U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-275/85-31 and 50-323/85-40

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 Nuclear Power Plant, Units 1 and 2

Inspection at: Diablo Canyon Nuclear Power Plant, San Luis Obispo County, California

Inspection conducted: October 28 - November 1, 1985

Inspectors: K. M. Prendergast — 12/3/85 Date Signed
K. M. Prendergast
Emergency Preparedness Analyst

R. F. Fish for — 12/3/85 Date Signed
G. M. Temple
Emergency Preparedness Analyst

Team Members: F. Kantor, U.S. NRC,
Section Chief, Emergency Preparedness Branch
G. Martin, Pacific Northwest Laboratories
M. Good, Comex Corporation

Approved by: R. F. Fish — 12/3/85 Date Signed
R. F. Fish, Chief
Emergency Preparedness Section

Summary:

Inspection on October 28 - November 1, 1985 (Report Nos. 50-275/85-31 and 50-323/85-40)

Areas Inspected: Announced inspection of the emergency preparedness exercise and associated critique. This inspection involved approximately 180 hours of onsite time by three NRC inspectors and two contractor team members. Inspection procedure 82301 was covered.

Results: No significant deficiencies or violations of NRC requirements were identified.

DETAILS

1. Persons Contacted:

J. Shiffer, Vice President, Nuclear Power Generation
R. Thornberry, Plant Manager
W. Kaefer, Assistant Plant Manager
W. Keyworth, Senior Power Production Engineer
S. Joiner, Emergency Planner
J. Gilfor, Emergency Planning Instructor
T. Martin, Training Manager
J. Raab, Shift Supervisor

Contractors

R. Wester, Impell Corporation
J. Toresdahl, Impell Corporation
T. Nahay, Impell Corporation
S. Nesta, Impell Corporation
B. Wiggs, Impell Corporation

2. Emergency Exercise Planning

The licensee's corporate staff has the overall responsibility for developing, conducting, and evaluating the emergency preparedness exercise. The exercise scenario was developed by a team approach between Impell Corporation and PG&E under a contract issued by the licensee. Impell was also responsible for conducting the exercise and providing controller/evaluators for evaluating the exercise and preparing a report of the findings promulgated by the critique process. In an effort to maintain strict security over the scenario, individuals who had been designated by the licensee to assist in the preparation of the scenario were not active players in the exercise.

Emergency preparedness exercise objectives were established by discussions and meetings involving representatives from San Luis Obispo County, the State of California, Pacific Gas and Electric Company, Federal Emergency Management Agency (FEMA) and the NRC. The scenario document included: the objectives and guidelines, the scenario, a list of participants, the informational messages delivered during the exercise, the initial and subsequent plant parameters, meteorological parameters, radiological data, and controller/evaluator instructions and evaluation sheets.

The scenario document was controlled by Impell Corporation and distribution was limited to persons having a specific need which included; onsite and offsite controller/observers, members of the federal organizations (NRC and FEMA) evaluating the exercise. This emergency preparedness exercise was intended to meet the requirements of IV.F.3 of Appendix E to 10 CFR 50. Controller/Evaluators were stationed at each of the licensee's emergency response facilities (ERFs), e.g. Control Room (CR), Technical Support Center (TSC), Operations Support Center (OSC) and

the Emergency Operations Facility (EOF). Controller/Evaluators were also dispatched with repair/monitoring teams. All controllers acted as evaluators and had knowledge related to the activities they were evaluating. The final briefing of controllers was conducted on October 28. Clarifications were also made to the NRC during this meeting. All of the NRC observers were present during this briefing.

No violations or deficiencies were identified in the review of this program area.

3. Exercise Scenario

The exercise scenario started with the declaration of an unusual event (UE) and ultimately escalated to a general emergency (GE) condition. The initiating event of the scenario was the loss of the one remaining Morro Bay Power unit, which resulted in the loss of all offsite sources of 230 kv power to the Diablo Canyon Power Plant. Other events experienced during the scenario included: a release of chlorine gas, a fire in the diesel generator room, an ejected control rod assembly, a loss of coolant accident, and an eventual loss of containment integrity.

4. Federal Observers

Five NRC inspectors and twenty FEMA observers evaluated the licensee and offsite agencies' response to the scenario. The NRC observed activities in the CR, the OSC, the TSC, and the EOF. FEMA evaluated that portion of the exercise which involved local and state agencies as well as interfaces occurring in the EOF. FEMAs findings will be addressed in a separate report from that agency.

