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October 5, 1994

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U.S. Nuclear Regulatory
Commission
Washington, DC 20555

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Washington, DC 20555

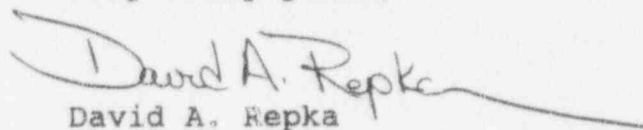
Jerry R. Kline
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Atomic Safety and Licensing
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U.S. Nuclear Regulatory
Commission
Washington, DC 20555

Re: Pacific Gas and Electric Co. (Diablo Canyon Nuclear
Power Plant, Units 1 and 2), Docket Nos. 50-275-
OLA, 50-323-OLA (Construction Period Recapture) - 2

Dear Administrative Judges:

Attached for the information of the Licensing Board and
the parties in this proceeding is the latest NRC Staff Systematic
Assessment of Licensee Performance ("SALP") evaluation report for
the Diablo Canyon Nuclear Power Plant.

Very truly yours,


David A. Repka

Counsel for Pacific Gas and
Electric Company

Attachment

cc: Service List

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Dockets: 50-275
50-323
Licenses: DPR-80
DPR-82

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SUBJECT: SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP) REPORT

Enclosed for your review is the SALP report for the Diablo Canyon Nuclear Power Plant for the period January 1, 1993, through August 31, 1994. The Nuclear Regulatory Commission (NRC) made this assessment under the revised SALP process implemented on July 19, 1993. A public meeting to discuss this report with you and your staff has been scheduled for 1 p.m. on October 26, 1994, at the PG&E Community Center, San Luis Obispo, California.

During this meeting you are encouraged and expected to candidly comment on our report. Although this meeting is a forum between PG&E Company and the NRC, it will be open to observation by members of the public and other interested parties.

In accordance with the NRC policy, I have reviewed the recommendations of the SALP Board and concur with the ratings and the views. All four functional areas were rated as Category 1, indicating overall superior performance in plant operations, maintenance, engineering and plant support. This performance is considered exemplary and is consistent with your previous recognition as an NRC good performing plant.

Your self assessment efforts, both by the line and Nuclear Quality Services (NQS) organizations, were a significant contributor to your success. NQS independent oversight activities were intrusive and identified problems for early resolution. The quarterly Quality Performance Assessment Report (QPAR) provided a critical and insightful evaluation of organizational and equipment performance to focus corrective actions on the root causes of problems and improve safety performance. Management involvement and commitment to safety were evident in the resolution of problems and the improvements in plant equipment.

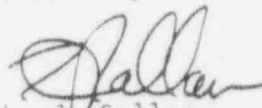
While your overall performance was superior in each functional area, recent declining trends observed in housekeeping, engineering coordination with the

plant, and procedural compliance have raised our concern. Additionally, your efforts to streamline your organization and reduce outage duration may further stress your safety programs. Your attention to those areas is encouraged to assure continued superior safety performance.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the SALP report will be placed in the NRC's Public Document Room.

Should you have any questions concerning the SALP Report, we would be pleased to discuss them with you. While no written response is required, if you wish, you may provide written comments within 30 days of the SALP meeting.

Sincerely,



L. J. Callan
Regional Administrator

Enclosure:
SALP Report 50-275/94-99; 50-323/94-99

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DIABLO CANYON POWER PLANT
SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP)
REPORT 50-275/94-99 AND 50-323/94-99

I INTRODUCTION

The SALP process develops the NRC's conclusions regarding a licensee's safety performance. The SALP report documents the NRC's observations and insights on a licensee's performance relative to safety risk perspective and communicates the results to the licensee and the public. The NRC uses SALP results when allocating NRC inspection resources at licensee facilities.

This report is the NRC's assessment of the safety performance at the Diablo Canyon Power Plant from January 1, 1993, through August 31, 1994.

An NRC SALP Board, comprising the individuals listed below, met on September 7, 1994, to review and assess performance in accordance with the guidance in NRC Management Directive 8.6, "Systematic Assessment of Licensee Performance." The Board developed this assessment for the Regional Administrator's approval.

