

U.S. NUCLEAR REGULATORY COMMISSION
REGION V

Report Nos: 50-275/92-01 and 50-323/92-01

Docket Nos: 50-275 and 50-323

License Nos: DPR-80 and DPR-82

Licensee: Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

Facility Name: Diablo Canyon Units 1 and 2

Inspected at: Diablo Canyon Site, San Luis Obispo County, California

Inspection Conducted: January 1 through February 3, 1992

Inspectors: H. Wong, Senior Resident Inspector
M. Miller, Resident Inspector
D. Acker, Reactor Inspector, Region V

Approved by: P. J. Morrill
P. J. Morrill, Chief, Reactor Projects Section I

2-28-92
Date Signed

Summary:

Inspection from January 1 through February 3, 1992 (Report Nos. 50-275/92-01 and 50-323/92-01)

Areas Inspected: The inspection included routine inspections of plant operations, maintenance and surveillance activities, followup of onsite events, open items, and licensee event reports (LERs), as well as selected independent inspection activities. Inspection Procedures 37828, 41500, 61726, 62703, 71707, 71710, 92700, 92703, and 93702 were used as guidance during this inspection.

Safety Issues Management System (SIMS) Items: None

Results:

General Conclusions on Strengths and Weaknesses:

Strength - On January 9, 1991, during a routine plant tour, the licensee's chemistry manager identified that the auxiliary building sump had begun to overflow through floor drains on the 54 foot elevation of the auxiliary building. The chemistry manager's timely observation demonstrates the benefits of plant tours by licensee managers. This occurrence is described in paragraph 4.a.



Weakness - Licensee corrective actions were inadequate in preventing the recurrence of the undetected failure of a reactor cavity sump level instrument. An NRC inspector identified a failed reactor cavity wide range sump level instrument during the followup to a previous failure in 1990. This occurrence is described in paragraph 12.a.

Significant Safety Matters: None

Summary of Violations and Deviations:

A violation was identified involving the licensee's inadequate corrective actions to preclude the recurrence of an undetected failure of a reactor cavity wide range instrument in Unit 2. An NRC inspector identified in October 1991 that a reactor cavity level instrument had failed. The instrument had failed for over 7 days and had not been detected by licensee personnel. The same failure occurred in 1990 when both reactor cavity wide range level instruments failed and was undetected for over two months.

Open Items Summary:

Three new items were opened, eight items closed, and one item remains open.



DETAILS

1. Persons Contacted

Pacific Gas and Electric Company

- *J. D. Shiffer, Executive Vice President
- *G. M. Rueger, Senior Vice President and General Manager, Nuclear Power Generation Business Unit
- *J. D. Townsend, Vice President and Plant Manager, Diablo Canyon Operations
 - W. H. Fujimoto, Vice President, Nuclear Technical Services
- *D. B. Miklush, Manager, Operations Services
- *M. J. Angus, Manager, Technical Services
- *B. W. Giffin, Manager, Maintenance Services
- *W. G. Crockett, Manager, Support Services
- *J. E. Molden, Instrumentation and Controls Director
- *W. D. Barkhuff, Quality Control Director
 - R. P. Powers, Mechanical Maintenance Director
- *D. A. Taggart, Quality Performance and Assessment Director
- *T. L. Grebel, Regulatory Compliance Supervisor
 - H. J. Phillips, Electrical Maintenance Director
- *R. C. Anderson, Manager, Nuclear Engineering and Construction Services
 - J. A. Shoulders, Onsite Project Engineer
 - S. R. Fridley, Operations Director
 - R. Gray, Radiation Protection Director
- *J. J. Griffin, Senior Engineer, Regulatory Compliance
 - J. V. Boots, Chemistry Director
- *J. B. Hoch, Manager, Nuclear Safety and Regulatory Affairs
- *T. A. Moulia, Assistant to Vice President Diablo Canyon Operations
- *C. A. Dougherty, Quality Assurance Senior Supervisor
- *R. C. Russell, Nuclear Safety and Regulatory Affairs

*Denotes those attending the exit interview

The inspectors interviewed several other licensee employees including shift supervisors, shift foremen (SFM), reactor and auxiliary operators, maintenance personnel, plant technicians and engineers, and quality assurance personnel.

