

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/91-14 and 50-323/91-14

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: May 20 through 24 and June 5, 1991

Inspector: *Emilio M. Garcia* July 8, 1991
E. M. Garcia, Emergency Response Coordinator Date Signed

James H. Reese 7/8/91
A. D. McQueen, Emergency Preparedness Analyst Date Signed

Approved by: *James H. Reese* 7/8/91
James H. Reese, Chief, Safeguards, Emergency Date Signed
Preparedness, and Non-Power Reactor Branch

Summary:

Areas Inspected: This unannounced, routine inspection by region-based inspectors examined the following portions of the licensee's emergency preparedness program: Open Items identified during previous emergency preparedness inspections; Emergency Detection and Classification; Protective Action Decision Making; Dose Calculation and Assessment; Operational Status of the Emergency Preparedness Program and Inspector Identified Items. During this inspection, portions of Inspection Procedures 82201, 82202, 82207, 82701 and 92701 were used.

Results: In the areas inspected, the licensee's emergency preparedness program appeared adequate to accomplish its objectives and was found to be in compliance with NRC requirements. An area of concern was identified and is discussed in section 3 of this report. It involved the timely classification of an emergency.



INSPECTION DETAILS

1. Key Persons Contacted

- *M. J. Angus, Manager, Technical Services
- *R. M. Bliss, Planner, Technical Support Center
- *B. W. Giffen, Manager, Main Services
- T. L. Grebel, Regulatory Compliance
- *J. J. Griffen, Sr. Engineer, Regulatory Compliance
- *J. R. Harris, Auditor, Quality Assurance
- *W. S. Joiner, Emergency Planning (EP) Coordinator
- *R. P. Kohout, Manager, Safety, Health and Emergency Planning
- *P. M. Lang, Senior Engineer, Quality Control
- *D. B. Miklush, Assistant Plant Manager, Operations
- *D. H. Oatley, Manager, Support Services
- D. W. Patty, Shift Supervisor
- *W. T. Rapp, Chairman, OSRG
- *D. A. Taggart, Director, Quality Assurance
- *J. D. Townsend, Plant Manager
- *E. V. Waage, Senior Engineer, EP

The above individuals denoted with an asterisk were present during the exit meeting. The inspectors 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

- E. M. Garcia, Emergency Response Coordinator, RV
- A. D. McQueen, Emergency Preparedness Analyst, RV

2. Follow up on Previous Inspection Findings

- a. (Closed) Follow-up Item (90-04-01). Monitor Scope, Conduct and Documentation of Future HP Drills.

During a previous inspection (Inspection Report 50-275/90-04, dated February 14, 1990), the inspector concluded that the licensee needed to improve aspects of the EP program pertaining to Health Physics (HP) drills to assure continued compliance with Sections 8.1.3.1 and 8.1.3.3 of the DCPPE Emergency Plan and Appendix E, IV.F.5 of 10 CFR 50. In particular, the inspector took exception to the scope of the licensee's HP drills, the level of simulation during the drills and the timeliness/quality of the drill documentation. The licensee was encouraged to discuss this matter with the EP staffs from other utilities. It was indicated that RV inspectors would monitor the scope, conduct and documentation of future HP drills.

The inspectors examined the report for the Semi-Annual Health Physics drill of April 30, 1991, and the associated drill scenario package. The inspectors noted the following facts:



- * A formal drill report had been prepared,
- * 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, and
- * The scenario package included health physics data.

Based on these findings this item is consider closed.

However, the inspectors also noted that according to the drill report the Technical Support Center (TSC) staff had failed to demonstrate the objectives for:

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

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

These observations were discussed during the exit interview. The inspectors recommended that the licensee resolve the problems and take prompt corrective actions. The Plant Manager stated that they were not satisfied with their performance during the Health Physics drill and were working to correct the problem. The licensee's efforts to correct the problems identified during this drill and the April 26, 1989 HP Drill will be reviewed during a future inspection. (Open) 91-14-01

3. Functional or Program Areas Inspected

The inspectors reviewed licensee emergency preparedness implementing procedures pertaining to the inspection modules being inspected (subparagraphs a through d below). The inspectors conducted a tour of on-site emergency preparedness facilities which included the Control Room, the Technical Support Center (TSC), and the Operations Support Center (OSC). The inspectors were able to observe a licensee exercise of the Emergency Assessment and Response System (EARS) at the Control Room and at the TSC. The inspectors interviewed a Shift Supervisor and a Shift Technical Assistant (STA) and observed their actions in classifying emergency events and calculating a dose assessment.



a. Emergency Detection and Classification (MC-82201)

Two events where the licensee had declared unusual events were reviewed. A concern was identified; regarding event classification.

(1) The inspectors examined the licensee's classification and notifications related to the unusual event of March 7, 1991. Details of the event and its causes are documented in Licensee Event Report (LER) number 91-004-00, and NRC Inspection Report 50-275/90-09. From the review of available records, which include plant computer printout, classification and notification forms, LER 91-004-00 and Inspection Report 50-275/91-09, and individuals written statements the inspectors developed the following time line:

March 7, 1991

08:07	Loss of off-site power.
08:10	Shift Supervisor (SS) recognizes that a loss of off-site power has occurred:
08:15 apr.	The Assistant Plant Manager for Operations, the Operations Manager, and the NRC Resident Inspector enter the control room
08:20	A senior reactor operator (SRO) responding to the control room directed by the Operations Manager to review reportability requirements.
08:25 apr.	SRO advises SS that a unusual event should be declared due to the loss of offsite power.
08:30	Unusual event declared by SS after consultation with Operations Manager and Assistant Plant Manager for Operations.
08:37	San Luis Obispo County Notified of unusual event.
08:50	California Office of Emergency Services (OES) notified of the unusual event:
09:00	NRC Operations Center notified of the unusual event.