Board Chairperson

J. E. Dyer, Deputy Director, Division of Reactor Projects, Region IV

Board Members

T. P. Gwynn, Director, Division of Reactor Safety, Region IV
R. A. Scarano, Deputy Director, Division of Radiation Safety and Safeguards,
Region IV
T. R. Quay, Project Director, Project Directorate IV-2, Office of Nuclear
Reactor Regulation

II PERFORMANCE RATINGS

This assessment was conducted under the revised SALP process implemented by the NRC on July 19, 1993. Under the current SALP process, performance was assessed in four functional areas instead of the previous seven functional areas. The four areas are plant operations, maintenance, engineering, and plant support. Safety assessment and quality verification were considered for each of the four functional areas rather than as a separate functional area. Radiological controls, emergency preparedness, security, housekeeping, and fire protection were assessed under the plant support functional area. The SALP category ratings continue to be used in the assessment of licensee performance in each functional area. Improving or declining performance trends have been eliminated from the ratings.

Current Functional Areas and Ratings:

<u>Functional Area</u>	<u>Rating This Period</u>
Plant Operations	1
Maintenance	1

Engineering	1
Plant Support	1

Previous Functional Areas and Ratings:

<u>Functional Area</u>	<u>Rating Last Period</u>
Plant Operations	1
Maintenance/Surveillance	1
Engineering/Technical Support	1
Radiological Controls	1
Emergency Preparedness	1
Security	2 Improving
Safety Assessment/Quality Verification	1

III PERFORMANCE ANALYSIS

A. Plant Operations

Overall safety performance in the plant operations area continued to be superior. A conservative operating philosophy, strong management commitment to safety, effective training and an aggressive program of self-assessment were noted strengths. Program and procedure guidance provided effective controls for activities, although some instances of lax procedure adherence were observed towards the end of the evaluation period.

The licensee demonstrated a conservative operating philosophy during both power operations and refueling outages. Management was actively involved in the planning and execution of site activities, ensuring that expectations were properly implemented. This was evident when the startup of Unit 2 was delayed to resolve testing anomalies with the emergency diesel generator (EDG) air flow and when preparations for work at reduced inventory on Unit 2 were delayed to resolve inconsistencies with a narrow range level instrument. Daily planning meetings and operator involvement with briefings of safety significant equipment maintenance demonstrated operator ownership for plant activities and were effective in communicating management expectations to all site organizations. Periodic observations by operators of the maintenance work-in-progress helped ensure that the expectations were implemented.

Licensee programs and procedures for the conduct of operations were detailed and provided the appropriate level of direction for execution and coordination of activities. The administrative processes for equipment operability were tightly controlled and well-understood not only for Technical Specification

equipment, but also for other risk significant equipment controlled by Equipment Control Guidelines. Shutdown risk considerations were extensively evaluated and well communicated to site personnel at all levels of the organization.

Operator training was comprehensive and directed towards both prevention and mitigation of plant events. Simulator training was effectively used to challenge the operators with beyond design bases events and to facilitate improved teamwork among the operating crews. A particular strength was noted with the extensive use of the simulator to emphasize the differences between the new Unit 1 Eagle 21 system and the existing Unit 2 solid state protection system. Critiques of operator performance were thorough and set high standards of performance. As a result, operators were very knowledgeable concerning the operating procedures and behavior of plant equipment during normal, abnormal and emergency operating situations.

Operator responses to transients and performance during routine operations were excellent. Power operations during this evaluation period on both units were free of significant events caused by operator errors with the exception of a Unit 2 trip during surveillance testing early in the evaluation period. Prompt operator action was noted in response to several transients and facilitated a smooth, rapid shutdown of Unit 2 from full power when a small leak was identified in the reactor coolant system. Outage activities were well-planned and usually accomplished in accordance with procedures and management expectations. Recently, there has been a slight increase in the incidence of procedure noncompliance by operators as a result of inattention to detail or proceeding in the face of uncertainty. Management initiated actions to correct this trend before safety significant issues arose.

Self assessment activities by both the Operations and the Nuclear Quality Services (NQS) Departments were thorough and aggressive, facilitating correction of many issues before they impacted safe plant operations. On one occasion, when steps of a surveillance procedure were improperly completed, alert operators identified anomalies with steam generator instruments and took prompt actions to avoid a potential plant trip. NQS audits and surveillances effectively identified problem areas for management attention, facilitating prompt corrective actions. Self assessment reviews of events and violations were also found to be thorough and honest appraisals directed towards improving future performance.

The performance rating is Category 1 in the Plant Operations area.

B. Maintenance

Overall safety performance in the maintenance area continued to be superior. Maintenance support to the plant was strong, and management was involved in addressing problems. Plant facilities that supported maintenance operations were high quality and effectively utilized. The material condition of the plant equipment continued to be very good with recent physical plant improvements that evidenced a strong safety philosophy. An apparent decline

in procedure adherence and an increase in personnel errors toward the end of the assessment period were being addressed by management. Quality performance monitoring and problem identification were notable assets.

