August 1, 1984

Docket No.: 50-354

APPLICANT: Public Service Electric & Gas Company (PSE&G)

FACILITY: Hope Creek Generating Station

SUBJECT: SUMMARY OF REACTOR SYSTEMS BRANCH DRAFT SER OPEN ITEMS MEETING

On July 11, 1984, a meeting was held in the Bethesda, Maryland offices of the NRC to discuss open items identified in the Draft SER by the Reactor Systems Branch. Representatives of the NRC, PSE&G General Electric (GE) and the Bechtel Power Corporation were in attendance (See Enclosure 1).

The open items discussed and their status are identified in Enclosure 2 to the meeting summary.

After discussion of the open items, the staff indicated to the applicant that it may be requested to address the effects of loss of offsite power for all FSAR Chapter 15 transients.

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Division of Licensing

Enclosure: As Stated

cc: See next page

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Wayne Hodges
Martin Virgilio
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MEETING TITLE: REACTOR SYSTEMS BRANCH DRAFT SER OPEN ITEMS MEETING

APPLICANT: PUBLIC SERVICE ELECTRIC & GAS COMPANY

FACILITY: HOPE CREEK GENERATING STATION

DATE: WEDNESDAY, JULY 11, 1984

NAME	AFFILIATION
Dave Wagner	NRC
George Thomas	NRC
Wayne Hodges	NRC
Gus Kapandritis	Bechtel
Paul Schragger	Bechtel
Chuck Bradford	Bechtel
Jim Ashley	PSE&G
R. L. Huang	GE
D. B. James	GE
J. C. Larrew	GE
Ron. Drewnowski	PSE&G
T. R. McGuire	PSE&G
R. A. Lint	Bechtel
William Gailey	PSE&G
Bruce Preston	PSE&G
Robert L. Mittl	PSE&G
Martin Virgilio (part-time participant)	NRC
Summer Sun (part-time participant)	NRC
Jerry Mauck (part-time participant)	NRC

DSER Section 6.3.3

We require the applicant to verify that the LPCS and LPCI injection valves are interlocked to prevent them from opening unless reactor pressure is below the low pressure system design pressure or to conform to one of the acceptable designs given in Section 6.3 of the SRP. (OPEN)

STATUS

At the meeting the applicant provided a proposed response to this open item (attached). The staff finds this response acceptable. Pending formal submittal of this response by July 31, 1984, the staff considers this item CLOSED.

DSER Sections 6.3.5 and 15.9.3

We require a plant-specific LOCA analysis for Hope Creek. We require the LOCA analysis to be submitted at least 6 months prior to fuel loading. (OPEN)

STATUS

At the meeting the applicant provided a proposed response to this open item (attached). The staff finds this response acceptable. The applicant will formally submit this response to the NRC by July 31, 1984. This item will be considered a CONFIRMATORY item in the SER.

DSER OPEN ITEM 136 (Section 6.3.5, 15.9.13)

PLANT SPECIFIC LOCA ANALYSIS

The LOCA analyses reported in the FSAR were for a lead plant representative of Hope Creek. The applicant has committed to supply plant-specific LOCA analyses in a later amendment to the FSAR before fuel loading. The NRC staff will report the results of its review of the plant-specific analyses in a supplement to this report.

The applicant has included small-break LOCA calculations in FSAR Section 6.3.3 that were performed for a lead plant representative of Hope Creek. The applicant has committed to supply plant-specific LOCA analyses in a later amendment before fuel load. The staff will report on its review of the plant-specific analyses in a supplement to this report.

Response

The plant-specific LOCA analysis will be provided in July 1985 and will utilize the evaluation model described in Reference 1 and accepted by the NRC staff in Reference 2.

References

1. "General Electric Company Analytical Model for Loss-of-Coolant Analysis in Accordance with 10CFR50, Appendix K," NEDE-20566P, November 1975.

2. Letter to G.G. Sherwood (General Elecric) from R.L. Tedesco (NRC), "Acceptance for Referencing of Topical Reports-20566P, NEDO-20566-1 Revision 1, and NEDE-20566-4 Amendment 4," February 4, 1981.

DSER Section 15.1.1

We require the applicant to submit an analysis to justify that operation with partial feedwater heating to extend the cycle beyond the normal end of cycle would not result in a more limiting change in MCPR than that obtained using the assumption of normal feedwater heating. Otherwise, operation with partial feedwater heating will be prohibited. (OPEN)

STATUS

At the meeting the applicant provided a proposed response to this open item (attached). The staff finds this response acceptable. Pending formal submittal of this response by July 31, 1984, the staff considers this item CLOSED.

