

UNITED STATES NUCLEAR REGULATORY COMMISSION PEDION V 1450 MARIA LANE, SUITE 210 WALNUT CREEK, CALIFORNIA 94596

Ducket No. 50-275

 Memorandum for:
 H. Denton, Director, Nuclear Reactor Regulation

 From:
 J. B. Martin, Regional Administrator, Region V

 Subject:
 Pacific Gas and Electric Company, Diablo Canyon Unit 1,

Reinstatement of License

Based on the results of our inspection efforts, we have determined that Construction and Preoperational Testing of the subject facility have been completed in substantial agreement with docketed commitments and regulatory requirements, with the exception of items indicated in the enclosures. With

the exception of noted items, we have completed our inspections in accordance with the requirements contained in MC 2500. The remaining construction, tearing, and inspection items identified in the enclosures have been categorized with recommended mandatory completion milestones.

As part of our inspection efforts, we have reviewed the licensee's implementation of the Quality Assurance Program for Operations, and have found that they meet the requirements of 10 CFR 20, Appendix B, as specified in the licensee's Quality Assurance Program (Chapter 17 of the FSAR), which was reviewed by the Office of Nuclear Reactor Regulation.

> John B. Martin Regional Administrator

cc W/cnclosure: R. DeYoung, IE/IIQ D. Eisenhut, NRR G. Kuighton, NRR H. Schierling, NRR T. Bishop, RV D. Kirsch, RV J. Crews, RV F. Morrill, RV M. Mendoncs, RV Enclosures (5): Status Summary

A. Items to be Completed Before Recinding the License Suspension
B. Items to be Completed Before Fuel Loading
C. Items to be Completed Before Initial Criticality
D. Items to be Completed Before Exceeding 5% Power

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STATUS SUMMARY

INSPECTION PROGRAM

The status of the inspection program, prescribed by MC2512, 2413, and 2514 has been reviewed. The inspections prescribed by MC2512 and 2513 are complete and MC2514 was current, consistent with present plant and testing status.

ENFORCEMENT ITEMS

The status of inspection closeout of enforcement items was reviewed. The licensee has submitted the required responses to all citations, which were evaluated and determined to be acceptable, with one exception. The licensee's response to an item of noncompliance involving records of welder qualification was found to be incorrect (Inspection Report 50-275/83-13). The licensee has resubmitted a corrected response explaining how the error occurred and what will be done to prevent this in the future. This response has been evaluated by the Region V staff and found acceptable. The Office of Investigation (01) has been tasked to examine the circumstances surrounding the submittel of the incorrect response to that Notice of Violation. Of's current schedule for completion of licensee personnel interviews is October 28, 1983. The Region V staff will complete an evaluation of this information within five working days of receipt of the completed interviews from OI.

TESTING PROGRAM

The licensee has completed the preoperational test program and is now ready to conduct the zero power, low power, and power ascension test programs. Portions of systems modified as a consequence of the Independent Verification Program and the licensee's Internal Technical Programs have been retested by the licensee. Procedures for all required start-up tests have been developed and have either been approved or are in the final stages of the approval process. The licensee's "Operational Readiness" letter of August 10, 1983 combined with commitments subsequently made to the NRC staff appear to meet our requirements for hot functional testing with a few exceptions. The exceptions (such as testing of check valves) are being evaluated by the Region V staff on a case-by-case basis.

CONSTRUCTION STATUS

Construction is nearly complete, but still continuing in Unit 1. Final analyses by PG&E and reviews by the Independent Verification Program will result in relatively minor changes to some structural members. Rupture restraint and pipe support clearances will need to be checked and adjusted during and after heat-up of the associated systems. Licensee cold walkdowns of large bore piping systems should minimize interference problems occurring during heat-up and expansion of piping systems.

The construction of Unit 2 is just beginning to pick up. Substantial construction is ongoing in the Unit 2 containment and major construction activity related to supports and hangers is expected. Some clean-up work needs to be done at the south end of the Unit 2 Fuel Handling Building. Portions of the modifications to Unit 2 will be different from those of Unit 1.

ENCLOSURE A

ITEMS TO BE COMPLETED BEFORE RECINDING THE LICENSE SUSPENSION

The licensee's response to an item of noncompliance related to welder qualification records was found (by the Region V staff) to be incorrect (inspection Report 50-275/83-13, item 83-13-02, licensee letter Schuyler to Martin, dated June 20, 1983). The licensee has submitted a revised response dated September 16, 1983, which has been reviewed by the Region V staff and found acceptable. This situation and the circumstances which led to it must be resolved prior to reinstatement of the license to identify the root cause of the breakdown in the licensee's wanagement system which allowed an incorrect and inadequate response to be sent to the NRC. The Office of Investigations is acheduled to complete interviews of licensee personnel by October 28, 1983. Region V will complete an evaluation of this information within five working days of receipt of the completed interviews.

The licensee must either evaluate or repair the gouges in the Reactor Coolant System piping identified in Inspection Report 50-275/83-17 (follow-up item 83-17/05).

ENCLOSURE B

ITEMS TO BE COMPLETED BEFORE FUEL LOADING

CONSTRUCTION

The construction resulting from the licensee's Internal Technical Program (ITP) and the Independent Verification Program (IDVP) is continuing. The Region V staff believes construction in the following areas must be complete prior to fuel loading.

- Containment, including the dome service crane, the connections in the annulus and any other construction work involving lifting heavy steel components or welding.
- (2) Control room, including modifications to the control cabinets and the HVAC system.
- (3) Compartments and rooms containing equipment which is required by Technical Specifications depending upon the mode of plant operations.

