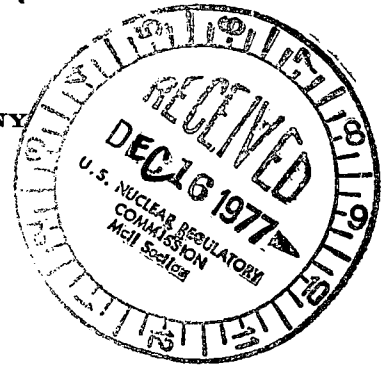


VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

December 14, 1977



**REGULATORY DOCKET FILE COPY**

Mr. Edson G. Case, Acting Director  
Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Serial No. 446A  
PO&M/TAP:wbh  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Attn: Mr. Robert W. Reid  
Operating Reactors Branch 4

Dear Mr. Case:

This letter is to inform you of a delay in the final installation of our Reactor Coolant System overpressure protection system. A problem with the system operation was discovered during the final installation and testing in Surry Unit. No. 1. The investigation revealed that the air controlling solenoid valves were incorrectly specified. Other valves are on order and their delivery is expected by the end of January. These valves will be installed and the systems tested during the first cold shutdown after the valves are received.

A revision to the previously submitted Westinghouse prepared analysis is enclosed. This revision does not alter our system design.

Very truly yours,

*C. M. Stallings*

C. M. Stallings  
Vice President - Power Supply  
and Production Operations

40 Copies attached of letter  
4 Copies attached of Report Revision

cc: Mr. James P. O'Reilly, Region II  
Director, Office of Inspection and Enforcement

REFERENCE: "Pressure Mitigating Systems Transient Analysis Results", July 1977. (Westinghouse Report on RCS Solid Water Over-pressurization)

Attached are three revised figures which should be substituted for the corresponding figures to be found in Appendix B of Reference 1. The revisions accommodate modifications made to the letdown isolation transients represented in these figures to upgrade the analytical basis and account for an input data correction.

Setpoint pressure overshoot has not been altered in any of the transients plotted in these figures; however, setpoint pressure undershoot has been modified in several of the letdown isolation transients. In every case, the modification has resulted in an improvement in (i.e., smaller) setpoint pressure undershoot.

