

ENCLOSURE

DIABLO CANYON UNIT 1
DOCKET NO. 50-275

ANNUAL REPORT OF FACILITY CHANGES
OCTOBER 1, 1983 - SEPTEMBER 30, 1984

Pacific Gas and Electric Company

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Diablo Canyon Unit 1
Docket No. 50-275

SUMMARY OF FACILITY CHANGES FOR ANNUAL REPORT
OCTOBER 1, 1983 - SEPTEMBER 30, 1984

<u>No.</u>	<u>Change Identification</u>	<u>Description</u>
1	DC1-OE-293R1	Main Steam Line Isolation Monitor Light Box
2	DC1-EE-1140	125Vdc Batteries and 250 Vdc Switchgear Relocation
3	DC1-EE-1196	Station Battery
4	DC1-EC-1250	Station Battery
5	DC1-EC-1362R1	Extend ASW Pump Ventilation Shaft
6	DCO-GE-2659	Electrical Splicing Details at the Penetration Outside Containment
7	DC1-EE-3041	Instrument AC 7 5KVA Inverters
8	DC1-EM-3174R1	Emergency Borate System
9	DC1-EE-3182	Diesel Generator Tach Pack Power Supply
10	DC1-EC-3328	Auxiliary Saltwater System Vacuum Breakers
11	DC1-EH-5528R8	480Vac Switchgear Room Ventilation System
12	DC1-EM-7148	Component Cooling Water System
13	DC1-EH-7948	Mechanical Equipment Room HVAC
14	DCO-EE-9732R1	RTV Silicone Fire Sealant
15	DC1-EM-11437	RCP Motor Lower Bearing Oil Cooler
16	DC1-EH-11877R2	Cable Spreading Room Ventilation System
17	DC1-EE-13620	Reactor Protection System
18	DC1-EE-13853	Pipe Break Isolation System
19	DC1-EJ-17548	Residual Heat Removal System
20	DC1-EE-19564	Auxiliary Building Ventilation System
21	DCO-EM-110R2	Diesel Fuel Oil Storage Tank Vents
22	DCO-EM-1048R1	Main Steamline Radiation Monitor
23	DC1-EE-1057R1	Main Control Board Recorders
24	DC1-EE-1240	4 16KV Bus F, G, and H Relay Settings
25	DCO-EM-1289	Mechanical Panel Moisture Seals

DESCRIPTION OF FACILITY CHANGES WHICH AFFECT THE
PLANT AS DESCRIBED IN THE SAFETY ANALYSIS REPORT

1. DC1-OE-293R1, Main Steam Line Isolation Monitor Light Box

This change improves the operation of monitor light box D to alert the control room operator to a main steam isolation signal by sealing in alarm windows regardless of the duration of the isolation signal.

Safety Evaluation Summary

This change improves the display of plant conditions for control room personnel. The change does not affect operation of the Main Steam Isolation Valves (MSIVs) or other safety related equipment.

2. DC1-EE-1140, Non-Vital 125/250 Vdc System

This change provides a new non-vital 125/250 Vdc system. Two of the existing three 125 Vdc batteries and the 250V switchgear were relocated to the turbine building. The existing dc intertie between Unit 1 and Unit 2 was removed.

Safety Evaluation Summary

The removal of non-safety related loads from the Class 1E dc power supply enhances the reliability of the Class 1E dc system. The reliability of the non-vital 125/250 Vdc system is unchanged.

3. DC1-EE-1196, Station Battery

This change replaces some battery cells, modifies the battery racks to fit the smaller cells, and modifies the vital dc system to establish a new non-vital 125/250 Vdc system in conjunction with reported item 2 (DC1-E-E-1140).

Safety Evaluation Summary

The NRC approved revisions to Technical Specification 3/4.8.3 to reflect changes in the Class 1E 125 Vdc system and 125/250 Vdc non-vital system. Removal of non-safety related loads from the Class 1E dc power supply enhances the reliability of the Class 1E dc system.

4. DC1-EC-1250, Station Battery

This change provides a battery room in the turbine building for the batteries which supply non-class 1E 125/250 Vdc loads. Ventilation is provided to limit hydrogen concentration to less than 2 percent by volume at any location within the area. Class 1E annunciation is to be provided on a loss of ventilation.

Safety Evaluation Summary

The battery room was designed to protect adjacent safety equipment from the potential buildup of hydrogen gas while recharging the batteries.

5. DC1-EC-1362R1, Extend ASW Pump Ventilation Shaft

This design change increases the height of the Auxiliary Salt Water (ASW) pump ventilation shaft to mitigate the combined effect of a Tsunami, high tide, storm waves, and damage to the breakwater on the intake structure.

