

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/92-03 and 50-323/92-03  
License Nos. DPR-80 DPR-82  
Licensee: Pacific Gas and Electric Company (PG&E)  
77 Beale Street  
San Francisco, California 94106  
Facility Name: Diablo Canyon Nuclear Power Plant (DCPP), Units 1 and 2  
Inspection at: Diablo Canyon Site, San Luis Obispo County, California  
Inspection Conducted: January 27 through 31, 1992

Inspector: Arthur D. McQueen 2/13/92  
Arthur D. McQueen, Date Signed  
Emergency Preparedness Analyst

Approved by: James H. Reese 2/14/92  
James H. Reese, Chief Date Signed  
Safeguards, Emergency Preparedness, and  
Non-Power Reactor Branch

Summary:

Areas Inspected: This unannounced, routine inspection by region-based inspector examined the following portions of the licensee's emergency preparedness program: Open Items identified during previous emergency preparedness inspections; Operational Status of the Emergency Preparedness Program, On-site Follow-up of Written Report of Nonroutine Events at Power Reactor Facilities and Inspector Identified Items. During this inspection, portions of Inspection Procedures 82701, 92700, 92701, and 92703 were used.

Results: In the areas inspected, the licensee's emergency preparedness program appeared adequate to accomplish its objectives. The licensee was found to be in compliance with NRC requirements within the areas examined during this inspection.

## INSPECTION DETAILS

### 1. Key Persons Contacted:

- \*M. J. Angus, Manager, Technical Services
- \*W. D. Barkhuff, Director, Director, Quality Control
- \*P. A. Bishop, Secretary, Emergency/Safety Services
- \*R. M. Bliss, Emergency Planner, Technical Support Center
- \*A. R. Bruce, Security/Special Projects
- \*S. Deinhart, Security
- S. R. Fridley, Operations Manager
- \*J. J. Griffen, Sr. Engineer, Regulatory Compliance
- \*B. T. Hansen-Harris, Security Shift Supervisor/Special Projects
- \*J. Hayes, Security
- \*J. P. Hubble, Security Supervisor
- W. S. Joiner, Emergency Planning (EP) Coordinator
- \*C. Kan, Co-op Student with Regulatory Compliance
- T. R. King, Shift Foreman, Unit 1
- \*R. P. Kohout, Manager, Safety, Health and Emergency Planning
- \*L. G. Lundsford, Security Supervisor
- \*D. B. Miklush, Assistant Plant Manager, Operations
- \*D. H. Oatley, Manager, Support Services
- D. W. Patty, Shift Supervisor
- \*C. B. Prince, Emergency Planner
- \*D. P. Royer, GET (General Employee Training) Instructor
- \*P. A. Steiner, Supervisor, Emergency Planning
- \*R. G. Todaro, Director, Security
- \*E. V. Waage, Senior Engineer, EP
- \*L. J. Wandling, Fitness for Duty Coordinator
- \*A. Wells, Security
- \*W. R. White, Senior GET Instructor

The above individuals denoted with an asterisk were present during the exit meeting. The inspector also contacted other members of the licensee's emergency preparedness, administrative, and technical staff during the course of the inspection.

### NRC Personnel at Exit Interview:

- A. D. McQueen, Emergency Preparedness Analyst, RV
- L. R. Norderhaug, Physical Security Specialist, RV
- H. Wong, Senior Resident Inspector, RV

### 2. Functional or Program Areas Inspected:

The licensee seemed to be maintaining their previous level of performance in the following areas and their program appeared adequate to accomplish their objectives.

The inspector reviewed licensee emergency preparedness implementing procedures (EPIP) pertaining to the inspection modules being inspected. The inspector took a tour of on-site emergency preparedness facilities

which included the Control Room, the Technical Support Center (TSC), and the Operations Support Center (OSC).

a. Operational Status of Emergency Preparedness (MC-82701)

(1) Emergency Plan and Implementing Procedures

Licensee Emergency Plan Implementing Procedures (EPIP), which had been revised since the last routine inspection, reviewed during this inspection included:

- (a) EP EF-1, Activation and Operation of the Technical Support Center, Revision 13, dated September 20, 1991.
- (b) EP OR-2, Release of Information to the Public, Revision 7, dated November 20, 1991.
- (c) EP OR-3, Emergency Reentry and Recovery, Revision 2, dated August 14, 1991.
- (d) EP G-3, Notification of Off-Site Agencies and Emergency Organization Personnel, Revision 20, November 6, 1991.
- (e) EP G-4, Personnel Accountability and Assembly, Revision 12, dated April 4, 1991.
- (f) EP G-5, Evacuation of Nonessential Site Personnel, Revision 5, dated April 4, 1991.