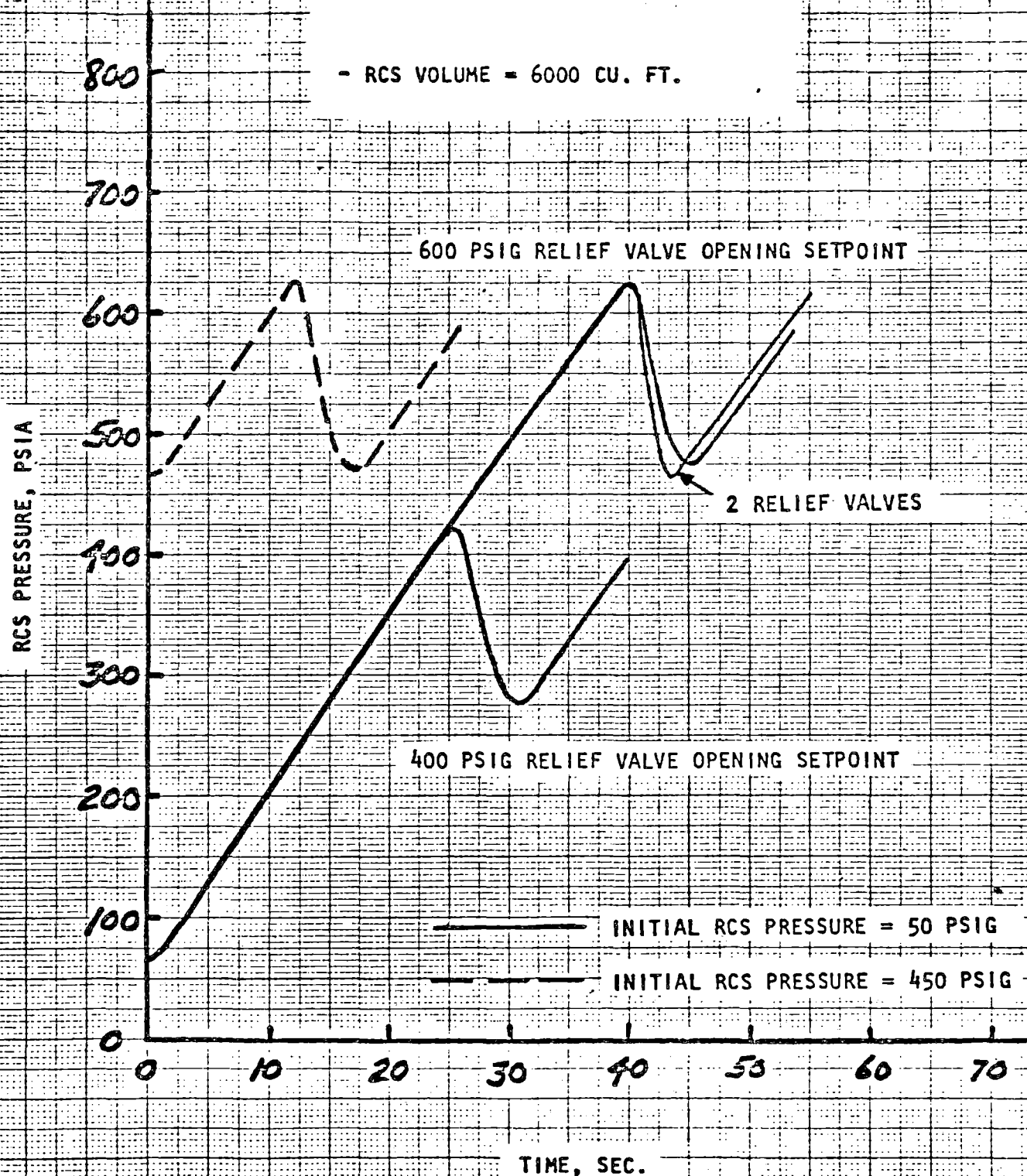
In both Figures M6 and M10, the common transient exhibiting RCS setpoint pressure undershoot response for two relief valve operation at a setpoint of 600 psig has been replotted to reflect valve closure at a reset pressure 20 psi below the setpoint. The original transient depicted in Figure M6 and Figure M10 of Reference 1 (Appendix B) represented valve closure at a reset pressure 120 psi below the 600 psig setpoint. As would be expected, the setpoint pressure under shoot has been significantly reduced to the extent that violation of the RCS pump seal pressure limit is no longer a consideration for this transient.

In Figure M7, the setpoint pressure undershoots for both the 500 psig and 600 psig relief valve setpoint transients have been adjusted to reflect a correction to the LOFTRAN input data. A reduction in setpoint pressure undershoot is evident in both transients.