Numerous strengths discussed in the previous SALP report continued to be in evidence throughout this assessment period. These strengths included the effective and efficient management of outages, the qualifications of the maintenance staff, and the effective use of excellent training facilities. In addition, plant safety awareness continued to be high with particular emphasis on the management of risk during shutdown operations. The planning and prioritization of work continued to result in high availability of plant safety equipment, and there continued to be a low threshold for root cause investigations.

Maintenance support to plant operations was strong, as evidenced by few plant events and equipment failures attributable to maintenance. Management was closely involved in responding to those events that did occur. Of particular note was the prompt identification and resolution of the degraded main generator output transformer for Unit 1. In general, when equipment failures occurred, maintenance crafts demonstrated strong troubleshooting skills. For the more complex maintenance/modification tasks, High Impact Teams were effectively used to coordinate the work and ensure its quality and timeliness.

Plant facilities that supported maintenance operations were high quality and effectively utilized. Of particular note were the state-of-the-art material services warehouse facility and the management approach to service its customers in a prompt and efficient fashion. Also of note, was the use of the maintenance training facilities to ensure high quality maintenance and modification work. Examples included the use of simulator facilities to prepare the instrumentation and control maintenance staff for the installation of the Eagle 21 Digital Process Protection System, and the use of training mockups to analyze steam generator work practices to ensure correct worker performance and minimize radiation exposures. Of particular note was the use of training mockups to analyze equipment failures such as the Diablo Canyon duplication and diagnosis of the control rod problem experienced at the Salem facility.

The material condition of the plant equipment was very good and management continued to improve the physical plant. Physical plant improvements included the addition of a sixth safety-grade emergency diesel generator, elimination of the reactor coolant loop resistance temperature detector bypass manifolds, installation of the Eagle 21 Digital Process Protection System, and the upgrade of the plant main annunciator system. These and other physical plant upgrades evidenced a strong safety philosophy at Diablo Canyon.

Notwithstanding the overall superior safety performance in this area, continued challenges were evident. NRC inspector observations indicated a need for improvement in procedure adherence by craft and supervision in both nuclear construction services and maintenance services organizations. In addition, human performance errors resulted in engineered safety feature

actuations on two occasions during the latter part of the assessment period. The apparent decline in procedure adherence and the increase in human performance errors indicated the need for increased supervisory involvement in maintenance work activities to ensure that management expectations are met. Management has recognized the need to reinforce its expectations in this area.

NQS performance monitoring in the maintenance area was a notable strength, addressing both personnel/department and equipment performance in a critical manner. Assessments were both objective and pervasive, resulting in excellent performance insights and recommendations for performance improvement. Line management actions in response to the findings and recommendations were evident.

The performance rating is Category 1 in the Maintenance area.

C. Engineering

Overall safety performance in the engineering area continued to be superior. The licensee exhibited a generally aggressive and thorough engineering approach in resolving technical problems and usually maintained high quality performance in this area. The engineering organization was staffed with experienced, well-trained and qualified staff and was generally proactive in identifying and resolving design issues. Independent assessments by NQS were noteworthy. In addition, followup activities to evaluate and correct problems were usually a strength. Although the overall level of performance was superior, isolated instances of weak implementation of engineering programs on emergent issues were noted.

In general, the quality and implementation of engineering programs were excellent. Particularly strong programs included the system engineering program, inservice examination of steam generator (SG) tubes, the motor-operated valve (MOV) program, the commercial grade dedication program, probabilistic risk assessment resulting in plant modifications to reduce risk, and NQS audits. The licensee was also generally proactive in identifying and resolving many complex, potentially generic, design issues. In each case, licensee coordination with vendors was insightful, timely and involved. Management support was evident in all of these programs with minor exceptions noted in engineering's response to some NQS findings.

Overall engineering products were of high quality and appropriately addressed safety significance. The design change program was excellent and produced timely and technically sound 10 CFR 50.59 reviews. Several significant design changes were installed and effectively integrated into plant operation during this assessment period. These changes included: Eagle 21 reactor protection system installation, replacement of 120 volt vital inverters, main annunciator upgrade and the resistance temperature detector (RTD) bypass manifold elimination. The overall effect of the design changes has been an improvement of plant reliability and safety.

