U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Inspection Report:	50-275/94-08; 50-323/94-08
Operating License:	DPR-80 and DPR-82
Licensee:	Pacific Gas and Electric Company Nuclear Power Generation, B14A 77 Beale Street, Room 1451 P. O. Box 770000 San Francisco, California 94177
Facility Name:	Diablo Canyon Units 1 and 2
Inspection at:	PG&E Corporate Offices 333 Market Street San Francisco, California 94177
Inspection Conducted:	February 28, March 1 and 8, 1994
Inspector:	P. Narbut, Regional Team Leader

Approved by: C. A. VanDenburgh — 3-16-94 Date Signed
Acting Deputy Director
Division of Reactor Safety & Projects

Inspection Summary:

Areas Inspected (Units 1 and 2): Routine, announced regional inspection of PG&E's activities performed in response to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," issued on July 18, 1989. The inspection followed up the unresolved items identified in NRC Inspection Report 50-275, 50-323/93-36. Temporary Instruction (TI) 2515/118 and Inspection Procedure 40500 were used as guidance during this inspection.

Safety Issues Management System (SIMS) Items: None

Results (Units 1 and 2): Three apparent violations were identified involving:

- The failure to implement adequate design control measures to assure that the specifications and procedures associated with the Component Cooling Water Heat Exchangers maintained the system design basis for maximum system temperature (Section 2).
- The failure to provide complete and accurate information to the NRC regarding the results of the testing of these heat exchangers (Section 3.2).
- The failure to identify the cause and take timely corrective action for the failure of the CCW Heat Exchanger 1-2 to meet the test acceptance criteria for heat exchanger capacity on February 2, 1991 (Section 3.6).

Summary of Inspection Findings:

- Apparent Violation 50-275/94-08-01 was opened.
- Apparent Violation 50-275/94-08-02 was opened.
- Apparent Violation 50-275/94-08-03 was opened.
- Followup Item 50-275/94-08-04 was opened.
- Followup Item 50-275/93-36-01 was closed.
- Unresolved Item 50-275/93-36-02 was closed.
- Unresolved Item 50-275/93-36-03 was closed.
- Unresolved Item 50-275/93-36-04 was closed.
- Followup Item 50-275/93-36-05 was closed.
- Unresolved Item 50-275/93-36-06 was closed.
- Unresolved Item 50-275/93-36-07 was closed.
- Followup Item 50-275/93-36-08 was closed.

Attachments:

- Persons Contacted and Exit Meeting

DETAILS

1. BACKGROUND

The NRC issued Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," on July 18, 1989. The generic letter described recurring industry problems with the service water systems at nuclear power plants. Service water systems are important to plant safety as the ultimate heat sink following a design basis event. The generic letter recommended certain actions to be taken by licensees and required that each licensee advise the NRC of the programs to be implemented in response to the generic letter recommendations. PG&E Letter No. DCL-90-027, dated January 26, 1990, provided PG&E's response to the generic letter and committed to perform certain actions. PG&E Letter No. DCL-91-286, dated November 25, 1991, provided a supplemental response to the generic letter and reported the completion of the initial program actions.

NRC Inspection Reports 50-275, 50-323/93-36 examined the licensee's actions taken in response to Generic Letter 89-13. The inspection report identified a number of unresolved and followup items regarding the adequacy of the licensee's actions taken in response to the generic letter, and requested that the licensee address the items in a written response to the NRC. The licensee provided a response to the inspection report in PG&E Letter No. DCL-94-037, dated February 15, 1994. The response addressed each of the inspection items and stated that there were instances in 1987 and 1990 when the Auxiliary Saltwater System (ASW) may not have been operable. The response stated that a supplemental response would be provided when the results of the past operability study were completed. The results of that past operability study were documented in Licensee Event Report (LER) 1-93-012-01, "Auxiliary Saltwater System Outside Design Basis Due to Fouling," dated March 8, 1994.

2. ASW OPERABILITY AND DESIGN BASIS

NRC Inspection Report 50-275/93-36; 50-323/93-36, dated January 12, 1994, found that the licensee's heat exchanger test results showed that one ASW heat exchanger did not meet the acceptance standards for minimum heat transfer capacity established by the system design requirements. This raised a concern regarding the operability of the ASW system which the licensee subsequently determined to be temporarily acceptable due to the cold winter sea temperatures. Additionally, the test data appeared to contradict the licensee's statements to the NRC in their November 25, 1991, letter to the NRC regarding the acceptability of the test results.