2. Operation Status of Diablo Canyon Units 1 and 2

During the inspection period, Units 1 and 2 operated at essentially 100% power except for a few days (January 18-21, 1992), during which Unit 2 reduced power to 50% and then increased power to 90% to investigate leaking tubes in feedwater heater 6A. Unit 2 returned to 100% power on January 21, 1992.

3. Unusual Event Declared Due to Minor Earthquake (93702)

On January 17, 1992, at 0036 PST, an Unusual Event was declared by licensee personnel based on the occurrence of an earthquake felt by some plant personnel and recorded by plant seismic instrumentation.



Units 1 and 2 were at 100% power at the time of the earthquake. The earthquake was considered minor and measured approximately 3.2 on the Richter Scale. It was centered approximately 4 miles north of the plant and the peak acceleration measured by the seismic instrumentation mounted on the containment foundation was 0.0028 g. After verification of the magnitude of the earthquake, the licensee terminated the Unusual Event at 0406 PST on January 17. Visual inspections performed by licensee personnel and the NRC inspector did not identify adverse effects from the earthquake.

4. Operational Safety Verification (71707)

a. General

During the inspection period, the inspectors observed and examined activities to verify the operational safety of the licensee's facility. The observations and examinations of those activities were conducted on a daily, weekly or monthly basis.

On a daily basis, the inspectors observed control room activities to verify compliance with selected Limiting Conditions for Operations (LCOs) as prescribed in the facility Technical Specifications (TS). Logs, instrumentation, recorder traces, and other operational records were examined to obtain information on plant conditions and to evaluate trends. This operational information was then evaluated to determine if regulatory requirements were satisfied. Shift turnovers were observed on a sample basis to verify that all pertinent information of plant status was relayed to the oncoming crew. During each week, the inspectors toured the accessible areas of the facility to observe the following:

- (a) General plant and equipment conditions
- (b) Fire hazards and fire fighting equipment
- (c) Conduct of selected activities for compliance with the licensee's administrative controls and approved procedures
- (d) Interiors of electrical and control panels
- (e) Plant housekeeping and cleanliness
- (f) Engineered safety feature equipment alignment and conditions
- (g) Storage of pressurized gas bottles

The inspectors talked with operators in the control room and other plant personnel. The discussions centered on pertinent topics of general plant conditions, procedures, security, training, and other aspects of work in progress.

During a tour of plant areas, the NRC inspector noted a pair of conduit brackets with an information tag attached lying on top of a check valve in the Unit 1 (1-2) residual heat removal pump room. The licensee determined that these brackets were removed



during the Unit 1 refueling outage completed in April 1991 to facilitate the installation of a trolley hoist in the room. The maintenance personnel involved in that work provided a statement that the bracket was intended to be reinstalled after completion of the work, but with other ongoing activities its reinstallation was forgotten. Licensee personnel reinstalled the bracket.

The licensee's investigation of this issue is documented in Action Request (AR) A0257321 and associated Quality Evaluation (QE) Q0009474. The conduit bracket supported cabling for a pump motor stator temperature sensor, a nonsafety-related component. The licensee evaluated the effects of the removed bracket and concluded that the as-found condition was acceptable. It appears that improper work control practices contributed to the failure to reinstall the bracket. While the safety impact of this event was minimal, this event reinforces the need for licensee personnel to maintain appropriate work control to assure plant configuration is maintained. The licensee's corrective actions and evaluation of the cause of the event will be reviewed in a future inspection (Followup Item 50-275/92-01-01).

