviewed the work planned to repair a leak on the Anion Retention Tank (ART) that was needed to remove a temporary modification. (Station policies generally required that all temporary modifications be removed as soon as possible and by the next refueling outage at the latest. Exceptions to this policy require approval by the Site Vice President.) The discussions centered around the fact that the ART was scheduled to be opened and other extensive work performed to replace the tank lining during the next outage, Refueling Outage 2R25. It was proposed that it would be more efficient to delay leak repairs until they could be performed concurrently with the scope of related work planned for Refueling Outage 2R25. At the end of the discussion, managers unanimously voted to recommend to the Site Vice President that work to repair the leak on the ART (and clear the temporary modification) be deferred from the upcoming Unit 2 Refueling Outage, 2R24, to the next Refueling Outage, 2R25.

The second major item on the agenda was to appoint a Readiness Review Board (RRB) to review the major outage work of inspecting, repairing, and recoating the Main Condenser Water Boxes. Under Procedure AD8.ID1, an RRB meeting is the forum for senior leadership to appraise outage readiness for programs, major projects, departments, and selected work groups. The RRB format involved reviewing a list of 22 questions challenging the preparations and planning for major outage work activities with managers and supervisors responsible for implementing the work activity.

The water boxes are the plenums where seawater transitions from supply and return piping to enter and exit the condenser tubes. This area is subject to corrosion and routinely inspected and repaired during outages. Additionally, during this upcoming outage, it was planned to install a coating on the tube sheets at the inlets and outlets of the water boxes to help prevent future corrosion and leakage. Topics reviewed and discussed were schedule readiness and accuracy, subcontractor readiness and oversight, risk management, and coordination between subcontractors. The discussion was extensive and concluded that most of the preparations were adequate although it was noted that several broken schedule links had been discovered and the schedule was in the process of being corrected at the time of the meeting.

The FFT concluded that the discussions and decisions made regarding the two major agenda items were appropriate. The FFT noted that the RRB portion of the meeting seemed to consume a significant amount of managers' time in discussions that appeared routine. Also, it was observed that safety issues (primarily confined space management) were discussed at the end of the RRB, rather than at the meeting's start, which is generally the practice at the station.

Conclusion: The March 19, 2024, Outage Management Team meeting was conducted efficiently and effectively.

Recommendations: None

3.4 Auxiliary Feedwater Systems

The DCISC FFT met with Cory Pfau, Strategic Engineer, and Mike Moren, Secondary Strategic Engineering Supervisor, for an update on the health of the Auxiliary Feedwater (AFW) System at DCP. The DCISC last reviewed the AFW System in September 2021 (Reference 6.7), when it concluded the following:

The DCISC found that DCP's Auxiliary Feedwater Systems continue to be given close attention, and the systems on both Units continue to be rated as Green (Healthy) with no major issues.

The AFW System is a safety-related system that provides feedwater to the Steam Generators (SGs) under shutdown, startup, low power, and accident conditions. The AFW System is designed to provide a water source to the SGs in order to remove heat from the Reactor Coolant System (RCS), prevent damage to the nuclear reactor fuel and prevent overpressurization of the RCS in the event of transients such as a loss of normal Main Feedwater (MFW), a stuck open relief valve, or a pipe

rupture on the secondary side. During normal plant shutdown, the AFW System replaces the MFW System and serves as a system to remove heat in hot standby or to cool down to a point where the Residual Heat Removal System can be placed in operation (when Reactor Coolant System temperature becomes less than 350°F). The AFW System is also used during normal plant startup prior to placing the MFW System in service. The AFW System consists of three feedwater supply trains on each unit with diverse means of powering the pumps. One train on each unit consists of a full-capacity steam turbine-driven pump, which can be aligned to use steam from any of the four SGs. The other two supply trains consist of half-capacity electric-motor-driven pumps, each normally supplying flow to two of the four SGs, with the capability to be aligned to any of the four SGs. The pumps normally draw water from the Condensate Storage Tank with backup supplies available from the Fire Water Storage Tank or the Raw Water Storage Reservoirs. Diesel-driven pumps from the FLEX Program are also available for use to supply AFW should the normal pumps or water supplies become unavailable during an emergency.