RCS PRESSURE TRANSIENTS  
FOR ONE CYCLE OF RELIEF  
VALVE OPENING AND CLOSING  
FOR 2 SEC. LETDOWN ISOLATION

FIGURE M6  
REVISED

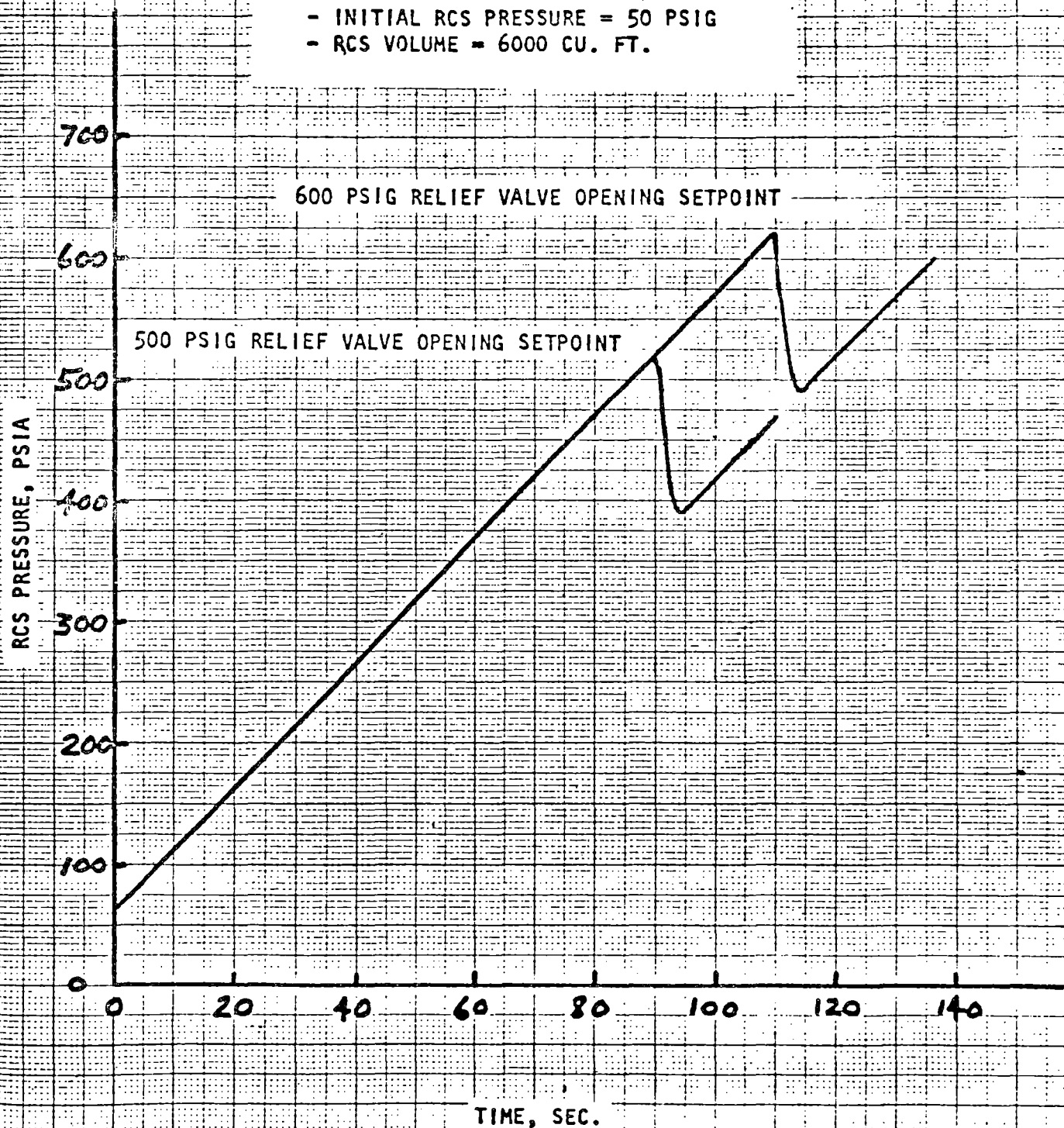
- RCS VOLUME = 6000 CU. FT.



RCS PRESSURE TRANSIENT  
FOR ONE CYCLE OF RELIEF  
VALVE OPENING AND CLOSING

- CONSTANT MASS INPUT RATE OF 40 GPM
- 2 SEC. LETDOWN ISOLATION

- INITIAL RCS PRESSURE = 50 PSIG
- RCS VOLUME = 6000 CU. FT.



## COMPARISON OF 1 VERSUS 2 RELIEF VALVES

-INITIAL RCS PRESSURE = 50 PSIG

-RCS VOLUME = 6000 CU.FT.

-RELIEF VALVE SETPOINT = 600 PSIG