In addition, the inspector found that the licensee had not assured that the ASW system maintenance and surveillance controls were sufficient to assure system operability. Specifically, the licensee had high differential pressure limits on the heat exchangers which allowed macrofouling to a degree that would apparently exceed the manufacturer's tube plugging limit and significantly reduce the heat removal capacity. This concern also affected the operability of the ASW system which the licensee subsequently determined to be temporarily acceptable due to the cold winter sea temperatures.

In general, the previous inspection concluded that the licensee had not developed a good engineering understanding of the effects of microfouling, macrofouling, and heat exchanger differential pressure and had not implemented adequate operational controls to ensure system operability. This was considered a significant failing due to the high safety significance of the

system and the number of opportunities the licensee had to address the issues. NRC concerns regarding system operability due to differential pressure had also been previously raised in NRC Inspection Report 50-275/88-11. The licensee responded to those concerns with assurances that the differential pressures were acceptable. Generic Letter 89-13 again focused attention on the issue of heat exchanger performance. The failed heat exchanger capacity test in 1991 should have initiated additional analysis and understanding, but did not. Finally, a QA surveillance in May 1993 raised the same heat exchanger performance issues, but did not result in an adequate technical response from the engineering organization.

In response to these concerns, during the period from December 1993 to March 1994, the licensee performed extensive calculations to assess the operability of the Auxiliary Saltwater (ASW) system during the periods of high microfouling and high macrofouling of the Component Cooling Water (CCW) heat exchangers. The results of those calculations were presented in PG&E Letter No. DCL-94-037, "Auxiliary Saltwater Operability," dated February 15, 1994; and Licensee Event Report (LER) 1-93-012-01, "Auxiliary Saltwater System Outside Design Basis Due to Fouling," dated March 8, 1994. The letter concluded that the ASW system was operable and capable of meeting its design basis for future operation. The LER also concluded that the ASW system had been operable, but not within its design basis for past operating periods. The licensee determined that the ability of the ASW system to meet its design basis was assured subsequent to the initiation of continuous chlorination of the system in September and November 1992 for Units 1 and 2 respectively.

During this inspection, the inspector reviewed Calculation No. M-963, Revision 0, File 140.061, dated March 7, 1994, which demonstrated the ASW system's past operability. The calculation was very complex, in that several sets of cases and assumptions were used by Westinghouse and the licensee's technical staff to support their conclusions. Westinghouse used five cases and the licensee used five cases with a variety of subsets. The cases all had variances and did not correlate on a one-for-one basis. Nonetheless, the licensee was able to demonstrate the basis of their conclusions using the calculations. However, the inspector noted that the licensee's determination of operability was based on the following four facts:

- First, the calculations depended on the 1991 heat exchanger capacity test results for the tests done in response to Generic Letter 89-13. As discussed in Inspection Report 50-275, 50-323/93-36, those tests were not well controlled and the microfouling and macrofouling conditions were not known and had to be later inferred by the licensee. The licensee has committed to perform additional tests to confirm the performance inferred by the tests.

- Second, the licensee appeared to essentially remove the margin in the calculations. For example, the licensee took advantage of a two percent tube plugging allowance provided by the manufacturer to increase the baseline heat removal capacity by two percent. Likewise, the calculations used actual ocean temperatures, rather than higher design basis ocean temperatures. Similarly, actual versus design values were used for containment initial temperature, reactor power, water temperature in the Refueling Water Storage Tank, and other parameters. This technical approach appeared credible to the inspector for assessing

past conditions, but left little of the conservative margin usually preserved for calculational uncertainties in predictions of performance.

- Third, the licensee took credit for operator actions which they considered credible at the time, but which were not in all cases part of the Emergency Operating Procedures (EOPs). Nevertheless, the licensee's assumptions appeared credible to the inspector.

- Fourth, the study was performed using the licensing basis model for mass and energy release which did not predict as severe conditions as the newer mass and energy release models. The licensee made an approximate correction for this difference.