Mr. Pfau provided copies of the most recent health reports for the AFW System (System 03B) and reviewed its status with the FFT. Both units' AFW Systems were rated as Green (Healthy), with no major issues. Each unit was also rated on the following additional individual performance categories: Reliability, Maintenance Rule Compliance, Material/Equipment Condition and Corrective Actions, Operations Concerns, Performance Monitoring, and Design. All those individual performance categories were rated as Green (Healthy) for both units. He noted that both health reports were tracking one equipment issue that did not affect the systems directly, but rather affected equipment used to perform overspeed trip tests on the turbine-driven pumps. He explained in detail how automatic controls for the electric motor used to drive the pump for trip testing failed during Refueling Outage 2R23 resulting in schedule delays needed to successfully complete the tests. The test device was repaired and successfully used during Refueling Outage 1R24. DCPD was also working to obtain a new test device for future use.

Mr. Pfau also provided health reports specific to the safety-related portions of the Main Feedwater (MFW) System (System 03C), which consists of piping where the AFW System connects to the MFW System to supply water to the SGs. He reported that in December 2023, a small leak developed on a pipe fitting weld near check valve 1-FW-1-98. A Prompt Operability Assessment was performed which determined that the safety-related functions of the system could be maintained until such a time as the leak could be repaired. The leak was repaired a few days later when the plant was shut down for an unrelated leak on a Pressurizer Safety Valve (Maintenance Outage 1X25). An action plan was in development which would be presented to the Plant Health Committee sometime in the first quarter of 2024 to address the extent of condition concerns for this issue.

Conclusions: The DCISC found that DCPD's Auxiliary Feedwater Systems continue to be given close attention, and the systems on both Units continue to be rated as Green (Healthy) with no major issues.

Recommendations: None.

3.5 Cyber Security Program

The DCISC FFT met with Chance Siri, Cyber Security Supervisor, and Bryan Galvan, Risk Management and Cyber Security Manager, for an update on the status of DCP's Cyber Security Program. The DCISC last reviewed this topic in September 2021 (Reference 6.8), when it concluded the following:

DCP's Cyber Security Program appears to be effectively managed, and efforts are continuing to ensure that the program is successfully sustained.

The core elements of the Cyber Security Program include identifying and implementing protection for all the Critical Digital Assets (CDAs) at DCP. CDAs are digital computer and communications systems and components associated with safety-related and important-to-safety functions, security functions, emergency preparedness functions, and support systems which if compromised could adversely impact any of those functions. During the program's initial implementation, DCP identified approximately 4,000 CDAs across 66 critical systems. Slightly less than half of the 4,000 CDAs were in security-related systems, and the remainder were plant-related systems. Some examples of CDAs were the Programmable Logic Controllers in the Digital Electrohydraulic Turbine Control System, Operator Human-Machine Interface Computers, the Plant Process Control System, Security Cameras, and the Security Event and Monitoring System. Almost all of the CDAs were located inside protected or vital areas of the plant. The CDAs were evaluated, and approximately 900 were modified to assure compliance with the regulations. In general, implementation of the program ensured that none of these CDAs could be accessed from the internet, including the use of data diodes to block intrusion. Modifications included such work as locking USB ports, removing unnecessary programs, upgrading firmware, and reassigning or locking Internet Protocol (IP) addresses. DCP completed its original implementation of the full Cyber Security Program prior to the NRC-required due date of December 31, 2017.

Mr. Siri explained that the Cyber Security Program in general was now considered mature and the station was focusing on maintaining effective implementation and on initiatives for program improvement. The group actively monitors activities affecting CDAs and the continual performance of CDAs for irregularities or possible intrusions from both outside and inside the station. Updates and revisions to industry guidance documents were in process, and DCP would be modifying its program to comply with the updated guidance. He also explained that there were new initiatives to improve assessing threats and vulnerabilities, monitor systems in real time, and improve the security of wireless systems.

The FFT inquired about the effects of the proposed extended operations on the program, and Mr. Siri responded that Cyber Security Systems, like many plant systems, required lifecycle management reviews to ensure that the systems would be maintained in a manner that ensures they will not become obsolete or ineffective during a period of extended operations. System improvement plans for replacements and upgrades had been prepared and submitted via the plant's processes for approving project funding and implementation. With regards to staffing, Mr. Siri reported that the group was authorized for a staff of five technicians, two contractors, and one supervisor. One of the technician positions was vacant with hiring in progress to fill the open position.

