Idaho National Engineering Laboratory

December 20, 1990

Mr. O. O. Rothberg
Office of Nuclear Regulatory Research
U. S. Nuclear Regulatory Commission
MS NLS302
Washington, D. C. 20555

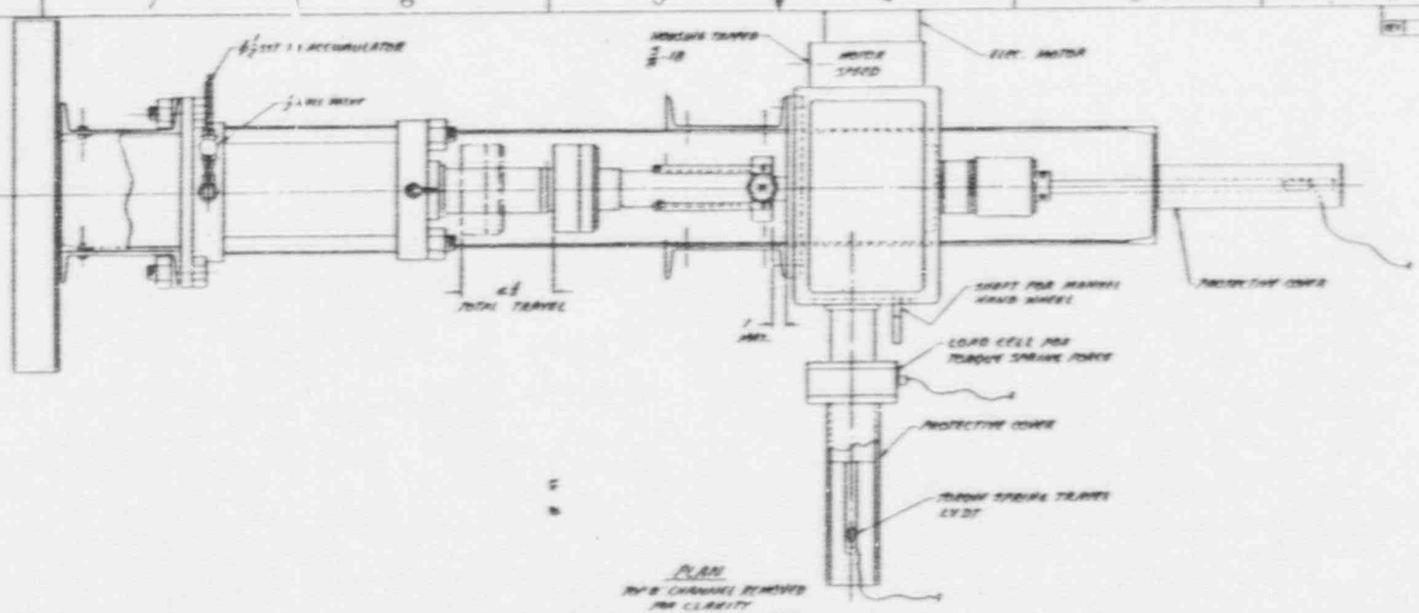
MODIFICATION OF MOVLS TO MODEL VALVE YOKE BEHAVIOR - KGD-23-90

Dear Owen:

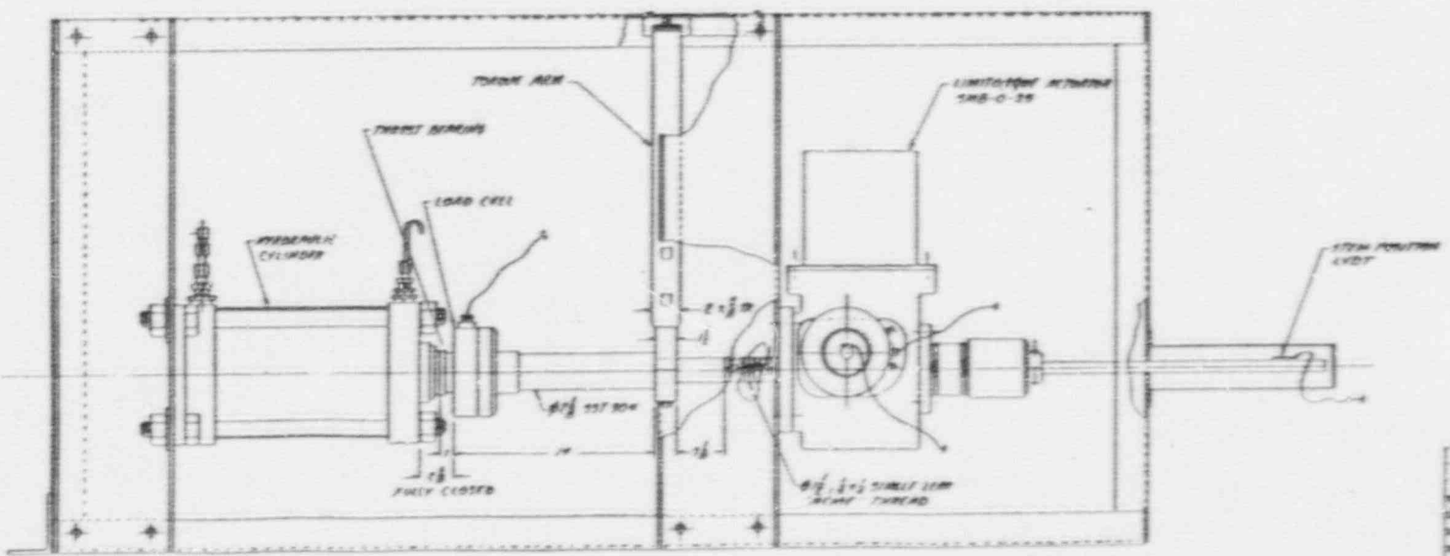
This letter documents the proposed modifications of the motor operated valve load simulator (MOVLS) to support the yoke strain method of diagnostic testing. Engineering drawings of the proposed modification will be completed early in January. For reference, a copy of the present configuration is attached. A copy of the new drawings will be forwarded when completed.

Our proposal is to modify the test stand so that the thrust load in the stem is reacted by a valve yoke instead of the MOVLS frame. The hydraulic cylinder will be modified by the addition of a 1 ¾ inch plate representative of a valve bonnet. The yoke from one of the GI-87 valves will be bolted to this bonnet in a normal manner and the motor operator will be bolted to the yoke as normally installed. The torsion load in the stem will still be reacted at the MOVLS frame by the stem torque arm which operates much like a valve with a stem anti-rotation device. Removing the torsion load from the yoke should not be a problem for any potential user. The modification to the stand will not invalidate any of the work previously performed in the stand since those devices measured the load on the stem, which is not influenced by how the load is reacted back at the motor operator. The MOVLS structural frame will remain as built except that the side mounted channels (present operator support) will be removed and the frame will be stood on end to place the "MOV" in the vertical position.

EG&G Idaho, Inc. P.O. Box 1625 Idaho Falls, ID 83415



PLAN



ELEVATION

SPECIAL PURPOSE

VALVE LOAD SIMULATOR ARRANGEMENT