The NRC inspector noted that the licensee's chemistry manager had identified on January 9, 1992, that floor drains in the pipe tunnel on Elevation 54' of the auxiliary building had begun to back up with water. Shortly thereafter it was determined that calibration activities involving the auxiliary building sump level transmitters were being performed and the sump had been overfilled. This caused approximately 400 gallons of water to backflow through floor drains leading to the sump. The licensee drained down the sump and cleaned the wetted area. No plant equipment was affected. The discovery of the overfilled sump by a licensee manager is considered by the inspector to be a positive demonstration of the benefits of managers touring plant areas.

b. Radiological Protection

The inspectors periodically observed radiological protection practices to determine whether the licensee's program was being implemented in conformance with facility policies and procedures and in compliance with regulatory requirements. The inspectors verified that health physics supervisors and professionals conducted frequent plant tours to observe activities in progress and were aware of significant plant activities, particularly those related to radiological conditions and/or challenges. ALARA considerations were found to be an integral part of each RWP (Radiation Work Permit).

c. Physical Security

Security activities were observed for conformance with regulatory requirements, implementation of the site security plan, and administrative procedures including vehicle and personnel access screening, personnel badging, site security force manning, compensatory measures, and protected and vital area integrity. Exterior lighting was checked during backshift inspections.



No violations or deviations were identified.

5. Onsite Event Followup (93702)

a. Loosening of Containment Fan Cooler Unit (CFCU) Damper Counterweights

On January 22, 1992, during a routine Unit 2 containment entry by licensee personnel, it was identified that two counterweights had fallen from a CFCU backdraft damper. There are a total of 16 louvers on each damper, with 2 counterweights on each louver. The counterweights assist the closure of the damper when the fan is idle and are intended to have a sliding fit in lever arms attached to the louvers. Subsequent investigations by the licensee identified that counterweights were attached on all Unit 1 and Unit 2 CFCUs, except for Unit 2 CFCUs 2-1 and 2-5. The licensee investigations determined that CFCU 2-5 had 1 counterweight assembly which had fallen off (2 counterweights) and CFCU 2-1 had 9 assemblies (18 counterweights) which had fallen off or were removed by the licensee due to the potential for coming loose. In addition, the licensee's subsequent investigation on January 31, 1992, identified that while the damper of CFCU 2-5 appeared to be closed, the fan was rotating in the reverse direction at approximately 30 rpm.

The licensee reinstalled the two missing counterweights on CFCU 2-5 and evaluated the operability of CFCU 2-1 in its as-found condition and with reverse rotation of the fan. The licensee's evaluation determined that the fan motor would not be electrically overloaded and that the fan and motor shaft would not be overstressed even if the fan started while rotating backwards at speeds up to 120 rpm. Therefore, the licensee concluded that the CFCU remained operable. In any case, the licensee continued to maintain at least three CFCUs (2-2, 2-3, and 2-4) operable as required by Technical Specifications. Subsequent to the inspection period, the licensee identified that: (1) some Unit 1 CFCU damper counterweights had been installed in a manner which could prevent the damper from fully closing (too tightly), and (2) some Unit 1 CFCUs had reverse rotation of up to 140 rpm while deenergized. The licensee's preliminary evaluation is that the CFCUs of both units remain operable. This evaluation will be reviewed in the next inspection period.

b. Inadequate Separation Between Circuits in Reactor Trip Switchgear Room - Unit 2

While performing a design bases review of Appendix R safe shutdown analyses, the licensee identified that an error had occurred. The error involved taking credit for a power operated relief valve (PORV), PCV-474, to achieve cold shutdown in the event of a fire in the reactor trip switchgear room of Unit 2. The error was that the PORV would not be available in the event of a loss of offsite power since the PORV uses instrument air and has no backup motive power.