The calculations concluded that no Final Safety Analysis Report (FSAR) design bases would have been exceeded during the injection phase of an accident. However, the calculation showed that later in the accident scenario during the recirculation phase, the Component Cooling Water (CCW) temperature would have exceeded the FSAR design basis peak temperature of 132 degrees Fahrenheit and would have exceeded 120 degrees for longer than the 20 minutes allowed by the FSAR design basis under the worst case conditions identified by the licensee to have actually occurred in the past. The calculation showed a range of results with temperatures up to a peak of about 139 degrees and times above 120 degrees of about 33 minutes. The licensee evaluated the Emergency Core Cooling System (ECCS) components affected by the increased CCW temperature and, after contact with Westinghouse and individual vendors, concluded that none of the components would have been adversely affected with the exception of the Centrifugal Charging Pumps (CCPs), which would have experienced bearing failures. However, the licensee noted that the CCPs were not required during the recirculation phase and would have been secured by the operators in response to high bearing temperature alarms. The licensee also concluded that the Post Accident Sampling System (PASS) would have been inoperable due to the elevated CCW temperatures. However, alternate means of core damage assessment would have remained available.

The calculations also showed that, in approximate terms: (1) a clean heat exchanger had about 20 percent margin, (2) a heat exchanger microfouled to the usual amount currently encountered with continuous chlorination and macrofouled to 140 inches of differential pressure would have no margin, and (3) a heat exchanger with the current typical amounts of microfouling and macrofouling would be somewhere in between.

Although the licensee's evaluation demonstrated the operability of the ASW system under past actual operating conditions, the licensee concluded in PG&E Letter No. DCL-94-037, "Auxiliary Saltwater Operability," dated February 15, 1994; and Licensee Event Report (LER) 1-93-012-01, "Auxiliary Saltwater System Outside Design Basis Due to Fouling," dated March 8, 1994, that the ASW system was not within its design basis for past operating periods. The licensee's failure to assure that the design basis as specified in the Final Safety Analysis Report (FSAR) was correctly translated into instructions and specifications for the operation and maintenance of the ASW system and the CCW heat exchangers, was considered an apparent violation (Apparent Violation 50-275/94-08-01).

3. OPEN ITEMS INSPECTION

The inspection examined the unresolved items and followup items identified in Inspection Report 50-275/93-36; 50-323/93-36 to determine their disposition.

3.1 (Closed) Followup Item 50-275/93-36-01, Review of Design Basis

This item concerned the perception that the licensee had adopted a revised design basis which had not been reviewed by NRR. The licensee's response, PG&E Letter DCL-94-037, dated February 15, 1994, clarified that the design basis had not changed from that which was described in the Final Safety Analysis Report (FSAR). The families of acceptance curves in WCAP-12526, Revision 1, "Auxiliary Salt Water and Component Cooling Water Flow and Temperature Study for Diablo Canyon Units 1 and 2," dated June 1992, were derived utilizing the proper design basis.

3.2 (Closed) Unresolved Item 50-275/93-36-02, Failure to Provide Complete and Accurate Information Regarding a Heat Exchanger Capacity Test

This unresolved item involved the adequacy of the results of a heat exchanger capacity test which had been performed on the Component Cooling Water heat exchangers. The licensee had reported to the NRC that the heat exchangers met their design heat removal capacity; however, the test data showed that one of the four heat exchangers did not meet this capacity.

Generic Letter 89-13 requested that licensees conduct a test program to verify the heat transfer capability of all safety-related heat exchangers. In PG&E Letter DCL-90-027, dated January 26, 1990, the licensee explained that they would perform a one-time heat exchanger performance test to confirm the baseline heat transfer capability of the heat exchangers. In PG&E Letter DCL-91-286, dated November 25, 1991, the licensee reported that they had performed the heat exchanger capacity test and stated that "...the computer model predicted that the heat exchanger would remove the design basis heat load at design conditions."

The inspector reviewed the results of the one-time heat exchanger test. The test methods and results were described in Field Test Report 420DC-91.1156, "Diablo Canyon Power Plant CCW Heat Exchanger Performance Tests Units 1 and 2," dated November 22, 1991. The test report showed that the computer prediction for Unit 1 Component Cooling Water Heat Exchanger 1-2 did not predict that the heat exchanger would remove the design basis heat load. Rather, the test results showed the heat exchanger capacity to be at 98.7 percent of design.

The licensee subsequently concluded and reported in PG&E Letter No. DCL-94-037, dated February 15, 1994, that the test results for the heat exchanger did not meet the projected design basis heat transfer requirements using the computer program chosen at the time. The licensee concluded that the heat exchanger was fouled by an abnormal amount of microfouling at the time of the test. The licensee also concluded that if a different, more commonly used, computer code had been used then the calculated test results would have been 101 percent of the design basis requirements vice 98.7 percent. The licensee stated in the February 1994 letter that they believed that their statement regarding test results in the November 1991 letter was accurate and complete

based on guidance in the generic letter and based on the inaccuracies of the testing methodology.