No degradations in site emergency preparedness were noted.

(2) Emergency Facilities, Equipment, Instrumentation, and Supplies

The Technical Support Center (TSC) and the Operations Support Center (OSC) were toured and inspected, to include response equipment, instrumentation and calibration, and supplies on hand. Maintenance records for emergency preparedness facilities and equipment, all executed within the fourth quarter 1991 through January 1992, were inspected as follows:

STPG-17A, Form Number 69-9823, Emergency Equipment for Environmental Monitoring Inventory Checklist.

STPG-17B, Form Number 69-9369, Evacuation Kit Inventory Checklist.

STPG-17C, Form Number 69-10598, Hospital Kit Inventory Checklist.

STPG-17D, Form Number 69-11589, KI Inventory Kit.

STPG-17F, Form Number 69-10766, Control Room Checklist.

STPG-17G, Form Number 69-10767, Technical Support Center Checklist.

STPG-17H, Form Number 69-10769, Operational Support Center Checklist.

STPG-17I, Form Number 69-10770, Emergency Operations Facility Checklist.

STPG-17J, Form Number 69-10864, Decontamination Facility Checklist.

STPG-17K, Form Number 69-10865, Media Center Phone Checklist.

STPG-17L, Form Number 69-10866, Assembly Area Checklist.

STPG-17M, Form Number 69-11575, Isotopic Measurement Equipment Checklist.

STPG-17N, Form Number 69-10425, Site Emergency Signal Audibility Survey for Outlying Areas.

STP I-29B, Form Number 69-1163, NRC Emergency Notification System and Health Physics Network Functional Test.

It was verified that in instances where supply and equipment deficiencies or malfunctioning equipment were identified, appropriate on-the-spot action or Action Requests (AR) were initiated. Equipment was verified as being in calibration and properly scheduled for recalibration.

(3) Organization and Management Control

Two items of special interest were reviewed in the area of organization and staffing during this inspection. One was the status of shift staffing to preclude problems such as those discussed in NRC Information Notice (IN) 91-77, "Shift Staffing at Nuclear Power Plants," dated November 26, 1991. The other was a review of protective actions during plant shutdowns and outages for nonessential onsite personnel.

In discussions with the site Operations Manager and the on-duty Shift Supervisor, the licensee indicated that both day and night shifts at Diablo Canyon are staffed at levels above the minimum levels of staffing indicated in 10 CFR 50.54(m). They also indicated that additional resource personnel are available on-site in the event they are needed. Past actual events have indicated no adverse impact

on the ability of an on-duty shift to respond appropriately to emergency events. This includes instances where the Control Room was required to furnish personnel for fire brigade response. Nonetheless, the licensee plans to conduct a review of shift staffing to validate adequacy in view of the circumstances and discussion presented in NRC IN 91-77.

Discussions with on-shift operations managers in the Control Room indicated that their protective actions for nonessential onsite personnel during plant shutdowns and outages is the same as any other mode of operation. Licensee Emergency Preparedness Implementing Procedure (EPIP) G-5 addresses consideration of evacuation of nonessential onsite personnel upon declaration of an emergency event. The procedure would function the same in a shutdown mode as in any other operational mode. Individuals interviewed indicated a knowledge of the responsibilities set forth in the EPIP and in the procedures for implementing those responsibilities.

(4) Training

Inspection of the licensee emergency preparedness (EP) training program at the site included an interview with the principal EP instructor, interviews with on-shift personnel regarding their EP training, and a review of a sampling of training records for response personnel selected at random.

The licensee is currently implementing what appears to be a substantial change in the EP training program. In the past both the site and corporate headquarters had separate EP training programs and responsibilities. The function is being shifted to the site for EP training management and accomplishment corporate wide. This should improve consistency in the training program by having program development, implementation and management at one location.