OPERATIONS

The licensee recently requested twenty-six exemptions to the fire protection requirements of 10 CFR 50, Appendix R. Five of the exemptions were not granted. Corrective actions related to these five items should be implemented prior to fuel load as described below (NRC memo, Johnston to Novak, dated September 7, 1983).

(1) Coutsimment (Fire Area 1)

Provide a non-combustible radiant energy shield between redundant divisions of reactor coolant temperature instrumentation and circuits for the pressurizer liquid level instrumentation where they are located within twenty fect of each other.

(2) Penetration Area (Fire Area 3-BB)

Provide (i) area wide automatic fire detection and fire suppression systems on the 85, 104, and 115 foot elevations, (ii) twenty foot separation or a one-hour fire barrier between redundant shut-down divisions, and (iii) three-hour rated fire doors and dampers in the openings in the three hour rated perimeter walls.

(3) Fire Doors

Approximately fifty percent of the U.L. listed 3 and 12-hour fire rated doors in the plant have been installed in unlisted frames. In addition, doors of metal construction that are not fire rated have been installed in both listed and unlisted frames in several areas. Also, unlisted wetal panels, installed in conjunction with doors, have been provided for protection of large fire area barrier openings meeded for equipment access. The doors, frames and panels must be analyzed by an independent testing laboratory. The licensee has not identified all of the areas where unlisted frames and metal panels have been installed. No fire bazard analyzes was performed or compensating fire protection identified. Consequently, the magnitude of the fire safety problem as it relates to Appendix R compliance is at this time unknown.

(4) Emergency Lighting

Provide either (i) eight-hour battery powered lighting for all areas needed for operation and access to safe-shut down equipment or (ii) provide sufficient information to NRR to complete an independent reliability review of the AC electrical system.

(5) <u>RCP Oil Collection System</u>

Provide either (1) oil holding tank(s) large enough to hold the entire lube oil system inventory for the RCPs, or, (ii) compensatory fire detection and sprinkler systems to protect redundant safe shut down divisions.

The licensee must complete a cold walkdown of all "large borc" and selected "small bore" safety related piping to verify that there are no interferences for anticipated pipe thermal movements. The gaps on rupture restraints and pipe supports must be adjusted based upon the findings of this walk-down data prior to loading fuel.

The licensee must complete appropriate surveillance tests and verifications, as committed in their August 10, 1983 "Operational Readiness" letter, as the systems and components are required by the Technical Specifications.

SAFEGUARDS

The licensee's security system must be fully operational for 30 days prior to fuel loading. As of October 6, 1983 licensee personnel stated to the Region V staff that they have not implemented the "two-man" rule, which is part of the approved security plan. At the same time, NRR has not approved the licensee's request to eliminate the two man rule. Consequently, the thirty days does not appear to start until the licensee implements the two man rule or NRR approves the licensee's request to eliminate the two man rule.

A routine inspection was last conducted January 17-27, 1983 of the physical security program as implemented (Inspection Report 50-275/83-01, IE-V-543). No identified deficiencies from that inspection remain uncorrected which would preclude the reinstatement of the operating license.

ENCLOSURE C

ITEMS TO BE COMPLETED BEFORE INITIAL CRITICALITY

CONSTRUCTION

Essentially all construction should be completed in Unit 1 before initial criticality. Exceptions include routine maintenance, adjustment of gaps on rupture restraints, and minor changes necessitated by the start-up testing program.

OPERATIONS

The licensee must satisfactorily complete the relevant portions of the start-up test program. Specific tests or calibrations of concern are listed below.

- The Reactor Coolant System (RCS) saturation meter calibration, reactor vessel head vent test, and reactor vessel level indication calibrations must be completed prior to initial criticality.
- (2) Westinghouse personnel must be on shift in the control room/plant prior to initial criticality.
- (3) Complete the selective examination of large and small bore piping thermal movements to validate the piping system thermal analyses. The licensee should report to the NRC the results of the walkdown and corrective actions taken or planned prior to initial criticality. Some examinations (feedwater system for example) will have to be done later since that piping will not reach full operating temperature until the plant is at 100% power.

The licensee must also have installed a plant announcing and communications system as discussed at last year's Systematic Appraisal of Licensee Performance meeting, and at the September 7, 1983 "Readiness for Operations" meeting.

ENCLOSURE D

ITEMS TO BE COMPLETED BEFORE EXCEEDING 5% POWER

OPERATIONS

The licensee must satisfactorily complete the relevant portions of the start-up test program prior to exceeding 5% power.

- (1) The Reactor Coolant System (RCS) leak rate test, pressurizer heater test, and 48 hour auxiliary feed water pump endurance test must be completed prior to initial criticality (NUREG 0737 III.D.1.1, II.E.3.1.1, and II.E.1.1 respectively).
- (2) The safety parameter display system must be operable and associated procedures for operations personnel must be implemented prior to exceeding 5% power (NURRG 0737, I.D.2).
- (3) The Westinghouse review of the power ascension test program must be completed.

RADIATION PROTECTION

The implementation of some NUREG-0737 items has not been completed, and there are concompliant inconsistencies or omissions in the Technical Specifications. (Memo, Bishop to Knighton, dated August 23, 1983 which describes these items and our recommendations regarding their resolution).

The licensee's Core Damage Estimate Procedure is not consistent with the guidance being provided to operating reactors or other near term operating licensees. Prior to exceeding 5% reactor power the licensee should have an adequate Core Damage Estimate Procedure which has been reviewed by NRR and is based upon operable portions of the licensee's Post Accident Sampling System.

These matters have been discussed with Mr. B. Buckley and J. Boebli of NRR by Mr. E. Garcia of the Region V staff.

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