The licensee stated that the fire detectors in the area have been continuously operable and that hourly fire watches had been performed since initial plant operation. While the fire watches were not established specifically for this deficiency, they had been in effect and will be continued. The licensee will be documenting the evaluation of this issue in NCR 92-EN-NO01. The licensee's preliminary evaluations did not identify any other fire areas which are similarly affected by this error.

No violations or deviations were identified.

6. Maintenance (62703)

The inspectors observed portions of, and reviewed records on, selected maintenance activities to assure compliance with approved procedures, Technical Specifications, and appropriate industry codes and standards. Furthermore, the inspectors verified maintenance activities were performed by qualified personnel, in accordance with fire protection and housekeeping controls, and replacement parts were appropriately certified. These activities included cleaning of the Unit 1 station batteries and troubleshooting of molded case circuit breakers.

No violations or deviations were identified.

7. Surveillance (61726)

a. Observations

By direct observation and record review of selected surveillance testing, the inspectors checked compliance with TS requirements and plant procedures. The inspectors verified that test equipment was calibrated, and acceptance criteria were met or appropriately dispositioned. These tests included:

- * STR R3-A Core Flux Map
- * STP M-11B Testing of Unit 1 Batteries
- * STP P-6B Testing of Turbine-Driven AFW Pump
- * STP 3V-R5 Stroke Testing of FCV-95
- * STP I-12B5 Calibration Analog Electronic Steam Generator Steam Flow

- b. On January 22, 1992, during the NRC inspector's observation of STP P-6B, "Routine Surveillance Test of Steam-Driven Auxiliary Feedwater Pump," which involved the start of the Unit 1 turbine-driven auxiliary feedwater pump, the inspector observed that the verification of Step 10.10 had not been initialed. The step had been completed by the auxiliary operator and the test had progressed past this step. Step 10.10 placed a flow gauge into service so that data could be obtained later in the test. While there was minimal safety significance of the step (which had been properly completed,



but had not been verified prior to continuing the STP) the inspector questioned whether there was a common understanding of when a verification was to be completed during surveillance testing.

The inspector noted that Operations Department Policy D-6, dated February 2, 1990, stated that this type of verification "...shall be complete prior to continuing the STP." The licensee concluded that this guidance was too restrictive in this case, in that there was minimal need for the verification of the step because the flow data obtained later in the test would confirm proper completion of the step. Subsequently, the licensee revised Operations Department Policy D-6 to state that verification was required to be completed prior to the point where that component would be relied on. Licensee management stated that the surveillance procedures were being upgraded to identify those steps which actually needed to be verified prior to continuing the STP and eliminate those which were not safety significant. The operations department is focusing first on major surveillance tests involving pumps and the diesel generators and other surveillance test procedures will be reviewed for adequacy of independent verification steps during the normal revision process. A markup of the initial procedures should be completed by the end of February 1992. QE Q0009487 was initiated to track the revision of the procedures.

The NRC inspector was also concerned that licensee personnel had not previously identified that adherence to the Operations Policy memorandum was not practical in some cases. The licensee stated that the guidance was included in the refueling outage section of the Operations Policy document, which could have contributed to the lack of common understanding of the timing of verifications. Licensee management stated that the Operations Policy documents would be reviewed, and appropriate changes would be made to eliminate outdated or unnecessary guidance. The revisions to these documents are scheduled to be completed by early March 1992. The licensee's corrective actions will be reviewed in a future inspection (Followup Item 50-275/92-01-02).

- c. The inspector witnessed several valve stroke tests of steam admission valves to both Unit 1 and Unit 2 turbine-driven auxiliary feedwater pumps. In all tests, FCV-95 opened appropriately. In one case it was noted that the maximum current to open the valve was more than expected, approximately 22 amps. This was well within the capability of the motor circuit (stall current of approximately 40 amps under normal conditions). The licensee continues to test the valve weekly and has obtained a replacement valve should the currently installed valve fail to open during testing. The replacement valve is of a different design (parallel disk gate valve vice wedge disk) and has been adapted to accept a Limitorque motor operator. Evaluation of the testing data by licensee engineering personnel is continuing.