The licensee exhibited a strong commitment to safety in followup activities to evaluate and correct problems. For example, engineering analysis of the EDG air flow was prompt and very detailed. Management stayed very involved in the issue, kept Unit 2 shut down, and promptly obtained assistance from several experts outside the plant staff to resolve the concern over flow measurement inaccuracy. Throughout the assessment period the licensee demonstrated a conservative safety perspective.

NQS audits of engineering were performed in a probing, critical and well directed manner. However, there were isolated instances where engineering missed opportunities to promptly resolve identified problems. The most significant was the failure to take timely action for an NQS finding challenging the capacity of Component Cooling Water/Auxiliary Salt Water System Heat Exchanger and system operability. There were also infrequent instances of inadequate engineering interface with operations and maintenance. Examples involved the lack of engineering involvement in the troubleshooting of MOV operational failures and an inadequate initial operability determination on the EDG air flow issue. There were also insufficient administrative controls for implementing a Technical Specification amendment involving a containment isolation valve and for a local leak rate testing temporary modification. To address these weaknesses, clearer expectations for timely resolution of concerns identified by NQS, and improved integration and coordination of engineering programs with all plant activities appear warranted.

The performance rating is Category 1 in the Engineering area.

D. Plant Support

Overall safety performance in the plant support area was superior. Within the plant support area, emergency preparedness was considered exceptionally strong and radiological controls, security, chemistry, and fire protection areas were considered to be generally strong programs. Housekeeping activities were considered to be generally good with a declining trend noted towards the end of the evaluation period.

Generally excellent performance was noted in the radiological controls area which includes: radiation protection, radwaste management, radioactive effluents, radiochemistry confirmatory measurements, solid radioactive waste and transportation of radioactive material. An excellent as low as reasonably achievable (ALARA) program has been implemented with effective results. Personnel exposures for the 1993 Unit 2 refueling outages were below the established ALARA goals and the three year average of 1991-1993 was slightly below the PWR national average. However, the projected exposure goal for 1994 was well above the national PWR average. While the two planned outages in 1994 involved work associated with higher doses, it is not clear that this goal is indicative of an outstanding program. Overall, excellent radiation protection practices were observed during day-to-day work activities. Excellent performance was noted in the radiation protection area regarding communication with other departments, coverage of maintenance activities,

contamination and radioactive materials control, external and internal exposure control, dosimetry, calculation of internal dose, surveys, and postings. Additional attention should be given to reduce the number of personnel contaminations, which appeared to be high. Appropriate staffing, training and qualifications were maintained for personnel responsible for implementing the radiological controls area. Excellent procedures were properly implemented to address the processing, packaging, handling, classification and characterization, and transporting of radioactive waste and materials. An excellent radioactive waste minimization program was being implemented. Except for some concerns identified with audits in the radiological environmental monitoring program, comprehensive audits and surveillances were performed in the radiological controls area.

Performance in the emergency preparedness area continued to be at a superior level. Emergency response facilities were properly maintained and in a state of readiness for expeditious activation. Emergency plan implementing procedures and emergency action levels have been updated taking advantage of industry and plant experience. Corporate and site emergency preparedness training was consolidated at the site, facilitating improved management of procedures, records and training personnel. Emergency events were properly classified and appropriate notifications were made to the state, counties and federal agencies (NRC, EPA, FEMA and Coast Guard). The responses by both onsite and offsite organizations to the recent offsite fires in the area were strong. Weaknesses identified during the 1993 emergency exercise regarding assessment of core damage and identifying probable radioactive effluent release pathways, were the subjects of subsequent extensive training and drills. NQS audits and surveillances of emergency preparedness were appropriate in scope and objectives, providing early identification of issues for resolution. Self critiques of exercises and drills were comprehensive and identified weaknesses were corrected.

Excellent performance was noted in the security area during this assessment period. Day-to-day implementation of the program elements continues to be of high quality. Self-assessment, which was noted as a weakness during the last assessment period, has improved dramatically. NQS audits and surveillances have been redirected to be more performance based. In addition, security management has developed an internal evaluation process to facilitate self-identification of program weaknesses. As a result, weaknesses are now self-identified and corrected prior to being identified by the NRC.

The fire protection program continues to be implemented in a generally excellent manner as evidenced by the last three fire free outages. A comprehensive Appendix R Fire Protection review, initiated in 1989, identified numerous issues for resolution. Most of these issues have been corrected, while those requiring significant engineering integration with plant processes continue to be systematically addressed.

For the majority of the evaluation period, housekeeping was good. There appeared to be a recent declining trend; however, management acknowledged the concern and initiated a program to improve the condition of the plant.

The performance rating is Category 1 in the Plant Support area.