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**SUPPLEMENT 1 TO
EXTENDED LOAD LINE LIMIT
ANALYSIS MILLSTONE POINT
NUCLEAR POWER STATION UNIT 1**
(REVERIFICATION FOR CYCLE 9)

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SUPPLEMENT 1 TO GENERAL ELECTRIC BOILING WATER
REACTOR EXTENDED LOAD LINE LIMIT ANALYSIS
FOR
MILLSTONE POINT NUCLEAR
POWER STATION, UNIT 1

(REVERIFICATION FOR CYCLE 9)

NUCLEAR POWER SYSTEMS DIVISION • GENERAL ELECTRIC COMPANY
SAN JOSE, CALIFORNIA 95125

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1. SUMMARY

The Extended Load Line Limit Analysis (ELLLA) previously performed for Millstone Point Nuclear Power Station Unit 1 has been reverified for applicability to Cycle 9. It is concluded that analyses support operation above the 100% power/flow line within the region shown in Figure 1.

2. INTRODUCTION

The purpose of this supplement is to provide documentation which supports operation above the 100% power/flow line for Millstone Point Nuclear Power Station Unit 1 for Reload 8, Cycle 9. The region of operation supported by this supplement is shown in Figure 1 and is the same as the region defined and supported in Reference 1.

3. BACKGROUND

An analysis was previously performed which supported operation above the 100% power/flow line and was documented in Reference 1.

A subsequent design review was held to determine the generic applicability of the ELLLA to all BWR/3 plants for follow-on cycles. This design review concluded that only the standard reload analyses are required for licensing purposes to justify operation in the extended region identified in Reference 1 for all cycles, with four special considerations as follows:

- (1) Stability - A stability analysis shall be performed of the extended APRM rod/block line power/natural circulation flow.
- (2) ECCS - The ECCS analyses previously submitted to the NRC shall be verified on a cycle-by-cycle basis.
- (3) Scoop-tube Setpoint - The scoop-tube mechanical stop must be set no higher than 102.5% of rated flow.

- (4) Change to ODYN - Upon changing the transient code for pressurization events from REDY to ODYN, for the first reload with ODYN, the limiting pressurization event will be evaluated at the 100/87 point with ODYN to verify that the 100/100 point is still the most limiting point to establish the limit.

All other analyses performed for each reload were determined to be bounding for operation in the extended region.

4. STABILITY ANALYSIS

A stability analysis has been performed at the extended APRM rod block line power/natural circulation flow point with acceptable results as reported in Reference 2.

5. ECCS ANALYSIS

Both the previous ECCS analyses for Millstone Unit 1 and the ECCS analyses for Cycle 9 have been verified for applicability of operation in the extended region defined by the Extended Load Line Limit Analysis. The results are that the ECCS analyses are applicable when operating at core flows less than 90% of rated flow, with the low flow MAPLHGR multipliers as reported in Reference 3.

6. SCOOP-TUBE SETPOINT

As concluded by the design review for BWR/3 Load Line Limit Analysis, the recirculation pump MG set scoop-tube mechanical stop shall be set no higher than 102.5% of rated flow.

7. ODYN TRANSIENT CODE

The load rejection without bypass event (most limiting pressurization event) was analyzed for reload 8 at the rod block intercept point and the results were compared to the results for the 100/100 (licensing basis) point. The results indicate that the 100/100 point is still the most limiting. Therefore, the validity of the ELLA is verified with the change to the ODYN transient code.

8. CONCLUSIONS

The required cycle-specific analyses for application of the Extended Load Line Limit Analysis have been performed with acceptable results, and, therefore, operation in the extended region above the 100% power/flow line, as defined by Figure 1, is acceptable for Millstone Point Nuclear Power Station Unit 1 for Cycle 9.

9. REFERENCES

1. "Extended Load Line Limit Analysis for Millstone Point Nuclear Power Station, Unit 1," General Electric Company, September 1981 (NEDO-24366).
2. "Supplemental Reload Licensing Submittal for Millstone Nuclear Power Station Unit 1 Reload 8," General Electric Company, June 1982 (Y1003J01A44).
3. "Loss-of-Coolant Accident Analysis Report for Millstone Unit 1 Nuclear Power Station," General Electric Company, July 1980 (NEDO-24085-1).