Safety Evaluation Summary

This change improves the capability of the ASW system to perform its intended function during a Tsunami or other flood condition.

6. DCO-GE-2659, Electrical Splicing Details at the Penetration Outside Containment

This change revises the splice and sleeve procedure for multiconductor signal and control cables at the penetration to eliminate the requirement for the break-out boot from the outer side of the containment penetration.

Safety Evaluation Summary

Class 1E cable electrical penetrations located outside containment at the penetration are made using LOCA/MSLB qualified in-line cable splice assemblies which provide adequate protection for any postulated accident such as High Energy Line Break. Use of the break-out boot outside containment can be discontinued without reducing the margin of safety.

7. DC1-EE-3041, Instrument AC 7.5 KVA Inverters

This change provides additional capacity for present and future loads including TMI instruments in the existing instrument ac system by installing two new instrument ac inverters.

Safety Evaluation Summary

Electrical design of this installation is in accordance with FSAR design criteria. The total number of instrument inverters is increased, reducing the load on existing inverters. The consequences of an inverter failure causing a plant trip are reduced by powering fewer plant components with each inverter.

8. DC1-BM-3174R1, Emergency Borate System

This change adds two valves and piping to the emergency borate system to improve heat tracing and to provide an alternate emergency borate path, and the ability to calibrate FT-113 without flow to the charging pump suction.

Safety Evaluation Summary

This change increases the flexibility of the emergency borate system with respect to operation and maintenance.

9. DC1-EE-3182, Diesel Generator Tach Pack Power Supply

This DCN changes the diesel tachometer power supply from 120Vac to 120Vdc.

Safety Evaluation Summary

The manufacturer recommended this change to improve diesel generator reliability by eliminating dependence on 120Vac from the instrument ac inverters and by providing isolation between 120Vdc and the tach pack.

10. DC1-EC-3328, Auxiliary Saltwater System Vacuum Breakers

The design provides for the installation of vacuum breakers in the ASW system to protect system piping from damage due to water hammer. See Licensee Event Report 82-009.

Safety Evaluation Summary

Installation of the vacuum breakers will prevent water hammer and reduce the potential of piping damage. System performance will not be affected.

11. DC1-EH-5528R8, 480Vac Switchgear Room Ventilation System

This change increases the capacity of the Auxiliary Building, Area H ventilation supply fans and adds exhaust fans to control area maximum temperatures due to identified increased heat loads.

Safety Evaluation Summary

This modification upgrades the ventilation system capability to maintain ambient temperatures for satisfactory operation of the Class 1E electrical equipment inside the areas served by the system.

12. DC1-BM-7148, Component Cooling Water System

This change isolates the Component Cooling Water System from the Post-LOCA Sampling System by installing an isolation valve.

Safety Evaluation Summary

The integrity of the CCW system is improved by ensuring that breaks in the Post-LOCA Sampling System do not disable the vital CCW System. The possibility for an accident or malfunction is reduced by this change.

13. DCO-EH-7948, Mechanical Equipment Room HVAC

This change reduces the air quantity supplied to the control room and adds a ventilation supply to the mechanical equipment room.

Safety Evaluation Summary

This modification assures that Class 1E equipment in the mechanical equipment room will be maintained below 104°, while maintaining proper ventilation supply to the control room.

14. DCO-EE-9732R1, RTV Silicone Fire Sealant

This change permits the use of RTV Silicone Fire Sealant for separation of electrical devices and circuits.

Safety Evaluation Summary

This sealant will provide the circuits with the required physical separation to meet single failure criteria. Its use is consistent with FSAR statements on fire protection of Class 1E circuits.

15. DC1-BM-11437, RCP Motor Lower Bearing Oil Cooler

This change modifies the RCP motor lower bearing oil cooler supports.

Safety Evaluation Summary

This modification increases the seismic integrity of the RCP motor oil cooler heat exchanger. This will seismically qualify the component cooling water header C pressure boundary.

16. DC1-EH-11877R2, Cable Spreading Room Ventilation System

This change revises the ventilation ductwork in Area H of the Auxiliary Building to control maximum temperatures due to increased heat loads.

Safety Evaluation Summary

This modification assures that safety-related equipment in the cable spreading room is provided with sufficient ventilation to perform its intended function.

17. DC1-EE-13620, Reactor Protection System

This change provides an undervoltage trip signal to the shunt trip of the reactor trip breakers.

Safety Evaluation Summary

This change was made in response to NRC Generic Letter 83-28, "Salem ATWS". The change increases plant safety by providing an automatic trip via the shunt trip coil for greater assurance of proper system operation.

