



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

OCT 14 1983

MEMORANDUM FOR: J. B. Martin, Regional Administrator

FROM: T. W. Bishop, Director, Resident, Reactor
Projects and Engineering Programs Division

Subject: RESULTS OF THE DIABLO CANYON UNIT 1 LICENSE
REINSTATEMENT REVIEW PANNEL CONSIDERATIONS

In accordance with your previous direction, the Review Pannel met on October 12, 1983 to consider the status of Unit 1 and the basis for the reinstatement of the low-power license recommendations. The attendance was as follows:

D. Kirsch, Chairman, RV
M. Mendonca, Senior Resident Inspector, RV
P. Morrill, Reactor Inspector, RV
F. Wenslawski, Chief, Reactor Radiation Protection Section
L. Norderhaug, Chief, Safeguards and Emergency Preparedness Branch, RV
D. Schuster, Chief, Security Licensing and Emergency Preparedness Section
G. Hernandez, Reactor Inspector, RV
E. Garcia, Radiation Protection Specialist
G. Knighton, Chief, Reactor Operations Branch No. 3, NRR
H. Schierling, Diablo Canyon Project Manager, NRR
B. Buckley, Diablo Canyon Project Manager, NRR

A copy of the draft "Readiness for Operations" memorandum prepared by Mr. Morrill was reviewed (enclosure 1) for accuracy and completeness. This memo had been previously reviewed by Mr. Crews of the Region V office and revised by Mr. Morrill. The following issues were discussed with the stated resolution or assignment of responsibility.

1. The Region V inspection program for Diablo Canyon is up-to-date. There is one outstanding item of noncompliance regarding records of welder qualifications. The licensee's response was found to be incorrect. The Office of Investigations is scheduled to complete an investigation of this issue by October 28, 1983 with the Region V staff (Mr. Morrill and Kirsch) completing an evaluation of this information within five working days of OI's completed investigation. This item should be closed out prior to reinstatement of the license.

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OCT 14 1983

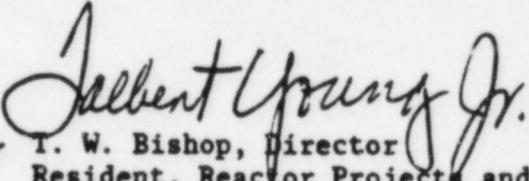
2

2. In a letter dated February 25, 1983, the licensee committed to reinstate the approved security program thirty days prior to loading fuel. As of October 12, 1983, the licensee had not reinstated the two-man-rule (which is a part of the approved security program) on the basis that a request for deleting this portion of the program had been filed with the NRC and approval was expected forthwith. NRR and Region V personnel stated that they had told licensee personnel repeatedly in the past that this approach did not appear acceptable, in that the thirty day clock would technically start when either the approved plan was reinstated (including the two-man-rule) or the plan (implemented without the two-man-rule) was changed. Since the deletion of the two-man-rule was approved just before the meeting it was agreed that NRR (Mr. Knighton) would determine when the thirty days was to start, and the Region V staff would verify the licensee's compliance during a routine inspection.
3. The licensee has requested twenty-six exemptions to the fire protection requirements of 10 CFR 50, Appendix R, of which twenty-one were granted by NRR. The Region V staff stated that the remaining five exemptions, which represent omissions and inadequacies in the fire protection of the plant, should be dealt with by the licensee prior to loading fuel. NRR personnel (Mr. Knighton) stated that they were aware of these items and would determine the required licensee action and schedule.
4. During a meeting open to the public, on September 7, 1983, the lack of the plant announcing system was raised by the NRC staff. The licensee had committed to consider such a system, but had evidently placed it on a "back-burner". The Region V staff stated that it was their understanding that an announcing system was to be installed prior to initial criticality. NRR personnel stated that there was no regulatory requirement for such a system. At the request of NRR, Region V personnel (Mr. Morrill and Schuster) stated that they would follow-up this issue with Regional emergency preparedness personnel to develop additional justification.
5. The licensee does not have a core damage estimate procedure consistent with other near-term or operating licensees. At the same time, the implementation of some NUREG-0737 items in the radiation protection area has not been completed and there are several concomitant inconsistencies or omissions in the Technical Specifications. These items should be resolved before the full power license is granted. NRR personnel (Mr. Knighton) stated that they were aware of these items and would resolve them prior to granting the full power license.
6. Regarding allegations, it was agreed that Region V (Mr. Morrill) would compile a list of allegations and their status and forward a copy of that list to NRR personnel. This list is attached as enclosure (2) to this memorandum.