No violations or deviations were identified.



8. Engineered Safety Feature Verification (71710)

During this inspection period, selected portions of the safety injection system for Units 1 and 2 were inspected to verify that system configuration, equipment condition, valves and electrical lineups, and that local breaker positions were in accordance with plant drawings and Technical Specifications.

No violations or deviations were identified.

9. Construction Activities Associated with Installation of Sixth Diesel Generator (37828)

The NRC inspector observed a portion of a concrete placement for the west wall in the sixth diesel generator room. The inspector observed that the forms appeared properly constructed and secured, the appropriate consolidation techniques were used, and that the equipment below the placement was properly protected. The inspector also reviewed the concrete batch records and the results of tests performed. This work activity appeared to be conducted in accordance with applicable American Concrete Institute and 10 CFR Part 50, Appendix B, requirements.

No violations or deviations were identified.

10. Operator Simulator Training (41500)

The inspector observed several operator training scenarios in the simulator. The training involved simulation of several design basis accidents as well as less severe plant transients. Simulated scenarios included a steam generator tube rupture, a feedwater line leak inside containment, loss of offsite power, loss of station batteries, as well as other less complicated transients. Many of these events were included in the same scenarios. The scenarios were followed by critiques of the operations crew's response to the transient.

Training emphasis was on crew awareness of overall plant conditions, use of appropriate procedures, effective communication between crew members, and appropriate transition between procedures.

The critiques identified specific areas in which crew communications could be improved and better understanding of significant plant conditions could be achieved.

The inspector concluded that the training appeared to meet the objectives of the licensee lesson plans.

No violations or deviations were identified.



11. Licensee Event Report (LER) Followup (92700)

a. LER 50-275/91-016-00: Missed Surveillance of Airlock Door Seals due to Personnel Error (Closed)

The LER involves the licensee's failure to perform surveillance testing of the containment personnel airlock door seals when the automatic tester was inoperable. From the period June 11, 1991, to September 27, 1991, 17 containment entires were made without the appropriate leak test being performed. During this period, on six occasions a manual leak test was performed which demonstrated acceptable door seal performance. The licensee performed a successful leak test after the missed surveillance tests were identified on September 27, 1991. The automatic leak tester was repaired and returned to service.

As part the corrective actions for this event, the licensee prepared an Operations Incident Summary regarding this event, revised the daily shift checklist to clarify the operability checks for the automatic tester, prepared a standard clearance for work on the leak tester with a specific note to perform the conditional surveillance test, revised surveillance testing to specify a functional test of the leak tester every 6 months, and will review other equipment which are used to automatically satisfy Technical Specifications surveillance requirements. These actions appear appropriate.

The licensee stated in the LER that operations training would be revised to incorporate additional details on the leak monitor; however, the latest training lesson plan was dated early September 1991 (prior to the event). Discussions with training personnel indicated that while the lesson plan had been recently revised, there were additional aspects which should be added to the lesson plan to reflect the lessons from the event. In addition, the NRC inspector questioned the appropriateness of the non-quality classification of the leak tester. This question had not been resolved prior to the end of the reporting period.

Followup to this event is also being tracked under Unresolved Item 50-275/91-27-01. LER 50-275/91-016 will be closed and Unresolved Item 50-275/91-27-01 will remain open pending resolution of the lesson plan and quality classification issues.

b. LER 50-275/91-04-00: Loss of Offsite Power During Refueling (Closed)

On March 7, 1991, the licensee experienced a loss of offsite power event during refueling as a result of crane approaching too close to the high voltage lines supplying offsite power and causing an arc to ground. Maintenance personnel were lifting a relief valve and did not understand that the lines were energized.

The Augmented Inspection Team investigation documented its results in Inspection Report 50-275/91-09 and open items were documented in this report. Because NRC followup action for the event is tracked



by the open items in Inspection Report 50-275/91-09, this LER is closed.