The inspectors noted the following facts:

- * It took 27 minutes after the SS recognized that a loss of offsite power had occurred before the event was classified and the unusual event was declared.
- * Review of classification requirements were not initiated until ten minutes after the loss of offsite power was recognized by the SS.
- * The review of classification requirements was directed by the Operations Manager not by a member of the control room staff and was performed by an SRO that was not part of the operating shift.
- * After being advised by the SRO that an unusual event should be declared, the SS consulted with the Operations Manager and the Assistant Plant Manager for Operations, before declaring the unusual event.



The licensee's report on their review of the implementation of the emergency plan concludes:

The classification of the event was done accurately and in a timely manner considering the amount of data that had to be assimilated and confirmed to assure this event did not require an elevated classification.

The time required for the declaration of this event raises concerns regarding prompt notification to off-site agencies. The failure to promptly classify the event when the appropriate criteria had been met resulted in the appropriate off-site agency (San Luis Obispo County) not being notified until 27 minutes after the event classification criteria had been recognized. The inspectors noted that promptness of event classifications was an area that might require further management attention.

(2) The inspectors examined the licensee's classification and notifications related to the unusual event of May 17, 1991. For specific details of the event and its causes the reader is referred to inspection report 50-275/91-13, Section 3. The inspector reviewed documents indicating times of actions. These documents include the plant computer printout, classification and notification forms, NRC Operations Center event report, California Office of Emergency Services (OES) Warning Center log the applicable Event Notification Form, and individual's written statements. From these documents the inspector developed the following time line:

May 17, 1991

06:24:03	Reactor trips
06:25:41	Safety injection initiation signal
06:25	Unusual event declaration
06:29	OES calls control room, the Shift Technical Advisor (STA) informs OES that the plant has suffered a reactor trip and that safety injection has initiated, but OES is not informed that an unusual event has been declared
06:33	NRC notified of the unusual event
06:40	San Luis Obispo county notified of the unusual event
06:50	OES notified of the unusual event
06:59	PG&E Senior corporate staff notified

The inspectors noted that the control room staff had:

- * Promptly classified the event,
- * Notified San Luis Obispo county within the required fifteen minutes,
- * Not strictly followed the order for notifying off-site organizations prescribed in the licensee's applicable procedure, and



- * Not notified the State of California of the event classification within fifteen minutes.

These observations were discussed during the exit interview. After additional review of the applicable requirements and discussions with regional management, the inspectors noted that the intent of the regulations and the procedure were met, in that:

- * The County and the NRC were notified within the required time,
- * The order in which the notifications were made were caused by more than one individual making the calls, (the procedure requires only one communicator), and
- * The notification to the State of California is not required to be made within fifteen minutes since in California protective actions decision making responsibility rests with the County, and the County was appropriately notified.

The inspectors concluded that in this area the licensee's program appears to meet the intent of the regulations.

b. Protective Action Decision Making (MC-82202)

This topic was covered during interviews with on-duty shift personnel and emergency preparedness staff members. No weaknesses were indicated.

c. Dose Calculation and Assessment (MC-82207)

The inspectors examined the ability of the control room staff to perform dose assessments, classify the emergency and make appropriate protective action recommendations. Specifically, the use of procedure EP R-2, "Release of Airborne Radioactive Materials," was examined. This procedure details the "paper method" used when the computerized method is unavailable. The individuals interviewed were a shift supervisor (SS) and a shift technical advisor (STA). They were provided with two scenarios to evaluate their ability to use EP R-2. The inspectors concluded that this procedure appears to meet the need of control room dose calculation and assessment in that:

- * It provides a means for dose calculations under anticipated release conditions,
- * It provides a means for making appropriate protective action recommendations based on the results of dose calculations,
- * A controlled copy was readily available in the control room, and
- * The staff interviewed could promptly and with one minor exception use it correctly.



The current version of the procedure requires the analysts to estimate the "Projected Duration" of the release without defining this term or suggesting a default value. For one of the scenario used the STA assumed that the release would last only until the time the calculations were made, which in the scenario would have under estimated the release duration. This apparent weakness was discussed with EP staff and the inspectors were shown a draft update to EP R-2 that addresses this weakness. The inspectors concluded that in the areas examined the licensee program meets their requirements. The inspectors discussed this item with the licensee during the exit meeting on May 24, 1991.

d. Operational Status of the Emergency Preparedness Program (MC-82701)

A weakness was indicated as noted in 3.a above.

Licensee procedures reviewed during the inspection included:

- * EPIP EP G-1, Accident Classification and Emergency Plan Implementation.
- * EPIP EP G-2, Establishing the Emergency Organization.
- * EPIP EP G-3, Notification of Off-Site Agencies and Emergency Organization Personnel.
- * EPIP EP RB-9, Calculation of Release Rate.
- * EPIP EP RB-11, Emergency Off-Site Dose Calculations.
- * EPIP EP AD-3, Emergency Equipment, Instruments & Supplies.

4. Exit Interview.

On May 24, 1991, at the conclusion of the site visit, the inspectors met with the licensee representatives identified in paragraph 1 above to summarize the scope and the preliminary results of this inspection. The inspectors noted that the previously open items would be reviewed and inspected for closure during the annual emergency exercise in August 1991. The inspectors reviewed the concerns discussed in paragraph 3 above and the licensee indicated that they would review improvements to their procedures and performance.