18. DC1-EE-13853, Pipe Break Isolation System

This change detects and isolates a High Energy Line Break in the auxiliary building.

Safety Evaluation Summary

This change significantly reduces the probability of a harsh environment being created in the auxiliary building, allowing instrumentation to perform its intended safety function without being qualified for a harsh environment.

19. DC1-EJ-17548, Residual Heat Removal System

This change adds a low flow alarm and annunciator to the RHR pump miniflow recirculation control circuit. This DCN prompted by NRC SSERs 13 and 21.

Safety Evaluation Summary

The low flow alarm increases the reliability of the RHR system and prevents damage to the pumps by warning the operators if no flow exists while a pump is running. Plant safety will be improved by having operators more accurately informed of RHR system status.

20. DC1-EE-19564, Auxiliary Building Ventilation System

This change revises the control logic for damper M-12 to meet the system flow distribution design.

Safety Evaluation Summary

This change fulfills the primary function of the auxiliary building ventilation system by maintaining the temperature of ESF pump motors within acceptable limits during their operation.

21. DC0-QM-110R2, Diesel Fuel Oil Storage Tank Vents

This change reroutes the diesel fuel oil storage tank vents, provides cathodic protection, and physical protection by covering the vents in a concrete box.

Safety Evaluation Summary

This change will prevent corrosion without interfering with venting of the tank.

22. DCO-EM-1048R1, Main Steamline Radiation Monitor

This change provides for the installation of the Main Steamline Radiation Monitor System and the addition of inputs to the Nuclear Measurement System.

Safety Evaluation Summary

Monitoring of noble gas discharges through the Steam Dump Valves is required by NUREG-0737. Addition of this monitoring system does not adversely affect any safety aspect of the plant since it is not connected to any safety-related system or systems important to safety.

23. DCI-EE-1057R1, Main Control Board Recorders

This change provides for the installation of a synchronizing transformer for each of four (4) Leeds and Northrup recorders on the main control board to stabilize the recorder chart drive speed to the station line frequency.

Safety Evaluation Summary

The installation of these transformers will increase the accuracy and readability of the recorder charts and does not affect the performance of systems described in the FSAR.

24. DCI-EE-1240, 4.16KV Bus F, G, and H Relay Settings

This design change modifies the setpoints for Diesel Generators 1-1, 1-2, and 1-3 overcurrent trip, Auxiliary Saltwater Pump and Auxiliary Feedwater Pump overcurrent trips and the 4KV bus differential relay trip.

Safety Evaluation Summary

The overcurrent trip setpoints are designed for 125 per cent overcurrent capability to protect the motors and/or diesel generators while permitting them to perform their intended function. The differential relay trip setpoints allow detection of fault conditions while preventing spurious trips.

25. DCO-EM-1289, Mechanical Panel Moisture Seals

This change removes the requirement for moisture seals to be placed on mechanical panels for protection against the effects of Moderate Energy Line Breaks.

Safety Evaluation Summary

The installation of moisture seals on identified mechanical panels is unnecessary as the devices being protected are presently qualified to operate in a submerged (LOCA) environment.

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JAMES D. SHIFFER
VICE PRESIDENT
NUCLEAR POWER GENERATION

REGION V&E

July 12, 1985

PGandE Letter No.: DCL-85-237

Mr. John B. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission, Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596-5368

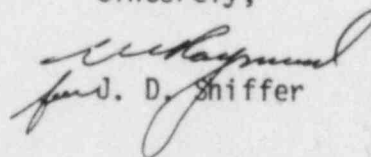
Re: Docket No. 50-275, OL-DPR-80
Diablo Canyon Unit 1
Annual Report of Facility Changes
October 1, 1983 - September 30, 1984

Dear Mr. Martin:

Pursuant to 10 CFR 50.59, enclosed is the Annual Report of Facility Changes submitted for the Diablo Canyon Power Plant Unit 1. All of these changes have been reviewed by the Plant Staff Review Committee as required by the PGandE Technical Specifications and none of these changes involve an unreviewed safety question. None of these changes (1) increase the probability or consequences of an accident or malfunction of equipment important to safety as previously analyzed in the Final Safety Analysis Report (FSAR); (2) create the possibility of an accident or malfunction of equipment not previously analyzed in the FSAR; or (3) reduce the margin of safety as defined in the bases of the Technical Specifications.

Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it in the enclosed addressed envelope.

Sincerely,


J. D. Shiffer

Enclosures

cc: G. W. Knighton
H. E. Schierling
J. M. Taylor
Service List

IE24
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-IE28
-IE07