The FFT inquired regarding the results of DCP's most recent NRC inspection. Mr. Siri reported that the NRC inspection, conducted in early February 2024, was performed over one week by several NRC staff members and contractors. The results of the inspection were generally favorable with one finding involving a deficiency in the logging of system activities which was considered to be of very low security significance (Green) and classified as a Non-Cited Violation by the NRC. During the inspection, DCP also initiated Corrective Action Program Notifications (SAPNs) for several minor issues. The FFT inquired about recent concerns from the Quality Verification (QV) Department about the Cyber Security Program, and Mr. Siri reported that in mid-2023 QV identified several instances where assessments of cyber security impacts by design changes were not performed in a timely manner. These deficiencies have since been resolved.

Conclusions: DCP's Cyber Security Program appeared to be effectively managed, and efforts are continuing to ensure that the program is successfully sustained.

Recommendations: None

3.6 Plant Tour

The DCISC FFT met with Ted Stanton, Acting Operations Manager, for a tour of maintenance work areas at DCP. The DCISC last conducted a plant tour during its November 2023, Fact-Finding Meeting (Reference 6.9) when it concluded the following:

On its plant tour the DCISC Fact-finding Team observed the Turbine Building areas to have been clean and orderly with all equipment operating normally. The DCP Operator escorting the Team was knowledgeable about the various areas of the plant as well as the equipment.

At the request of the FFT, Mr. Stanton guided the team in touring work areas inside and outside of the Unit 2 Turbine Building and the Control Room. On the Turbine Building 140' level (operating deck), numerous work areas and material staging areas were being assembled to support the upcoming refueling outage. In the Control Room, activities were being managed in a controlled and professional manner. On the Turbine Building 85' level, post-maintenance testing was being performed on Emergency Diesel Generator 2-2. Overall, the FFT found that all observed work areas were clean, orderly, and well lit.

Conclusions: The DCISC Fact-Finding Team toured the Unit 2 Control Room and maintenance work areas in the Turbine Building. Work was being managed properly, and all areas were clean, orderly, and well lit, with equipment in excellent condition.

Recommendations: None.

3.7 Seismically Induced Systems Interactions Program

The DCISC FFT met with Mike Phelan, Senior Nuclear Maintenance Specialist; Scott Maze, Design and Project Engineer; and Sean Pringle, Senior Civil Engineer, for an update of the Seismically Induced Systems Interactions (SISI) Program. The DCISC last reviewed this program in November 2020 (Reference 6.10), when it concluded the following:

DCPP's Seismic Induced Systems Interaction Program appeared effective in ensuring that systems important to safety would not be impacted by material or equipment temporarily stored within the plant during a seismic event.

Mr. Phelan explained that routine station operations with respect to the SISI Program were governed by procedures AD4.ID3, "SISI Housekeeping Activities," Revision 18, and AD4.ID1, "Housekeeping," Revision 18, copies of which were provided to and reviewed by the FFT. These procedures appeared adequate and addressed application of the SISI Program to daily housekeeping activities within the plant such as the following:

- Transient equipment being brought into the plant
- Component parts of systems, structures, or components being brought into the plant
- Non-design change alterations of systems, structures, or components

The objective of the SISI Program was to ensure that safe-shutdown systems, structures, and components, as well as certain accident-mitigating systems, would properly function during and following an earthquake. The procedure's intent was to ensure that needed components and equipment would not be impacted during an earthquake by improperly positioned or restrained transient equipment or alterations made to systems, structures, or components. Mr. Phelan explained that although the SISI Program focused on protecting plant equipment in specific locations, the program's housekeeping standards were always applied throughout the plant. The procedure provided lists of examples of temporary equipment and components that could damage plant equipment if stored unrestrained in unacceptable areas of the plant, and/or inadequately secured, were an earthquake to occur. Some examples were tools, ladders, gas bottles, workbenches, rigging equipment, test equipment, temporary power load centers, and parts resulting from operations, maintenance, modifications, or testing activities.

One method to help prevent an undesirable seismic impact on plant systems has involved the designation of "SISI Safe Areas," which were evaluated by Engineering and pre-designated throughout the plant. These areas were intended for repeated use and did not require a SISI evaluation by Engineering when the need occurred to store items temporarily in those areas. Such areas were identified by signs located throughout the Turbine Building, Auxiliary Building, and Fuel Handling Building.