The inspector reviewed the guidance in the generic letter with the licensee and found only general discussions that indicated that the level of detail provided by licensee's should be sufficient to demonstrate the adequacy of their actions. Therefore, the inspector concluded that the licensee failed to provide complete and accurate information to the NRC in regards to the CCW 1-2 heat exchanger's ability to meet the design basis heat load. This failure is considered an apparent violation (Apparent Violation 50-275/94-08-02).

3.3 (Closed) Unresolved Item 50-275/93-36-03, Differential Pressure Limits for the CCW Heat Exchangers

This item involved the adequacy of the 140-inch differential pressure limit used by the licensee as an operational limit for macrofouling and heat exchanger operability. The inspector was concerned that the licensee's basis for this operating limit was essentially engineering judgement, rather than analysis or some other technical basis. The inspector's review developed a technical basis for a substantially lesser amount of differential pressure based on the manufacturer's tube plugging limit.

The licensee subsequently performed calculations of the effects of tube blocking on heat exchanger differential pressure utilizing the current expected amounts of heat exchanger microfouling (i.e., slime). These calculations reflected the use of continuous chlorination which the licensee demonstrated had reduced the amount of microfouling. The licensee then used the reduced amount of microfouling to increase the allowed amount of macrofouling.

The licensee concluded that the operational limit of 140 inches was appropriate. However, to achieve this conclusion the licensee performed flow testing in February 1994 and then projected the results to include the more difficult conditions of low tide, cross-train flow configuration, and an ocean temperature of 64 degrees. The results of that calculation (Calculation No. M-962, Revision 0) showed that a differential pressure of up to 134 inches (not 140 inches) could be tolerated and provided the necessary amount of flow for design basis cooling. This calculation was based on the limited 1991 heat capacity test results and showed that the 134 inch differential pressure was achieved with a total blockage of about 250 tubes. The licensee then used a qualitative assessment to judge that a value of 140 inches would be an appropriate limit. This assessment was based on the opinion that the blocked tubes would not be totally blocked but would allow some flow and cooling to occur. The inspector concurred with the licensee's observation that the heat exchanger tubes do not generally become fully blocked by the mussels and barnacles typically found in the heat exchangers.

The licensee attempted to correlate these calculational results with results from biomass surveys which had sometimes been done during heat exchanger cleanings. However, the data did not correlate well and showed a wide variance in the number of marine creatures removed at any given differential pressure. It was the opinion of the licensee's marine biologist that, the calculated number of blocked tubes (about 250) roughly agreed with the usual condition at 130 inches of differential pressure.

The inspector concluded that the licensee calculations demonstrated that the differential pressure limit of 140 inches was sufficient to provide design basis cooling if the amount of microfouling assumed and the heat exchanger capacity assumed were correct. However, the inspector noted that the calculations did not demonstrate that any significant margin existed in the 140 inch limit.

The licensee stated in PG&E Letter No. DCL-94-037, dated February 15, 1994, that they recognized the limitations of the calculational model. The letter also stated that additional functional tests of the heat exchangers would be performed during the 1994 refueling outages and that PG&E would reassess the 140 inch limit based on the test results.

3.4 (Closed) Unresolved Item 50-275/93-36-04, Routine Inspection and Maintenance of the ASW System Piping

This item concerned the licensee's apparent failure to develop and implement a routine inspection program for ASW piping as committed in PG&E Letter DCL-90-027, dated January 26, 1990, and as stated as complete in PG&E Letter DCL-91-286, dated November 25, 1991.

Generic Letter 89-13 recommended that a routine inspection and maintenance program for the service water system piping and components be established so that corrosion, erosion, coating failure, silting, and biofouling would not degrade the performance of the system. In PG&E Letter DCL-90-027, dated January 26, 1990, the licensee stated that they would develop a program and that procedures for a routine piping inspection and maintenance program for the ASW system would be established by the 1991 fourth refueling outages of Units 1 and 2. In PG&E Letter DCL-91-286, dated November 25, 1991, the licensee stated that they had established a routine piping inspection and maintenance program.

