

NOV 30 1978

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MEMORANDUM FOR: Walter Butler, Chief, Containment Systems Branch, DSS
FROM: Zoltan R. Rosztoczy, Chief, Analysis Branch, DSS
SUBJECT: PALO VERDE 3 AND 4 MAIN STEAM LINE BREAK

In your letter of Nov. 3, 1978 you requested that the Analysis Branch review the acceptability and the conservatism of the mass and energy release data used by the applicant to analyze the containment response to a postulated main steam line break.

The applicant utilized the mass and energy release data in the CESSAR PSAR. This data was approved for analysis of CESSAR plants in the NRC Safety Evaluation Report dated December 1975.

The main steam system is not included in CESSAR and the blowdown from this system is not included in the CESSAR mass and energy release data. The applicant for Palo Verde calculates 14.6×10^9 BTU's of steam to be contained in the steam system and adds this instantaneously to the containment at the time of peak pressure. This assumption is conservative since the rate of steam flow is maximized. A more realistic assumption would be to release the steam over a one second time interval at 5 seconds into the accident when the main steam isolation valves close.

We understand that CE plans to include a flow restrictor in the steam generator outlet nozzles for CESSAR plants. The restriction would limit the break flow area to about 25% of the full break area and would preclude occurrence of the 7.3 ft.² (85% full area) break identified as the worst case.

In conclusion we believe that the mass and energy release data used to analyze the containment response to a main steam line break is conservative.

Zoltan R. Rosztoczy, Chief
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cc: R. Tedesco P. Norian
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