5. Control Room

The following aspects of CR operations were observed during the exercise: detection and classification of emergency events, mitigation, notification and protective action recommendations. The following are NRC observations of activities in the CR.

a. The notifications of the unusual event and alert were very timely.

b. The investigation of actions to restore equipment and mitigate damage was extensively pursued throughout the exercise.

c. There was an excellent interface and coordination between the Operations Emergency Coordinator and the Site Emergency Coordinator.

d. There was no formal log keeping evident in the CR (numerous scratch pad logs were being kept; however, not all entries referenced time). A review of the requirements for formal documentation of an emergency event is suggested to determine whether some changes may improve record keeping. The importance of records in reconstructing the emergency event may warrant a specific objective in this area for the next exercise (85-31-01).

e. The CR status board was not routinely used during the exercise. This item was also mentioned during the licensee's critiques. Perhaps, if this board serves no useful purpose consideration should be given to its removal.

f. There were no routine plant status announcements over the public address system concerning the fire, chlorine, or changing plant conditions, etc. The use of the plant public address system for messages containing safety information and to keep plant personnel informed of plant evolutions is encouraged. It is recognized that such announcements might be simulated during an exercise when the plant is operating.

No violations or deficiencies were identified in the review of this program area.

6. Operations Support Center

The following aspects of OSC operations were observed: activation, functional capabilities, the disposition of various inplant teams, and coordination with the TSC. The following are NRC observations of the OSC activities:

a. An excellent level of play was exhibited by OSC personnel.

b. Good health physics practices and team briefings were observed.

c. The OSC was declared activated with no repair/monitoring teams available. The OSC was declared activated at 7:28 a.m. However, the OSC did not have repair team members present. Procedure EF-2 allows for the OSC to be declared activated with the presence of four key personnel, providing no requests for teams have been made. It should be noted that this item was brought up during the ERF appraisal and that changes to procedure EF-2 had been made. However, in light of the aforementioned observation these changes should be reexamined with respect to the minimum personnel (team members) that must be present to support the OSC function. (Open, 85-31-02)

d. Through the use of realistic implementation during the scenario the licensee was able to identify some areas where improvements should be considered. As an example, it appeared to be very physically taxing for the health physics technician to maneuver a cart up the stairs with a portable air sampler and battery, while fully dressed out in SCBAs and carrying an instrument with an extendable probe (teletector). Under certain conditions, such as the one just described, the licensee might find it advisable to provide for additional team members.

e. There appeared to be an excessive delay in dispatching a team to evaluate the containment purge valve. This team took approximately one hour to get ready and, because so much time had elapsed and conditions had worsened, the team was recalled prior to reaching the valve location. The problem appears to be that the team did not

effectively use their time to get ready. Consideration should be given to examining methods to expedite team departure and ultimately increase their effectiveness.

No violations or deficiencies were identified in the review of this program area.

7. Technical Support Center (TSC)

The following aspects of TSC operations were observed: activation, accident assessment/classification, dose assessment, notification and support of the CR in their efforts to mitigate the consequences of the accident. The following are NRC observations of the TSC activities.

a. An excellent level of play was observed in the TSC.

b. Excellent coordination was observed among the Emergency Radiological Advisor, Security Manager, and the Site Emergency Coordinator.

c. There did not appear to be a clear transfer of authority from the TSC to the EOF, upon the arrival of the Recovery Manager. This item was also mentioned during the licensee's critique.

d. The evacuation from the OSC to the TSC appeared unorganized. Perhaps there would have been less confusion if team members from the OSC could have been evacuated to the TSC counting lab. As a suggestion for improvement, this area should be examined to determine if some additional preplanning would be beneficial.

e. No procedures were observed being used as guidance during observed reentry/recovery discussions in the TSC and EOF at the end of the exercise. Recovery and reentry are addressed in the Emergency Plan; however, there did not appear to be a procedure to implement this portion of the plan. Perhaps a brief procedure or a checklist would offer assistance in identifying major topics to be considered during reentry and recovery. (Open, 85-31-03)

No violations or deficiencies were identified in the review of this program area.