The FFT was also provided with a copy of the engineering document that provides the bases for the program, the "Seismically Induced Systems Interaction Manual," Revision 13. That document as well as supporting plant drawings provided the detailed information for the identification of the SISI Safe Areas and identified potential "Targets," which were defined as systems, structures, and components that are required to "safely shut down the plant, maintain the plant in a safe shutdown

condition, and/or maintain the function of accident mitigating systems.” Targets also included related tubing, instrumentation, electrical circuitry, and component supports that were necessary to ensure that the associated systems, structures, and components could perform their design functions. Thus, the SISI Safe Areas were locations where stored equipment, tools, or components could not negatively affect Targets and therefore could not have a negative impact on nuclear safety in the event of an earthquake. Separately, the same engineering documents were used during the design change process to ensure that any permanent station modifications could not impact any of the same Targets during a seismic event.

The FFT team inquired about recent NRC observations regarding SISI Program implementation. Mr. Phelan reported that there was one issue where a barrel used for capturing water during system draining was left unattended in an area required to be kept clear for Residual Heat Removal System operation. Operators reconfigured hoses such that the barrel could be located outside of the area. The issue was considered to be of very low security significance (Green) and classified as a Non-Cited Violation by the NRC. He also reported that NRC inspectors had questioned details about the requirements for blocking wheels on rolling carts and about whether wheels were required to be blocked for carts that were attended and in use for maintenance. DCPD had responded by clarifying the procedural requirements and ensuring that all maintenance personnel were aware of the detailed requirements for blocking the wheels on rolling carts. The FFT observed during its tour discussed above (Section 3.6) that all equipment staged temporarily in work areas was appropriately restrained and had appropriate spacing away from critical plant equipment.

In addition to the SISI Program, DCPD has a program to protect plant personnel from seismic events. This is the Seismic Workplace Safety Program, which ensures that plant furniture and other items will not injure personnel and that important post-earthquake passageways will not become blocked. The DCISC regularly reviews this program.

Conclusions: DCPD’s Seismic Induced Systems Interaction Program appeared effective in ensuring that systems important to safety would not be impacted by material or equipment temporarily stored within the plant during a seismic event. Minor implementation issues have been noted, and corrective actions appeared appropriate.

Recommendations: None

3.8 Cause Evaluation for Auxiliary Saltwater Pump 2-2 Failure

The DCISC FFT met with Sam Williams, Nuclear Training and Accreditation Director, and Jeff Wilkinson, Component Engineer, to review the status of the Cause Evaluation for the failure of Auxiliary Saltwater (ASW) Pump 2-2 in the fall of 2023. This item was a follow-up to the DCISC’s review of the need for an associated exigent Technical Specification change that was reviewed by the DCISC in December 2023 (Reference 6.11), when it concluded the following:

There were no significant safety concerns with the discovery of minor degradation of the oil in the lower motor bearing for Auxiliary Saltwater Pump 2-2, and DCPD’s plans to replace the motor were prudent. The DCISC should review the results of

the Cause Evaluation for the oil degradation on Auxiliary Saltwater Pump 2-2 following its completion.

The ASW System is a safety-related, Design Class 1 System which provides the heat sink required for the safe shutdown of the plant. The system in each unit provides cooling water from the Pacific Ocean (the Ultimate Heat Sink) to the Component Cooling Water (CCW) heat exchangers, through which CCW is pumped and, in turn, serves to remove heat from various plant systems. In the event of an accident involving a significant loss of reactor coolant, the ASW System is relied upon to function so that the CCW System can cool the Residual Heat Removal and Containment Ventilation Systems, which, in turn, cool the nuclear fuel in the reactor and cool the Containment, respectively. There are two ASW Pumps for each unit, and each pump can supply sufficient cooling water through both of two redundant trains to either of the two CCW heat exchangers for each unit. The ASW Pumps in each unit are electric motor driven 100 percent capacity pumps that are powered from separate vital power 4kV electrical buses and can be cross-tied to either unit. The pumps are physically located in watertight vaults in the Intake Structure where they are protected from high ocean levels including tsunamis. The portable Emergency ASW (EASW) System serves as a major element of the post-Fukushima FLEX strategy. DCPD has four trailer-mounted diesel-driven EASW Pumps, two per unit, which are designed to take suction from the ocean and be tied into the ASW discharge to the plant with portable piping.