The inspector had previously concluded that the inspection program had not been implemented as stated based on the apparent fact that the procedure for inspection had not been issued and the frequency of inspection had not been selected. During this inspection, the licensee stated that they considered that the inspection program had been implemented based on two open action items which documented their decision on frequency of the inspection and the intent to issue a permanent plant procedure based on their temporary procedure. Specifically, the licensee had previously provided the inspector a copy of open Action Request (AR) No. A0221696, dated March 6, 1991, which requested that the temporary inspection procedure be made a permanent plant procedure and that a regular inspection frequency be established. Additionally, the licensee provided AR A0245348, dated September 30, 1991, which had not been presented during the previous inspection. This action request was directed to the system engineer from the design engineer and requested that a frequency be established for the internal piping inspections. An electronic response, dated November 22, 1991, stated that the frequency would be every fourth refueling outage, with the option to change the frequency based on experience.

Based on the above, the inspector considered that the licensee had satisfactorily demonstrated that they had determined the frequency of the inspection and had an internal action item to prepare a permanent plant

procedure to perform the inspection. Therefore, the inspector considered that the licensee's statement to the NRC in letter DCL-91-286, dated November 25, 1991, that "The procedures and inspections for this program have been established and were performed during the Units 1 and 2 fourth refueling outages, and frequencies of performance were established or confirmed in response to the observations during these outages." was sufficiently complete and accurate. This unresolved item is considered closed.

3.5 (Closed) Followup Item 50-275/93-36-05, Confirmation of the Licensing Basis of the ASW System

This item concerned an assessment of the need for the licensee to reperform a review of the adequacy of their design bases for the ASW system which had been performed for Generic Letter 89-13. The question arose from the inspector's questions regarding the adequacy of the licensee's understanding of their macrofouling and microfouling limits and also from the licensee's quality assurance audit findings regarding pump runout conditions.

In PG&E Letter No. DCL-94-037, dated February 15, 1994, the licensee stated that additional testing of the CCW heat exchangers would be done in 1994 to assure that the heat exchangers met their design basis. Additionally, the letter stated that a team (consisting of operations, quality services, maintenance, Westinghouse, and engineering) would thoroughly and critically review the ASW, CCW, and interfacing systems by the end of 1994. The letter also stated that the design basis document would be revised appropriately. Based on the licensee's committed actions, this item is considered closed.

3.6 (Closed) Unresolved Item 50-275/93-36-06, Failure to take Timely Action

This item concerned the licensee's slow resolution of problems adverse to quality. The licensee had identified that CCW heat exchanger 1-2 failed to meet its test acceptance criteria in a test conducted on February 2, 1991. The test failure was documented in Field Test Report 420DC-91.1156, "Diablo Canyon Power Plant CCW Heat Exchanger Performance Tests Units 1 and 2," dated November 22, 1991. The test failure was also identified during a Quality Assurance (QA) surveillance and documented on Action Request No. A03066715, dated May 10, 1993. The effect of the test failure on ASW system operability was not resolved until after the issues were identified by the NRC inspector in NRC Inspection Report 50-275/93-36; 50-323/93-36.

As previously discussed in Section 2.0 of this report, the licensee concluded that the ASW system had been operable, but outside its design basis for periods prior to September 1992 when continuous chlorination of the system was initiated. These conclusions were provided to the NRC in a 10 CFR 50.72 report made on December 30, 1993. The licensee also documented their conclusions in PG&E Letter DCL-94-049, dated March 8, 1994, which provided Licensee Event Report 1-93-012-01, "Auxiliary Saltwater System Outside Design Basis Due to Fouling." The report concluded that on August 23, 1990, and perhaps dates prior to and subsequent to that date, the CCW heat exchangers for both units may have had sufficient fouling to have precluded the systems from meeting their design bases.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states that conditions adverse to quality are promptly identified and corrected. The

criterion further states that, in the case of significant conditions adverse to quality, the cause of the condition should be determined.

The failure of the ASW system to have met its design basis is considered a significant condition adverse to quality. Subsequent to the CCW heat exchanger 1-2 capacity test failure on February 1, 1991, the licensee failed to promptly identify, correct, or fully determine the cause of the test failure. The determination was made in February 1994 in response to Inspection Report 50-275/93-36; 50-323/93-36.

The failure to identify the cause and implement timely corrective actions for this condition adverse to quality is considered an apparent violation (Apparent Violation 50-275/94-03).