No violations or deviations were identified.

12. Open Item Followup (92703)

a. Unresolved Item 50-323/91-31-01: Inoperable Wide Range Reactor Cavity Sump Level Channel (Closed)

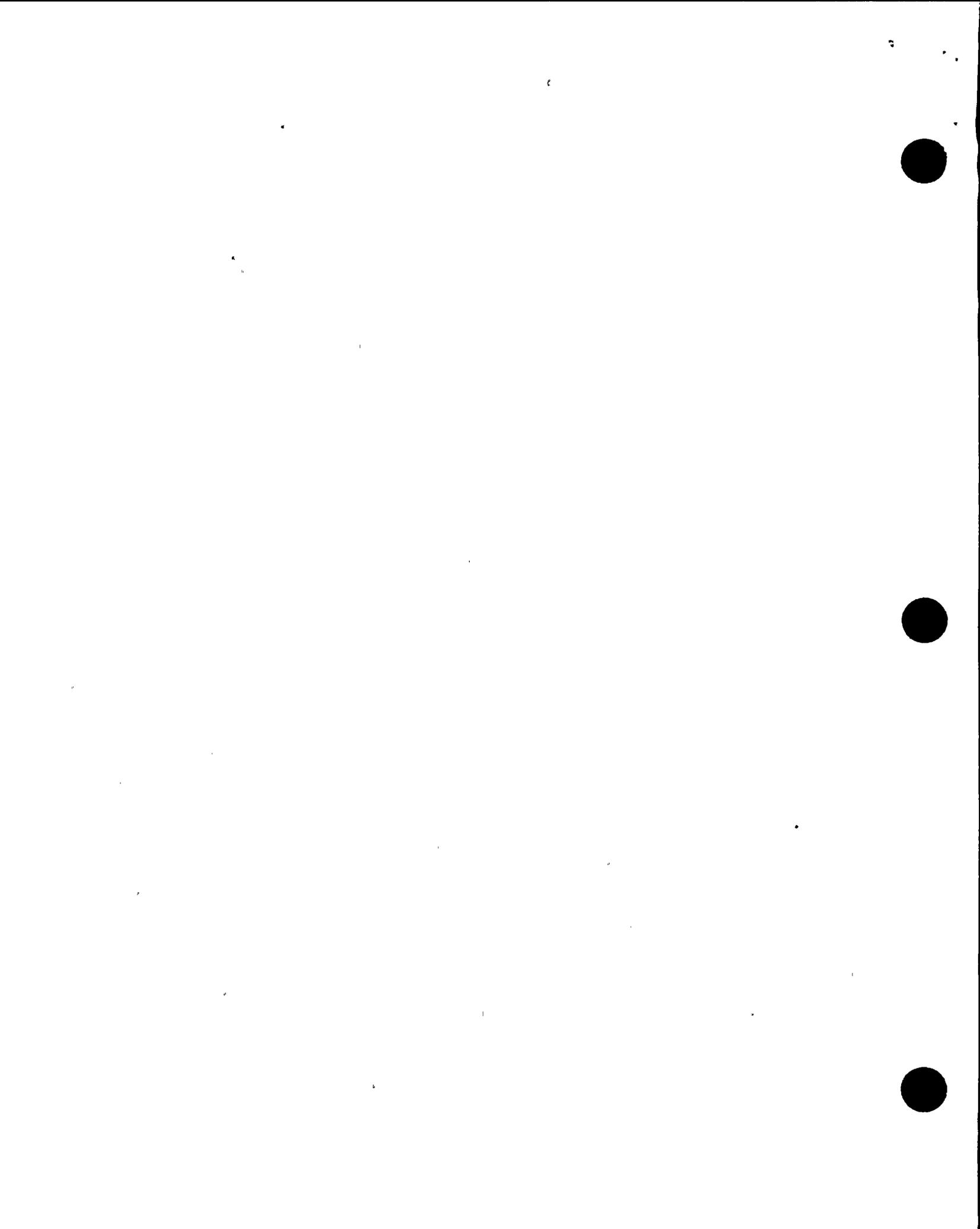
Between August 21, 1990, and November 6, 1990, both reactor cavity sump wide range level channels in Unit 2 were inoperable in violation of Technical Specification (TS) 3.3.3.6. The licensee issued Licensee Event Report (LER) 2-90-010, Revisions 0 and 1, to describe this event. Included in the LER were corrective actions to preclude recurrence.