The problem with ASW Pump 2-2 was first reported on August 23, 2023. At that time, routine testing of oil from the lower motor radial bearing reservoir indicated that the oil was darker in color than normal. A Corrective Action Program Notification was initiated (SAPN 51201169), and the August oil sample was analyzed and found to contain about 24 ppm of iron which was indicative of minor bearing degradation. The pump motor was evaluated by engineering and determined to be operable as there were no elevated vibrations or bearing temperatures. Bi-weekly monitoring of pump motor vibrations was initiated to monitor the motor for any possible future degradation. On October 23, 2023, another oil sample was taken and found that the iron concentration had risen to about 91 ppm. Given the adverse trend of iron concentration in the oil samples, DCPD managers decided that the prudent course of action would be to replace the pump motor as soon as possible rather than wait until the next scheduled outage in the spring of 2024. Because the pump and motor are located within a watertight vault and surrounded by a complex seismically reinforced structure, DCPD has found in the past that it is difficult to complete a replacement of an ASW pump motor within the normal 72-hour out-of-service limitations of the plant Technical Specifications. Therefore, senior managers decided to pursue a one-time exigent change request to the NRC for the plant's Technical Specifications to allow a longer out-of-service time (144 hours) for the pump to facilitate the motor replacement. On November 17, 2023, the NRC approved the exigent change to the unit's Technical Specifications, and the motor was successfully replaced in mid-December 2023.

The FFT inquired about the status of the Cause Evaluation for the pump motor failure. Mr. Williams reported that following pump motor removal, examinations quickly revealed that the motor bearing was degraded with wear patterns the same as a motor bearing degradation that occurred in November 2018 on the motor for ASW Pump 2-1. At that time, a Root Cause Evaluation (RCE) was performed and the cause of the 2018 bearing degradation was determined to be excessive axial pre-loading (thrust) of the bearing when it was reassembled following motor

overhaul in 2016. The axial pre-loading was determined by the installation of a proper thickness of shims which limited the amount of endplay for the motor shaft. The FFT was provided with and reviewed a copy of the 2018 RCE. Corrective actions focused on revising motor overhaul procedures to clarify the process for setting the bearing endplay and to provide training to technicians on the importance of correctly setting the endplay.

Mr. Williams further explained that since the 2018 RCE already covered the mechanism for the bearing failure, there would not be an additional Cause Evaluation completed for the bearing degradation. Instead, a Cause Evaluation had been initiated to address the ineffectiveness of corrective actions from the 2018 RCE. The FFT agreed that this approach was appropriate and focused on the more important issue of what went amiss with the corrective actions such that recurrence of the problem was not prevented. He reported that the new Cause Evaluation was expected to be completed by mid-April 2024.

Conclusions: A motor bearing degradation on Auxiliary Saltwater Pump 2-2 discovered in the fall of 2023 was found to be a repeat of a bearing degradation issue that occurred in 2018. DCPD has initiated a Cause Evaluation to determine why corrective actions from the 2018 event were ineffective in preventing recurrence, and the DCISC should review the results of that Cause Evaluation following its completion.

Recommendations: None

3.9 Maintenance Department

The DCISC FFT met with Mike Brass, Maintenance Services Director, for an update on the performance of DCPD's Maintenance Department. The DCISC last reviewed the Maintenance Department's performance in March 2023 (Reference 6.12), when it concluded the following:

DCPD Maintenance Department overall performance was reported as Green (good) and stable based on industry performance indicators. Maintenance was aggressively hiring for possible retirements and a five-year plant operations extension to 2030.

The FFT requested an update on department staffing, and Mr. Brass responded that current department staffing was at about 250 PG&E employees with a plan to recruit about 60 additional new employees. It was anticipated that the total staff would number about 286 at the end of 2024, with a long-term need of about 270 staff members for the department. The department continued to seek new employees both to fill open positions and in anticipation of future losses. It was forecasted that about 25 losses would occur by the end of 2024 and about 15 losses would occur in 2025 as individuals retired or chose to take jobs elsewhere. All supervisor positions were currently filled except for one Instrumentation and Controls (I&C) Supervisor. In general, Mr. Brass believed that the retention bonuses had been effective in keeping experienced personnel on site during the transition to extended operations.