(5) Independent and Internal Reviews and Audits

- (a) Annual Audit The 1991 Emergency Plan Audit for the Diablo Canyon Power Plant (Audit 910161), dated June 6, 1991, was reviewed during this inspection. The audit was conducted from May 6 through 17, 1991. Three Audit Finding Reports (QE/AFRs) were written to document deficiencies indicated by the audit. The deficiencies and documentation pertaining thereto were reviewed. The licensee initiated evaluation and corrective action, as appropriate, on all three. There were also eight recommendations offered as enhancements to the Emergency Preparedness Program. An Action Request (AR) was prepared on each recommendation for follow-up evaluation by the appropriate site element.

(b) Quality Performance and Assessment Surveillance

Four Quality Performance and Assessment Surveillance Reports were reviewed as follows:

7/24/91	Emergency Preparedness Drill at DCPD (Report Log No. QP&A-91-0098)
8/22/91	Emergency Preparedness Exercise at DCPD (Report Log No. QP&A-91-0120)
9/9-12/91	Source Range Detector N-31 High Count During Fuel Off-loading Unit 2 - Fourth Refueling Outage (Report Log No. QP&A-91-0116)
1/14-17/92	Emergency Response Guidelines Rev. 1B and DCPD EOPs (Emergency Operating Procedures) Validation (Report Log No. QP&A-92-0002)

Licensee assessment and follow-up actions appeared appropriate and no violations of NRC requirements were indicated.

b. Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities (MC-92700)

Three licensee events were reviewed during the inspection wherein the licensee had declared emergency unusual events since the last routine inspection.

- (1) On September 17, 1991, at 2:09 PM (PDT), Unit 1 at 50 percent power and Unit 2 shutdown for its fourth refueling outage, seismic activity was felt by plant personnel and confirmed by seismic instrumentation in the Control Room. In accordance with plant procedures, the Shift Supervisor declared an Unusual Event (UE) at 2:09 PM (PDT). The seismic activity measured approximately 5.2 on the Richter scale, centered approximately 13 miles northwest of San Simeon, California (45 to 50 miles northwest of the plant site). The acceleration of the foundation of the containment structure was approximately 0.0015 times the force of gravity. The reactor is designed to automatically shut down when ground acceleration greater than or equal to 0.35 times the force of gravity is detected. Following the detection of the earthquake, a plant walkdown and inspection was conducted with no damage found in either unit. Appropriate timely emergency notifications were made. At 5:06 PM (PDT), after verifying the magnitude of the seismic event, the Unusual Event was terminated and all response organizations were notified. The licensee indicated that all Technical Specification requirements were met, and no discharge of radioactive materials was made to the

environment. A review of this event and documentation pertaining thereto indicated that the event classification was appropriate and that timely notifications and follow-up notifications were made to the county, state and the NRC in accordance with approved procedures.

- (2) On November 12, 1991, while performing a controlled burn of grass and brush within the site boundary (outside the plant protected area), higher than expected winds caused the fire to cross the fire break. The fire burned 7 acres more than the 25 acres originally planned before the fire was put out. Plant structures, equipment and transmission lines were not in danger and were not affected by the fire. The licensee declared an Unusual Event at 2:00 PM (PST) based on a fire within the site boundary and the need for offsite assistance. The fire was declared out at approximately 4:00 PM (PST) and the Notification of UE was withdrawn at 4:03 PM (PST). A review of this event and documentation pertaining thereto indicated that the event classification was appropriate and that timely notifications and follow-up notifications were made to the county, state and the NRC in accordance with approved procedures.
- (3) At 12:35 AM (PST) on January 17, 1992, an Unusual Event was declared at Diablo Canyon as a result of an earthquake causing ground motion that was felt in the site's Control Room. There were no known adverse affects on the facility. The earthquake was centered approximately eleven miles north of Diablo Canyon and was reported to be 2.9 on the Richter Scale. Diablo Canyon reported an alarm on the facility's Terre Tech detectors that have an alarm setpoint of less than 0.01g. A review of the data indicated a maximum ground motion of 0.0028g. The UE was terminated at 4:06 AM (PST). Units 1 and 2 continued to operate at 100 percent power. Proper timely notifications were made to state and local officials, as well as to the local media. As with the two previously discussed events, a review of this event and documentation pertaining thereto indicated that the event classification was appropriate and that timely notifications and follow-up notifications were made to the county, state and the NRC in accordance with approved procedures.