During an NRC inspection conducted October 7 through October 25, 1991, (Inspection Report 50-275, 50-323/91-31) an NRC inspector identified on October 22, 1991, that one of two reactor cavity sump wide range level channels, 942A, in Unit 2, was inoperable. The licensee restored the channel to an operable condition. On October 23, 1991, the inspector again identified the channel as inoperable. The licensee again restored the channel to an operable condition.

The licensee and the inspector reviewed the records for reactor cavity sump level channel 942A. The licensee identified that the channel had become inoperable on October 10, 1991. The licensee entered Mode 3 on October 15, 1991, at 9:58 a.m., with channel 942A inoperable.

The inspector reviewed the 1990 failure and concluded that: 1) a normal channel indication of 0 was difficult to distinguish from a failed channel indication of slightly below 0; 2) reactor cavity sump level channel 942A was subject to intermittent failure from an unknown cause; 3) monthly surveillance testing of the reactor cavity level channels did not always identify failed channels; and 4) the safety parameter display system (SPDS) indication which could identify a failed channel was not being routinely monitored. Based on this information, the inspector concluded that the licensee's 1990 corrective actions were not adequate to ensure that reactor cavity sump wide range level channels remained operable in accordance with TS requirements. The apparent failure of the licensee to take effective corrective action was considered an unresolved item (50-323/91-31-01) pending the licensee's determination of root cause and review of TS requirements.

On November 9, 1991, the licensee identified that channel 942A had again failed. The licensee stated that the cause could not be determined. The channel was restored to operable conditions by down-powering and re-powering the unit power supply. As a compensatory measure the licensee added a surveillance requirement to check the SPDS critical safety functions daily, including channel 942A. The licensee also added labels to the SPDS monitor to clearly explain the indications for failed channels.



On November 22, 1991, the licensee issued LER 50-323/91-010 concluding that between 9:58 a.m. on October 15, 1991, and 9:15 p.m. on October 22, 1991, the channel had been inoperable in Modes 1, 2, and 3 for greater than 7 days contrary to TS Action Statement 3.3.3.6.a. This is an apparent violation of NRC requirements (Item No. 50-323/92-01-03).

On December 17, 1991, channel 942A failed again. The licensee reported that detailed voltage checks taken before and after this failure did not show the cause of the failure. The licensee was continuing to investigate this problem during the time of this inspection report.

Unresolved Item 50-323/91-31-01 is closed and remaining corrective actions, including measures to assure that the surveillance program will detect failed Technical Specification equipment, will be followed through Open Item No. 50-323/92-01-03.

b. Unresolved Item 50-275/91-27-01: Automatic Airlock Tester Isolated for 8 Days (Open)

This item is discussed in paragraph 11.a above. This item remains open.

c. Followup Item 50-275/91-01-01: Loss of Control Room Emergency Lighting (Closed)

During the loss of offsite power on March 7, 1991, Unit 1 control room emergency AC lighting was lost. Subsequent investigation found that during earlier maintenance work on vital bus H, the control room's emergency AC lighting had been aligned to non-vital power. This action had not been tracked and the alignment was not restored to the normal lineup after the work was completed.

As corrective action, the licensee issued an Operations Incident Summary, which included emphasis on the importance of proper status control of components and specific review of the operation of control room lighting. Also, the licensee determined that the label for the lighting switch backup power position should be changed to "alternate" rather than "emergency" and that appropriate procedure changes should be made to be consistent with this change.