OCT 14 1983

3

7. The senior resident inspector observed that the Reactor Coolant System leak rate tests had been completed with the exception of tests which would require significant radioactivity in the primary coolant system. Since this will require a significant reactor power history it should be deleted from the items to be completed prior to exceeding 5% power. Mr. Morrill agreed to make this change.
8. The personnel present had no additional changes or comments regarding the "Readiness for Operations" memorandum or the status of issues related to Diablo Canyon Unit No. 1. The meeting adjourned at 2:00 October 1983.

for 
I. W. Bishop, Director
Resident, Reactor Projects and
Engineering Programs Divisions

Enclosures:
As Stated

cc w/o enclosures:
All Region V Attendees
R. Fish, RV

cc w/enclosure 2:
O. Shackelton, OI, RV
All NRR Attendees

cc w/enclosure 1 and 2:
J. Crews, RV



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

Docket 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, testing, 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 50, 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/enclosure:
R. DeYoung, IE/HQ
D. Eisenhut, NRR
G. Knighton, NRR
H. Schierling, NRR
T. Bishop, RV
D. Kirsch, RV
J. Crews, RV
P. Morrill, RV
M. Mendonca, 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

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 (OI) has been tasked to examine the circumstances surrounding the submittal of the incorrect response to that Notice of Violation. OI'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 management system which allowed an incorrect and inadequate response to be sent to the NRC. The Office of Investigations is scheduled 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.

- (1) 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) Containment (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 feet 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 1½-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 metal panels, installed in conjunction with doors, have been provided for protection of large fire area barrier openings needed 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 hazard analyses 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) RCP Oil Collection System

Provide either (i) 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 bore" 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.

- (1) 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 (NUREG 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 concomitant 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.

ENCLOSURE 2

DIABLO CANYON - ALLEGATION & INVESTIGATION SUMMARY

ALLEGATION
NUMBER

DESCRIPTION, ASSIGNMENT, AND CURRENT STATUS

- N.A. An anonymous person met with NRR personnel and alleged design deficiencies in the Component Cooling Water system. NRR had lead responsibility. This item was closed out by Supplement 16 to the Safety Evaluation Report (SER).
- N.A. An NSC Audit of PG&E in 1977 (apparently very critical of Pullman construction work) was introduced by the Governor's representatives on a motion to have construction Quality Assurance hearings. Region V is assigned responsibility to follow-up. The audit and the PG&E response have been examined. Remaining open issues are being examined at the site October 11 - 14, 1983. The Region V staff does not feel the NSC audit changes the position previously taken by Region V.
- N.A. Allegations of welding and quality assurance deficiencies in "super-strut" material, were initially followed-up by Region V to verify adequate implementation of quality assurance programs and regulatory requirements by the licensee. NRR has responsibility to close remaining design issues with a supplement to the SER and to inform Region V if any additional requirements are to be placed on "off-the-shelf" material.
- N.A. Eight anonymous allegations regarding design were forwarded by the intervenors' attorney to NRR in May 1983. NRR has repeatedly attempted to talk to the alieger, with no success. NRR has the responsibility to close this issue out, possibly with a supplement to the SER.
- 83-18 An ex-licensure employee alleged that health physics personnel were not qualified to ANSI requirements, the ALARA program was a paper tiger, and some radiation monitors were not sensitive enough. Region V radiation protection inspection staff has the responsibility to follow-up and close-out these items.
- 83-29
and
83-33 An August 11, 1983 licensee contractor employee alleged there were deficiencies in the use of "red-head" anchors for raceway supports, and that the Foley company was not documenting nonconformance reports issued by field inspectors. The Region V examination of these allegations has resulted in a licensee technical evaluation of the "red-head" anchors, and changes to the Foley procedures to insure all NCRs are documented and dispositioned. These allegations are expected to be closed out in a routine Region V inspection report.

- 83-34 On September 7, 1983, during the readiness for operations meeting, Ms. S. Silver of the Mothers for Peace raised five issues. These items have been identified to all parties in the NRC meeting minutes. Follow-up responsibility of these items has not been assigned.
- 83-38 A representative of Governor's office received and forward anonymous allegations regarding inadequate electrical circuit pull records to NRR. Lead responsibility has been transferred to Region V on October 4, 1983. This item is scheduled for resolution by October 19, 1983. It is likely that this schedule will slip by two to four weeks due to lack of inspection resources.
- 83-39 Mr. C. Nieburger, a member of the staff of the San Luis Obispo Telegram-Tribune, informed the Resident Inspector that he had received allegations that welder qualifications could be purchased. The matter was transferred to the Region V field office of the Office of Investigation on October 13, 1983 to follow-up this item as it related to Diablo Canyon.
- 83-41 An unsigned letter alleging errors in design and documentation of the Diablo Canyon project (apparently written by project personnel) was received by the Region V office on October 12, 1983. Lead responsibility was transferred to NRR on October 12, 1983.
- 83-42 Subsequent to the readiness for operations meeting on September 7, 1983, Ms. S. Silver of the Mothers for Peace, expressed a second-hand allegation regarding pitting of the main steam and feedwater piping. This issue has been verified to be true by the Resident Inspector who has been in contact with Ms. Silver and has obtained a committment from the licensee to complete and engineering evaluation of the pitting problem. This item is expected to be closed out in a routine Region V inspection report.