8. Emergency Operations Facility

The following aspects of EOF operations were observed: activation, functional capabilities, offsite dose assessment and the interface with offsite officials. The following are NRC observations of the EOF activities.

a. There was an excellent level of play exhibited by the EOF Emergency Response Organization throughout the exercise.

b. An excellent interface was observed between the offsite authorities and PG&E personnel.

c. Status boards were well maintained during the exercise.

d. The team effort to provide dose assessment and protective action recommendations between the Unified Dose Assessment Center (UDAC) staff and PG&E went well.

e. It was never clear when the interim EOF organization was activated (i.e. fully functional). Procedure G-2, page 17, states that it is the responsibility of the Adviser to the County "to activate and provide interim management of the EOF" until the Recovery Manager arrives and assumes management responsibility. The EOF activation procedure (EF-3) might be improved by modifying it so as to indicate the point at which the EOF is manned and functional with the EOF interim staff.

f. It appeared that the UDAC controller was not adequately prepared to properly stage and control the reentry and recovery phase of the exercise. Further, the controller employed prompting during his briefing to set the stage for reentry and recovery, which may have hampered the evaluator's ability to evaluate this activity.

g. The Recovery Manager was observed to be diverted from management attention by the necessity of maintaining the Recovery Manager's Log. The need for a dedicated log keeper or communicator to provide assistance to the Recovery Manager might be considered.

h. During the exercise it appeared that a protective action recommendation developed by the UDAC went directly to the County Emergency Services Director without the concurrence of the Recovery Manager. By procedure (EP RB-10) the Recovery Manager is the PG&E representative with sole authority for the decision to recommend protective actions to local authorities and, as such, should review and concur with any protective action recommendations originating in whole or part from PG&E staff which are to be transmitted to local authorities.

No violations or deficiencies were identified in the review of this program area.

9. Critiques

A formal licensee critique was held in the plant Training Building on October 31, 1985, the day following the exercise. The purpose of this critique was to summarize the findings of the exercise and to discuss weakness or deficiencies identified by the licensee. The following represents some of the licensee's findings that were discussed during this meeting.

a. During the initial notification and call out of the Diablo Canyon Power Plant Staff the rapid alert notification system failed. However, appropriate procedures were followed and manual notifications were accomplished.

b. Due to the complexity of the exercise, the drill controllers experienced problems in providing data concerning equipment status.

- This appeared to cause some confusion in the CR on why equipment had failed and what was necessary to place it back in service.

c. The decision to evacuate the OSC was made without input from all key positions in the TSC and CR. As a result, this caused confusion and CR personnel continued to dispatch Auxiliary Operators to the Auxiliary Building without proper precautionary measures.

d. The decision to issue KI was made without discussions with radiation assessment personnel.

e. TSC personnel were not informed of the transfer of responsibilities from the TSC to the EOF.

f. The plant public address system was difficult to hear in the Emergency Maintenance Coordinator's Office and the Shift Security Supervisor's Office.

g. There was some initial confusion concerning the announcement of a site area evacuation declaration versus the declaration of a site area emergency.

No violations or deficiencies were identified in the review of this program area.

10. Exit Interview

The exit interview was held on August 30, 1985. The attachment to this report identifies some of the licensee personnel present at this meeting. The NRC was represented by five evaluator team members and Mr. M. Mendonca, Senior Resident Inspector. During this meeting the licensee was informed of the preliminary findings of this inspection and that these findings are subject to discussion and approval by NRC Regional Management. There were no violations of NRC requirements or deficiencies identified within the scope of this inspection.

There was an extensive discussion of the activation of the EOF. The licensee considers the EOF activated by the interim organization and fully operational when the designated persons have replaced the interim organization. Formal declaration of the EOF activation occurs when the designated persons are in place, 2-3 hours after deciding the EOF should be activated. The licensee believes that activation of the EOF with the interim organization satisfies the intent of NUREG-0696, Functional Criteria for Emergency Response Facilities, for activation of the EOF in one (1) hour because it is capable of performing all of the assigned function even though a few responsibilities are retained by the Site Emergency Coordinator. The licensee stated that they will review their procedures for activation of the EOF to determine if some minor changes in terminology concerning activation of the EOF within one hour, can be more clearly stated to meet the intent of NUREG 0696.

Other items specifically discussed during the exit interview are contained within the body of the report, Sections five (5) through eight (8).

ATTACHMENT

Exit Interview Attendees

Pacific Gas and Electric Company

J. Shiffer, Vice President, Nuclear Power Generation
R. Thornberry, Plant Manager
W. Kaefer, Assistant Plant Manager, Support Services
W. Keyworth, Senior Power Production Engineer
R. Powers, Senior Chemical and Radiation Engineer
J. Boots, Manager, Chemical and Radiation Protection
D. Taggart, Acting Director of Quality Support
R. Flohaug, Supervisor, Reactor Operations
J. Gilfor, Emergency Planning Instructor
J. Gliscon, Assistant Plant Manager, Technical Services
R. Todaro, Security Supervisor
B. Giffin, Supervising Engineer
T. Mack, Senior Nuclear Generation Engineer

Contractors

B. Wiggs, Project Engineer, Impell
R. Wester, Technical Manager, Impell