Regarding contractors, DCPD maintained a core crew of about 40 contractors who supported the station during normal operations and surged up to about 1100 contractors during the current pair of refueling outages. Most of the contractors were Mechanical and Electrical Maintenance Technicians that were needed to support major projects. I&C Technicians tended to be solely supplied by permanent station staff.

The FFT inquired about how the department managed training and qualification for the high number of new employees, and Mr. Brass reported that training and qualifications for Mechanical and Electrical Technicians typically required 12 months to complete. For I&C Technicians, about 18 months was required to complete all training and qualification. He provided the FFT with copies of qualification matrices used by the department to track the status and numbers of qualified technicians. The matrices appeared very effective in tracking the numbers of minimum, desired, and actual qualified workers for the 30 to 50 different qualifications needed among technicians in each group.

Mr. Brass reported that the Maintenance Department's recent performance had been good. This was demonstrated mostly by successful execution of maintenance activities during the recently completed Refueling Outage 1R24. There were no major issues or human performance problems for the department during the outage. Mr. Brass attributed the improvements in department performance to an increased focus on hiring, leadership development, and a new focus on peer-to-peer checking. Although occasional errors continued to be made, the errors had been mitigated and significant events avoided. This performance was supported by data on the department's Performance Improvement Dashboard, and the Nuclear Quality Digest prepared by Quality Verification.

Conclusions: DCPD Maintenance Department overall performance was good. The department continued to aggressively hire and train staff to support extended operations.

Recommendations: None

3.10 Meet with DCPD Officer

The DCISC FFT met with Adam Peck, Site Vice President, to discuss items from this Fact-Finding Meeting and other items of mutual interest. The DCISC last met with a DCPD Officer or Director during its December 2023 Fact-Finding Meeting (Reference 6.13), when it concluded the following:

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

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

Recommendations: None.

3.11 Refueling Outage 2R24 Planning and Safety Schedule

The DCISC FFT met with Casey Weir, Outage Manager, to discuss planning and scheduling for the upcoming Refueling Outage 2R24 and the associated Outage Safety Plan. Delphine Hou, Christian Arechavaleta, Deb Luchsinger, and Jerry Bischof from the California Department of Water Resources (DWR) participated remotely in the meeting. The DCISC last reviewed outage preparations and an Outage Safety Plan in August 2023 (Reference 6.14), concluding the following:

DCPP's preparations for Refueling Outage 1R24 were progressing satisfactorily with recovery plans in place for some planning activities that were behind schedule. The draft Outage Safety Schedule appeared to be comprehensive and effective for maintaining an appropriate safety margin during upcoming planned outage activities.

Refueling Outage 2R24 was planned to be conducted in the spring of 2024 with a planned duration of 50 days. The outage would be similar to Refueling Outage 1R24, completed in the fall of 2023, in having a relatively large scope of work and a longer length than typical due to license renewal inspections and other maintenance activities needed to support extended operations. Mr. Weir reported that the outage goals had been finalized and were as follows:

<u>Performance Measure</u>	<u>Goal</u>
Serious Injury or Fatality Events	0
Nuclear Safety Events	0
Site Clock Resets	0
Significant FME Events	0
Outage Duration	≤ 50 days
Radiation Dose	< 29.518 person-rem
Power Ascension	≤ 5 days
Reliability	≥ 90 days

Mr. Weir provided the FFT with an overview of outage preparations. In general, outage preparations were running behind schedule on some milestones primarily due to the large work scope of the outage and the short turnaround time from the fall 2023 outage. Fortunately, many of the planning staff who were new in the fall 2023 outage were now more experienced and productive. One continuing area of concern was the late timing and lower than desired number of completed work plans that were ready for walkdowns and preparation of clearances. The FFT inquired about the status of planning for license renewal inspections, and Mr. Weir reported that the scope and resources for the inspections were well understood, and he believed that DCPP was prepared to efficiently perform the inspections during the outage. Much of the effort made in preparing contingency plans for the fall 2023 outage would carry over to contingency planning for the spring 2024 outage. However, he remained concerned that DCPP needed to be ready to make repairs or implement other corrective actions should unexpected deficiencies be found during license renewal inspections.