3.7 (Closed) Unresolved Item 50-275/93-36-07, Use of a Computer Code that had not been Validated

This item concerned the licensee's use of a computer code which had not been validated for accuracy. The code was used to calculate the heat exchanger capacity for the CCW heat exchanger capacity tests done in response to Generic Letter 89-13. During this inspection, the licensee demonstrated that the results of the code used were conservative compared to the code generally utilized by the industry to analyze heat exchanger capacity. Additionally, the licensee demonstrated that the NRC had indicated, in Generic Letter 89-13 Supplement 1, "Questions and Answers," that it was willing to accept off-the-shelf software.

3.8 (Closed) Followup Item 50-275/93-36-08, Scaling of Heat Exchanger Tubes

This item concerned scaling on the inner diameter of the CCW heat exchanger tubes. The scaling was located only at the outlet end of the heat exchanger in the tube sheet area. The system engineer had stated that the cause of the scaling was deposits from seawater caused by the impressed voltage system for cathodic protection of the ASW piping. The system engineer had further stated that the scaling was deposited for a short length and would not affect the available heat transfer area or tube fouling factor. The inspector was concerned that the scaling could cause the tubes to plug at the outlet end, which would not be detected by the periodic cleaning and inspection of the inlet end. The system engineer had indicated that such tube end plugging had not been seen and that only a small amount of scaling had been seen. The inspector noted that the system engineer interviewed at the time of the December 1993 inspection was new and was not the engineer who had performed the inspections of the heat exchangers.

During this inspection, the inspector determined by a review of past heat exchanger records from April 1992, that heat exchanger scaling had proceeded to such an extent in CCW Heat exchanger 2-1 that 7 of the 20 tubes examined by a video camera, had become completely blocked at the outlet end, and 3 additional tubes were partially blocked. This heat exchanger had not had the normal outage maintenance of tube scraping performed during the previous refueling outage due to an outage management decision according to the licensee. The lack of tube scraping in the previous outage was attributed as the cause of the observed tube blockage.

The inspector noted that the licensee's response to the December inspection provided in PG&E Letter DCL-94-037, dated February 15, 1994, stated that the licensee considered that there was a low potential for tube plugging and that tube plugging would be detected by heat exchanger differential pressure. The inspector noted that this statement appeared to contradict the inspection data for CCW Heat Exchanger 2-1. In explanation, the licensee stated that the statement regarding the low probability of tube plugging was made reflecting the revised maintenance policy which required tube scrapping each outage.

The February 1994 response also stated that the licensee would change their monthly surveillance procedure to add trending of the differential pressure across the heat exchanger. The inspector noted that differential pressure trending would not provide data on the rate and degree of scale buildup. It appeared to the inspector that the licensee had assumed, rather than demonstrated, that scraping once an outage would prevent tube blockage. Factors such as the level of voltage used for cathodic protection were not assessed for their affect on the rate of scale buildup. At the exit interview, the licensee committed to trend the rate of scale buildup in the CCW heat exchangers and to assess the adequacy of the impressed voltage.

4. INSTRUMENT LINE SILTING

During testing conducted in February 1994 the licensee found that silting of the differential pressure instrument lines had occurred. The silting caused errors in the indicated differential pressure across the heat exchanger estimated by the licensee to be up to 25 inches. The licensee stated that they would establish a regular cleaning maintenance task to preclude repetition. The licensee had not assessed the significance of the silting. This is a followup item (Followup Item 50-275/94-08-04).

ATTACHMENT

PERSONS CONTACTED

Pacific Gas and Electric Company

+*W. H. Fujimoto, Vice President, Nuclear Technical Services
M. J. Angus, Manager, Technical and Support Services
J. A. Sexton, Manager, Nuclear Regulatory Services
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Contractor for Pacific Gas and Electric Company

R. J. Bell, Director of Engineering, Heat Exchanger Systems, Inc.
F. L. Steinert, Senior Scientist, Aquatic Systems Inc.

*Denotes those attending the exit interview on March 1, 1994.
+*Denotes those attending the exit interview on March 8, 1994.

EXIT MEETING

An exit meeting was conducted on March 1 and March 8, 1994, with the licensee representatives identified above. The inspector summarized the scope and findings of the inspection as described in this report. The licensee did not identify as proprietary any of the materials reviewed by or discussed with the inspectors during this inspection with the exception of some of the Westinghouse calculations which were marked as "Proprietary Class 2."