### 3. Follow up on Previous Inspection Findings

- a. (Closed) Follow-up Item (90-22-02). Inconsistencies Between Appendix Z and EP G-1.

During a previous inspection, it was found that several inconsistencies in General Emergency (GE) class requirements were noted between Appendix Zs and EPIP EP G-1, "Accident Classification and Emergency Plan Activation." These inconsistencies led to confusion and ultimately caused a General Emergency (GE) to be declared earlier than anticipated. The inconsistencies between Appendix Zs and EP G-1 was a finding

identified also by the augmented inspection team (AIT) in April 1987. It was indicated that since these procedural inconsistencies and unclear procedures could lead to delays in event classification, this matter would be reviewed in future inspections. The licensee has submitted Revision 14 to EP G-1 which cautions emergency decision makers that only the EPIP is to be used for event classification. Interviews with Control Room Supervisors responsible for event classification verified that they are aware of the changes and that Appendix Zs are not to be used for classification of emergency events. Operations Standing Orders AP C-151, dated September 13, 1991, reemphasized this new procedure. This order had been initiated by all five crew Shift Foremen.

- b. (Closed) Follow-up Item (91-14-01). Corrective Actions identified during Health Physics Drills of April 1989 and 1991.

During a previous inspection (Report Number 50-275/91-14), inspectors examined the report for the Semi-Annual Health Physics drill of April 30, 1991, and the associated drill scenario package. The inspectors noted that 67 health physics related drill objectives had been identified, of which the drill report identified 44 as being adequately demonstrated, 9 not observed and 14 not demonstrated. The inspectors further noted that the drill report indicated the Technical Support Center (TSC) staff had failed to demonstrate the objectives for:

- o Recognition and Classification of the emergency,
- o Performing off-site dose projections, and
- o Making appropriate action recommendations.

The drill report suggested that there were several contributing factors for these failures: malfunctioning computer equipment, scenario time compression, and misleading scenario data. The drill report concluded that these factors did not negate the use of key scenario data that was available.

These observations were discussed during the exit interview. The Plant Manager stated that they were not satisfied with their performance during the Health Physics drill and were working to correct the problem. A review of the licensee's efforts to correct the problems identified during this drill were reviewed during this inspection. To resolve the TSC issues, the licensee indicated that "several remedial drills were conducted to improve the dose projection, protective action recommendation process and EAL classification." Six drills were conducted between May and August 1991 to address these issues. A review of documentation of the drills indicated these items were exercised in each drill. These items were also objectives of the 1991 Annual Emergency Exercise in August 1991, which was inspected by the NRC. The objectives appeared to have been appropriately accomplished.

- c. (Open) Follow-up Item (91-15-01). Licensee's System for Prioritizing and Issuing PARs Caused Some Delay and Confusion.

An exercise weakness in the 1991 Annual Exercise (Inspection Report 91-15) indicated that the licensee's system for recommending protective action recommendations, as demonstrated in this exercise, appeared to be excessively complicated and could cause a delay in the issuance of PARs based on plant conditions. The licensee system for transmitting PARs to the County decision makers was not clearly specified by procedure and the licensee did not follow procedural requirements governing the documentation of PARs.

Concerns about the licensee system for making PARs were identified in 1985, 1987, and 1990. The finding identified in 1987 was characterized as an exercise weakness. The finding in the 1990 exercise was apparent again in this exercise in that a potential was noted for delays in the issuance of PARs based on plant conditions. It should be noted that none of the PARs bypassed the Recovery Manager (RM) during this exercise.

It was determined during this inspection that the licensee has made procedural changes to address these concerns. These procedures will be exercised and validated during upcoming emergency preparedness exercises and drills. It was indicated that since there had been concerns identified in the past two annual emergency exercises, the item will remain open for review in the 1992 Annual Emergency Exercise.

4. Exit Interview

On January 31, 1992, at the conclusion of the site visit, the inspector met with the licensee representatives identified in paragraph 1 above to summarize the scope and the preliminary results of this inspection. This exit interview was a joint exit for emergency preparedness and physical security.