DSER OPEN ITEM 177 (Section 15.1.1)

The applicant was asked to justify that operation with partial feedwater heating to extend the cycle beyond the normal end-of-cycle condition would not result in a more limiting change in minimum critical power ratio than that obtained using the assumption of normal feedwater heating. The staff requires that analyses be provided before operation in this mode if a decision is made to operate in this mode. Until such analyses are provided, the staff will condition the license from operation in this mode.

Response

PSE&G will accept a license condition as described above until such time as a HCGS analysis is submitted.

DSER Section 15.9.5

TMI-Item II.K.3.3

Response given in Section 1.10 of the FSAR is not acceptable. We require a detailed response explaining how PSE&G is planning to comply with the requirements of II.K.3.3.

STATUS

By letter dated June 29, 1984 (R. L. Mittl to A. Schwencer), the applicant provided a response to this open item. The staff has reviewed this response and finds it acceptable. This item is considered CLOSED.

DSER Section 15.9.10

TMI Item II.K.3.18

The applicant should specify which option they are planning to implement. Either option 2 or option 4 is acceptable to the staff.

STATUS

By letter dated June 1, 1984 (R. L. Mittl to A. Schwencer), the applicant provided a response to this open item. The staff has reviewed this response and finds it acceptable. This item is considered CLOSED.

Description of the Proposed Hope Creek
LPCI Injection Valve Pressure Interlock

Illustrated in the attached figure are the present design and a proposed new design for the Hope Creek LPCI injection valve pressure interlocks.

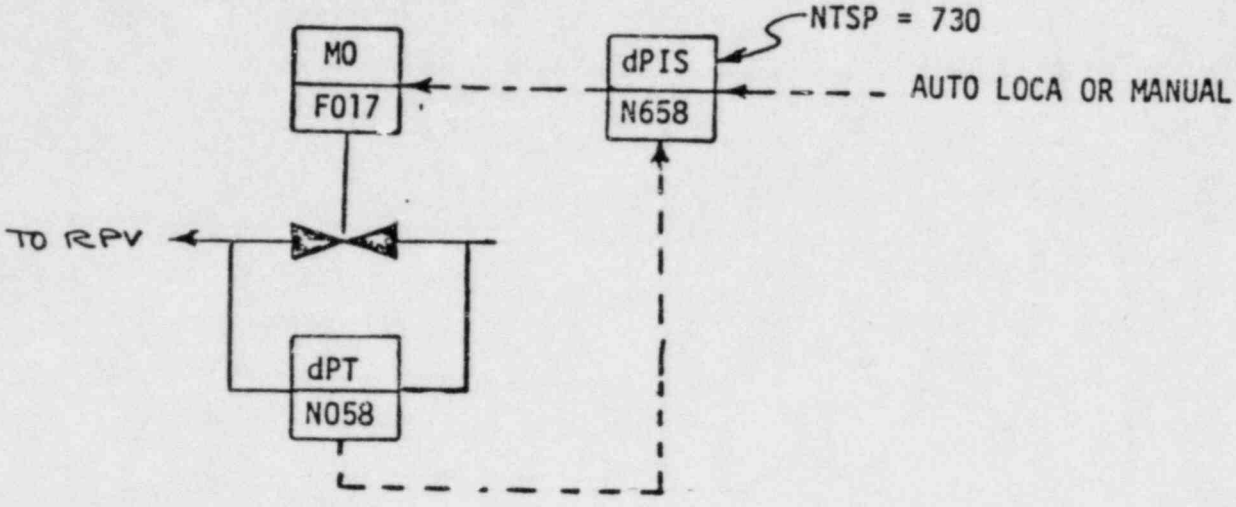
The present design permits the injection valves to open when the differential pressure across the valves is equal to or less than 730 psi. Therefore, the injection valves can open when the reactor pressure is equal to 1080 psig (ie: 730 psi plus the LPCI pump discharge pressure of approximately 350 psi = 1080 psig). The NRC has established the position that this arrangement is inacceptable because a single failure of the inboard testable check valve could result in overpressurization of the LPCI low-pressure piping upstream of the injection valve.

The proposed design would eliminate this single failure concern by preventing the injection valve from opening when the pressure downstream of the injection valve is greater than the design pressure of the LPCI piping upstream of the injection valve. The pressure indicating switch would have a nominal trip setpoint (NTSP) of 460 psi. Pressure downstream of the injection valve would have to be equal to or less than this NTSP before the automatic or manual open signal would be transmitted to the injection valve. Therefore, the LPCI low-pressure piping that has a design pressure of 500 psi could not be overpressurized by injection valve opening.

PROPOSED HOPE CREEK LPCI

PRESSURE INTERLOCK

PRESENT DESIGN



PROPOSED DESIGN