Major activities planned for Refueling Outage 2R24 were very similar to those completed during Refueling Outage 1R24, and they consisted of reactor refueling, various project implementations, and license renewal inspections. Major differences between the outages included the fact that Steam Generator internal inspections were not required to be performed on Unit 2, and that major inspections of the Unit 2 Main Generator were planned to be performed in order to complete corrective actions from the generator vibration issues and internal failures that occurred in late 2020 and early 2021. The FFT inquired regarding whether dredging of the Intake Cove was still planned to be performed during the upcoming outage, and Mr. Weir reported that the timing of that work was uncertain. DCPD still desired to complete the dredging during the outage if all preparations could be completed in time; however, the station had determined that dredging could be safely performed following the outage with both units online if necessary.

Mr. Weir then provided a copy and gave an overview of the draft Outage Safety Plan to the FFT. The purpose of the Outage Safety Plan was to provide information on outage safety requirements and highlight potential higher risk activities to plant staff. The intent of the Outage Safety Plan was to provide a concise document for use in evaluating plant conditions during Modes 5 (Cold Shutdown) and 6 (Refueling) to ensure the key safety functions are satisfied. He also provided a copy of the most recent procedure governing the Outage Safety Plan, AD8.DC55, "Outage Safety Schedule," Revision 48.

A key element of the Outage Safety Plan which Mr. Weir reviewed with the FFT was the 2R24 Schedule Evaluation. DCPD uses "Phoenix," a computer-based tool used online to analyze changes in risk using the PRA model when equipment is removed from service for maintenance. As the PRA model does not extend to shutdown conditions, Phoenix is used during outages via the loading of deterministic fault trees for shutdown conditions based on the Outage Safety Checklists. An "N+1" Defense in Depth (DID) approach, where N generally represents the minimum number of equipment sets needed to maintain a key safety function, is then utilized by Phoenix to evaluate the availability of the key safety functions. This DID Status is represented by the following four-color definitions:

- Green – represents DID greater than N+1, where N is the minimum number of components needed to maintain a key safety function with more than one backup means of support.
- Yellow – represents DID equals N+1, which is considered the normal DID. Key safety functions are fully supported with at least one backup means of support.
- Orange – represents a DID equals N condition, where key safety functions are supported, but the normal desired DID is not met, and compensatory measures must be put in place.
- Red – represents a DID less than N condition in which key safety functions are not supported.

DCPD considers a status of Green or Yellow as acceptable for planned outage activities because key safety functions are fully supported with at least N+1 DID. Contingency plans provide an additional approach to DID, because they provide a backup safety function should a minimum safety function become unavailable. DCPD avoids planned activities which result in Orange conditions, and Red conditions are prohibited.

The Refueling Outage 2R24 Schedule Evaluation contained no Orange or Red conditions and three individual Yellow conditions. The three Yellow conditions were driven by one planned drain down of the Reactor Coolant System (RCS) to mid-loop conditions to support valve repairs and two periods where only one source of offsite power would be available with the RCS at a reduced water inventory.

Conclusions: DCP's preparations for Refueling Outage 2R24 were progressing satisfactorily with some planning activities behind schedule due to the large volume of planned work. The draft Outage Safety Plan appeared to be comprehensive and effective for maintaining an appropriate safety margin during upcoming planned outage activities.

Recommendations: None

3.12 Meet with NRC Senior Resident Inspector

The DCISC FFT met with Mahdi Hayes, NRC Senior Resident Inspector, for an update. The DCISC meets regularly with the NRC Resident Inspectors and last met with the Resident Inspectors during its January 2024 Fact-Finding Meeting (Reference 6.15), 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:

- Refueling Outage 2R24 Preparations
- NRC Inspection Activities
- The recent Auxiliary Building Fan failure simultaneous with an inoperable Emergency Diesel Generator
- Short- and Long-Term Replacement Plans for the Resident Inspector

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

Recommendations: None.

4.0 CONCLUSIONS

4.1 PG&E provided information addressing each of several DCISC questions on the updated seismic assessment required by SB846. The clarifications were helpful and in sufficient depth to provide the needed information. The DCISC should continue its work to develop its own independent review of the updated seismic assessment report.

