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SUBJECT: Forwards info re Unit 2 inadequate core cooling implementation rept & description of mods to hardware & firmware since Nov 1984,supplementing Item 3 of 841121 ltr & Item 8 of 850415 ltr re NUREG-0737,Item II.F.2.

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JAMES D. SHIFFER
VICE PRESIDENT
NUCLEAR POWER GENERATION

April 19, 1985

PGandE Letter No.: DCL-85-155

Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-275, OL-DPR-80
Docket No. 50-323
Diablo Canyon Units 1 and 2
NUREG-0737, Item II.F.2 - Instrumentation for Detection of Inadequate Core Cooling/Unit 2 Implementation Report

Dear Mr. Knighton:

During the March 26, 1985 NRC Staff audit of instrumentation for detection of inadequate core cooling (ICCI), PGandE committed to provide information regarding remaining work on the ICCI for DCPP Units 1 and 2. The ICCI includes the subcooled margin monitor (SMM), core exit thermocouple system (CETS), and reactor vessel level instrumentation system (RVLIS). At the NRC Staff's request the enclosed information is provided which supplements Item 3 of PGandE letter DCL-84-355, dated November 21, 1984, and Item 8 of PGandE letter DCL-85-149, dated April 15, 1985.

The enclosure provides: (1) the DCPP Unit 2 ICCI implementation report, (2) a description of modifications made to ICCI hardware and firmware since November 1984, (3) items that remain to be completed, and (4) the qualification status of the CETS.

PGandE will complete all work on the Unit 1 ICCI hardware and firmware prior to the end of the present Unit 1 outage. PGandE has completed all work on the Unit 2 ICCI except for further testing and calibration which will be performed during the Unit 2 power ascension program. The NRC Staff will be informed

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when the Unit 1 work is complete and when the Unit 2 system is fully calibrated after completion of the power ascension program.

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

Sincerely,

for J. D. Shiffer

Enclosure

cc: R. T. Dodds
J. B. Martin
H. E. Schierling
Service List

ENCLOSURE

DCPP UNITS 1 AND 2 INSTRUMENTATION FOR DETECTION OF INADEQUATE CORE COOLING (ICCI)

A. DCPP Unit 2 ICCI Implementation Report

PGandE committed to provide an ICCI implementation report for DCPP Unit 2 in PGandE letter DCL-85-149, dated April 15, 1985. The Unit 2 implementation report follows.

1. Status of System Installation, Functional Testing, and Calibration

Two components of the ICCI, the SMM and the CET system, have been installed, functionally tested, and calibrated. Test results are available for inspection. The CET system will be reconnected and functionally checked when the vessel head is reinstalled. Retest due to the firmware changes is presently being performed and will be complete prior to fuel load. The RVLIS is installed and functioning, but not fully tested and calibrated. Complete functional testing and calibration will be accomplished during the post fuel load and power ascension testing program.

2. Summary of Licensee Conclusions Based on Test Results

The SMM and CET system are performing within design expectations as shown by calibration and surveillance testing performed to date. Conclusions regarding RVLIS performance will be made when power ascension testing is complete and test results have been evaluated.

3. Description of Any Deviations of the As-built System from Previous Design Descriptions

A description of changes for the as-built system from previous descriptions are provided in this enclosure under Item B.

4. Discussion of Proposed Technical Specifications for ICCI

Diablo Canyon Unit 2 proposed Technical Specification 3/4.3.3.6, "ACCIDENT MONITORING INSTRUMENTATION," addresses the three components of the ICCI in Tables 3.3-10 (LCO) and 4.3-7 (Surveillance Requirements). A proposed footnote to Table 3.3-10 is actively being discussed with the NRC Staff.

5. Request for NRC Approval of the Plant-specific Installation

The system is available for in-plant inspection by the NRC.

6. Confirmation of the Emergency Operating Procedures (EOPs) Used for Operator Training

DCPP Emergency Procedure EP FR-C.1 (formerly EP OP-7), "Response to Inadequate Core Cooling," is the primary procedure for response to symptoms of an ICC condition. This procedure conforms to the Westinghouse generic response to inadequate core cooling, FR-C.1, HP-Revision 1. Other DCPP emergency procedures regarding reactor trip or safety injection, natural circulation cooldown, loss of reactor or secondary coolant, safety injection termination, post-LOCA cooldown and depressurization, and response to voids in reactor vessel, refer to EP FR-C.1 for action in the event ICC symptoms should arise during operation.

B. The following information supplements Item 3 of PGandE letter DCL-84-355, dated November 21, 1984 regarding the status of the ICCI for Units 1 and 2 .

1. Status of Unit 1 System Installation

The recent design improvements resulting from Westinghouse qualification testing and their status are as follows:

a. Hardware modifications for open thermocouple detection - modification complete.

b. CET hardware modification to upgrade system to current Westinghouse specifications - modification complete.

c. RVLIS hardware modification to upgrade system to current Westinghouse specifications - modification complete.

d. Firmware modification for CET open thermocouple detection - modification being implemented and will be completed during the present Unit 1 outage.

e. Modification to upgrade CET reference junction boxes to qualified status - modification being implemented and will be completed during the present Unit 1 outage.

2. Status of Unit 2 System Installation

a. The following items have been completed for Unit 2:

(1) CET hardware modification for open thermocouple detection.

(2) CET firmware modification for grid reassignment and open thermocouple detection.

(3) CET hardware modification to upgrade system to current Westinghouse specifications.

(4) RVLIS hardware modification to upgrade system to current Westinghouse specifications.

(5) Modification to upgrade CET reference junction boxes to qualified status.

b. Unit 2 RVLIS testing requirements to be completed:

(1) RCP pump performance curve data collection and entry to be performed during Unit 2 startup to hot standby condition.

(2) Further testing and calibration appropriate for the Unit 2 startup test program to 100% power.