The inspector found that new labels had been added. The licensee stated that procedure changes would be performed by the end of March 1992. Based on the licensee's corrective action, this item is closed.

d. Followup Item 50-275/91-09-06: Traffic Near Offsite Power Supplies (Closed)

After the loss of offsite power on March 7, 1991, the licensee committed to control vehicles and install physical barriers near offsite power supplies.



The inspector walked down the barriers on both units and reviewed training of vehicle operators, including security escorts and operators of man-lifts (for example, painters). Barriers had been installed and maintenance and operations personnel are required to be trained in vehicle and crane operation.

The inspector discussed the issues with several licensee employees, including managers, operators, riggers, heavy equipment operators, and outage work planners. All of the individuals interviewed appeared to be sensitive to the need for the availability of multiple power sources during outages and the avoidance of loss of offsite power events by vehicle control. Most of the individuals had actively participated in the corrective actions as a result of the March 7, 1991, loss of offsite power and in corrective actions in response to other industry events. This item is closed.

e. Followup Item 50-275/91-09-07: Assessment of the Event Review Process (Closed)

After the March 7, 1991, loss of offsite power event, the licensee committed to strengthen the event review process.

The inspector reviewed procedure AP C-14, Processing of Industry Experience. The procedure had been changed to require a structured process for the review of industry events and to require a higher level of review responsibility and accountability for significant industry events. The inspector reviewed the results of reviews of recent industry events performed according to AP C-14 and observed that the assessments appeared to have included engineering and operations concerns specific to Diablo Canyon. The reviews had been completed and assigned for corrective action.

Based on the licensee corrective actions, this item is closed.

f. Followup Item 50-275/91-09-08: Safety Assessment and Control of Activities During Outages (Closed)

As corrective action associated with the March 7, 1991, loss of offsite power, the licensee committed to complete an outage policy and program summaries for safety assessment and control of activities during outages.

The inspector reviewed progress on the licensee's safety assessment and control of activities during outages. The licensee had taken several measures to ensure availability of other significant safety requirements. The following are noteworthy:

- Shutdown risk guides have been developed to address control of such items as reactivity, inventory, containment closure, core and spent fuel pool cooling, and vital electrical supplies. These are under review and expected to be implemented during the upcoming Unit 1 refueling outage.



- An outage work schedule for Unit 1 is under development to limit the unavailability of power sources.
- The shutdown risk findings of an EPRI and Westinghouse audit at a similar plant have been reviewed for applicability to Diablo Canyon.
- The maintenance of the offsite switchyard will be coordinated between Diablo Canyon and offsite PG&E organizations.
- Westinghouse, EPRI, and INPO will perform an audit of the plans for Diablo Canyon's outage and assess risk during shutdown.

Based on the licensee's corrective actions, this item is closed.

g. Followup Item 50-275/91-09-09: Guidelines for Restoration of Power and Cooling During Outages (Closed)

After the March 7, 1991, loss of offsite power event, the licensee committed to prepare baseline coping strategies for restoration of power and cooling before the next refueling outage.

The inspector noted that the licensee prepared procedures OP AP SD-1, Loss of AC Power; OP AS SA-2, Loss of RCS Inventory; OP AP SD-3, Loss of Auxiliary Salt Water; OP AP SD-4, Loss of Component Cooling Water; and OP AP SD-5, Loss of Residual Heat Removal. The licensee stated that these procedures were written specifically for modes 5 and 6 when the plant is shutdown and in refueling outage. Based on the licensee's corrective actions, this item is closed.

One violation (Paragraph 12.a) was identified.

13. Exit

On February 5, 1992, an exit meeting was conducted with the licensee's representatives identified in Paragraph 1. The inspectors summarized the scope and findings of the inspection as described in this report.