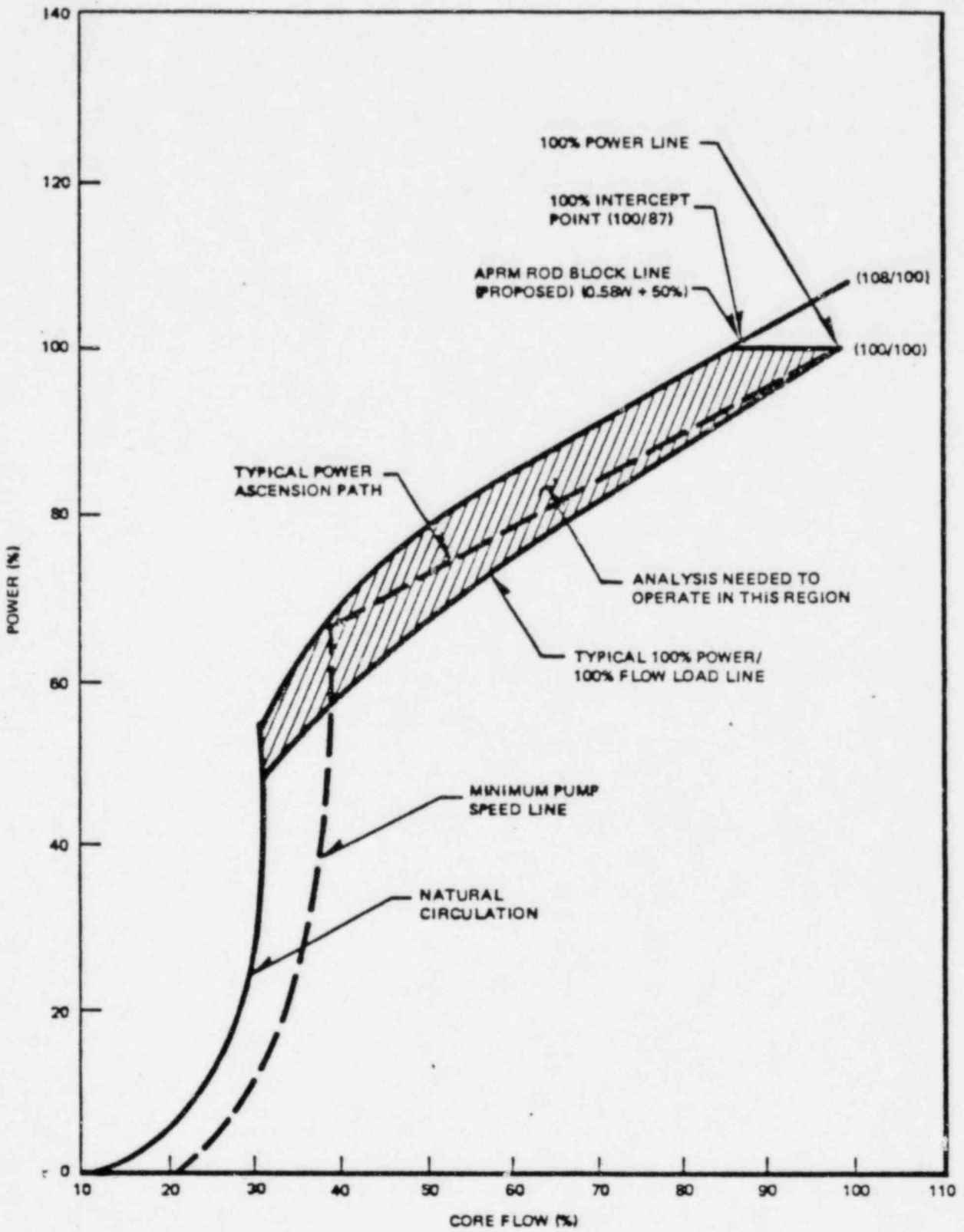


Figure 1. Power/Flow Map

Docket No. 50-245

Attachment No. 5
Proposed Technical Specification Changes
for
Millstone Unit No. 1, Reload 8

October 1982