- 4.2 DCP's Liquid and Solid Radwaste Processing Systems were effective in minimizing the volumes and radioactivity levels discharged or sent to licensed storage facilities.**
- 4.3 The March 19, 2024, Outage Management Team meeting was conducted efficiently and effectively.**
- 4.4 The DCISC found that DCP's Auxiliary Feedwater Systems continue to be given close attention, and the systems on both Units continue to be rated as Green (Healthy) with no major issues.**
- 4.5 DCP's Cyber Security Program appeared to be effectively managed, and efforts are continuing to ensure that the program is successfully sustained.**
- 4.6 The DCISC Fact-Finding Team toured the Unit 2 Control Room and maintenance work areas in the Turbine Building. Work was being managed properly, and all areas were clean, orderly, and well lit, with equipment in excellent condition.**
- 4.7 DCP's Seismic Induced Systems Interaction Program appeared effective in ensuring that systems important to safety would not be impacted by material or equipment temporarily stored within the plant during a seismic event. Minor implementation issues have been noted, and corrective actions appeared appropriate.**
- 4.8 A motor bearing degradation on Auxiliary Saltwater Pump 2-2 discovered in the fall of 2023 was found to be a repeat of a bearing degradation issue that occurred in 2018. DCP has initiated a Cause Evaluation to determine why corrective actions from the 2018 event were ineffective in preventing recurrence, and the DCISC should review the results of that Cause Evaluation following its completion.**
- 4.9 DCP Maintenance Department overall performance was good. The department continued to aggressively hire and train staff to support extended operations.**
- 4.10 The regular meetings between DCISC Members and DCP Officers and Directors continue to be beneficial for both organizations.**
- 4.11 DCP's preparations for Refueling Outage 2R24 were progressing satisfactorily with some planning activities behind schedule due to the large volume of planned work. The draft Outage Safety Plan appeared to be comprehensive and effective for maintaining an appropriate safety margin during upcoming planned outage activities.**
- 4.12 The regular meeting with the NRC Senior Resident Inspector was beneficial, and the DCISC should continue the meetings.**

5.0 RECOMMENDATIONS

5.1 None.

6.0 REFERENCES

- 6.1 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 9, 2024, Volume II, Exhibit D.4, Section 3.8, “Independent Seismic Assessment Update.”
- 6.2 “Seismic Hazard Screening Report, Diablo Canyon Power Plant Units 1 and 2,” submitted to the Nuclear Regulatory Commission as an attachment to PG&E letter DCL-15-035, “Response to NRC Request for Information pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident; Seismic Hazard and Screening Report,” March 11, 2015, NRC ADAMS Accession Numbers ML15070A607 and ML15070A608.
- 6.3 “Updated Implementation Guidelines for SSHAC Hazard Studies,” US Nuclear Regulatory Commission, Report NUREG-2213 (October 2018), NRC ADAMS Accession Number ML18282A082.
- 6.4 “Diablo Canyon Independent Safety Committee Thirty-First Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2020 – June 30, 2021,” Approved October 18, 2021, Volume II, Exhibit D.4, Section 3.6, “Radioactive Waste Processing System.”
- 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 9, 2024, Volume II, Exhibit D.2, Section 3.10, “Radioactive Effluent Release and Environmental Monitoring Reports.”
- 6.6 Ibid., Exhibit D.5, Section 3.2, “Outage Management Team Meeting.”
- 6.7 “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 September 28, 2022, Volume II, Exhibit D.3, Section 3.10, “Auxiliary Feedwater System.”
- 6.8 Ibid., Exhibit D.3, Section 3.9, “Cyber Security Program.”
- 6.9 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 9, 2024, Volume II, Exhibit D.4, Section 3.11, “Accompany Operator on Unit 2 Rounds.”

- 6.10 “Diablo Canyon Independent Safety Committee Thirty-First Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations, July 1, 2020 – June 30, 2021,” Approved October 20, 2021, Volume II, Exhibit D.4, Section 3.8, “Seismically Induced Systems Interactions Program.”
- 6.11 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 9, 2024, Volume II, Exhibit D.5, Section 3.13, “Auxiliary Saltwater Pump 2-2 Degradation and Exigent Technical Specification Change.”
- 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.8, Section 3.11, “Maintenance Department Update.”
- 6.13 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 9, 2024, Volume II, Exhibit D.5, Section 3.12, “Meet with DCCP Officer.”
- 6.14 Ibid., Exhibit D.3, Section 3.11, “Refueling Outage 1R24 Planning and Safety Schedule.”
- 6.15 Ibid., Exhibit D.6, Section 3.3, “Meeting with NRC Senior Resident Inspector.”