

TEST NUMBER 28B - RECIRCULATION PUMP TRIP - TWO PUMPS
IN CONJUNCTION WITH TEST NUMBER 25

OBJECTIVE:

Regulatory Guide 1.68 (Revision 2, August 1978), Appendix A, paragraph 5.i.i requires that the dynamic response of the plant is in accordance with design for limiting reactor coolant pump trips. The method for initiating the pump trip should result in the fastest credible coastdown in flow for the system. Test Number 28B, Recirculation Pump Trip (RPT) - Two Pumps, is currently planned to be performed at Test Condition 3 to verify the performance of the RPT circuit and the recirculation pump flow coastdown. The two pump trip will be initiated by simultaneously tripping both recirculation RPT breakers using a test switch. It is proposed to perform this test in conjunction with Test Number 25, Generator Load Rejection, at Test Condition 6. This testing will demonstrate that Regulatory Guide 1.68, Appendix A, paragraph 5.i.i objectives are met for a two pump trip.

DISCUSSION:

Response of the system during a two pump trip is determined by analyzing test data and comparing to acceptance criteria which define the required system performance. For the two pump trip test, the recirculation drive flow coastdown must be within specified limits used in the FSAR transient analyses. During Test Number 25, Generator Load Rejection at Test Condition 6, a two pump trip occurs as the result of the protective RPT function. This testing results in an actual demonstration of the RPT circuit. In addition, because of the enhanced data acquisition system, the flow coastdown data can be recorded during the transient along with the data necessary to demonstrate the compliance of the Generator Load Rejection to Test Number 25 acceptance criteria. The Generator Load Rejection is also performed at a higher power level than the currently planned two pump trip and is more limiting regarding pump coastdown. Furthermore, the characteristics of coastdown are well understood and have been demonstrated during power ascension at previous plants. The margin to safety has always been maintained and no additional safety risk is incurred by not performing this test at Test Condition 3.

CONCLUSION:

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Testing of the two pump RPT function in conjunction with the Generator Load Rejection at Test Condition 6 demonstrates the actuation of the RPT circuits and verifies the drive flow coastdown characteristics. This proposed testing satisfies the objectives of Regulatory Guide 1.68, Appendix A, paragraph 5.i.i and will not affect any safety related systems or safe operation of the plant and therefore does not involve an unreviewed safety question. Therefore, Test Number 28B, RPT Trip - Two Pumps, can be performed in conjunction with Test Number 25, Generator Load Rejection at Test Condition 6.

(approximately 100% core flow and 100% power) in conjunction with the Feedwater Pump Trip Test, Test Number 21D. Demonstration of the performance of this feature at Test Condition 6 will satisfy the intent of Regulatory Guide 1.68, Appendix A, paragraph 5.s. It is therefore proposed to delete performance of this test at Test Condition 3 (Test Number 28D).

The acceptance criteria for the recirculation pump runback test at Test Condition 3 (Test Number 28D) requires that the recirculation pumps runback upon a trip of the runback circuit. The trip of the runback circuit is accomplished by simulating the loss of a feedwater pump. Hope Creek's Final Safety Analyses Report (FSAR) states that this test is performed prior to actually tripping the Feedwater Pump at Test Condition 6 to determine the adequacy of the recirculation pump runback feature in preventing a scram.

This test is not considered absolutely necessary for three reasons. Firstly, the performance of the runback circuit is verified by preoperational tests. Secondly, the characteristics of recirculation pump runback are well understood and have been demonstrated to be acceptable during power ascension testing at other plants. Thirdly, in the unlikely event that the recirculation pump runback feature does not function properly, the most severe consequence would be a reactor scram due to low level. Thus, it would not place the plant in an unsafe condition.

5.0 CONCLUSION

Performance of Recirculation Pump Runback testing, in conjunction with the Feedwater Pump Trip Test, Test Number 21C, at Test Condition 6 satisfies the intent of Regulatory Guide 1.68, Appendix A, paragraph 5.s. Deletion of this test at Test Condition 3 will not affect any safety related systems or safe operation of the plant and a Technical Specification change is not required. Based on the above, deletion of this test does not involve an unreviewed safety question. Therefore, Test Number 28D, Recirculation Pump Runback Testing at Test Condition 3, can be deleted from Hope Creek's Power Ascension Testing Program.

6.0 DOCUMENTS GENERATED

None

7.0 RECOMMENDATIONS

Revision to Hope Creek's FSAR and startup test procedures shall be made to delete the Two Pump Recirculation Pump Runback Test at Test Condition 3, Test Number 28D, from the Hope Creek Power Ascension Test Program.

8.0 ATTACHMENTS

None

9.0 SIGNATURES

Originator	<u><i>Staff of Crane</i></u>	<u>P.E.</u>	<u>9/30/85</u>
			Date
Verifier	<u><i>J. H. Hering</i></u>		<u>9/30/85</u>
			Date
Group Head (or SSE)	<u><i>Suren Singh</i></u>	<u>P.E.</u>	<u>9/30/85</u>
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			Date
Site Engineering Manager	<u><i>CW Chun</i></u>		<u>10/1/85</u>
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