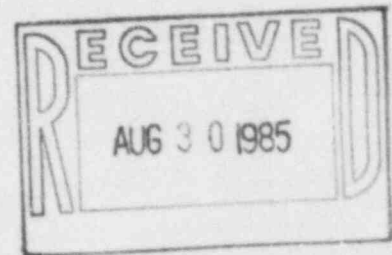


The Light company

Houston Lighting & Power P.O. Box 1700 Houston, Texas 77001 (713) 228-9211

August 27, 1985
ST-HL-AE-1312
File No.: G12.236

Mr. Robert D. Martin
Regional Administrator, Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Final Report Concerning Pipe
Support Eye-Rod Interferences

Dear Mr. Martin:

On April 25, 1985, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified your office of an item concerning pipe support eye-rod interferences. Attached is the final report concerning this item. Please note that this item is being included within the envelope of the generic item that was reported to your office on May 30, 1985 concerning potential deficiencies in pipe supports that have been accepted by Ebasco's Quality Control (QC). The results of the reinspection committed to in the attached report will be provided in future reports concerning the deficiency reported on May 30, 1985.

If you should have any questions on this matter, please contact Mr. Michael E. Powell at (713) 993-1328.

Very truly yours,

A handwritten signature in dark ink, appearing to read "J. H. Goldberg".

J. H. Goldberg
Group Vice President, Nuclear

MEP/yd

Attachment: Final Report Concerning Pipe
Support Eye-Rod Interferences

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PDR ADDCK 05000498
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cc:

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Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 & 2
Final Report Concerning
Pipe Support Eye-Rod Interferences

I. Summary

Fabrication interferences have been identified between the forged sway-strut eye-rod and the machined rear bracket (on one end of a sway-strut), and between the forged sway-strut eye-rod and the clamp-bolt spacer (on the other end of a sway-strut) on pipe support struts. Additional unanalyzed stresses could therefore be induced in the load pins on the struts. A reinspection program has been established and any such unacceptable interferences on eye-rods used on safety related pipe supports will be repaired.

II. Description of the Incident

On April 25, 1985, pursuant to 10CFR50.55(e), Houston Lighting & Power Company (HL&P) notified the NRC Region IV of an item concerning pipe support eye-rod interferences.

The eye-rods are supplied by NPSI Industries (NPSI) and are used in rigid sway struts, adjustable sway struts, and snubber transition kits. The eye-rod (Figure 1) is a threaded rod with one end having a spherical bearing installed for a load pin to attach the eye-rod to a bracket or pipe clamp.

Excess forging "trim" on the bearing end of the eye-rod can result in an interference between the eye-rod and the rear bracket and/or between the eye-rod and the clamp-bolt spacer depending on tolerance "stack-up" of the various parts. This could reduce the freedom of motion of the strut during high temperature operation and increase the stress on the load pin.

This deficiency was discovered by an Ebasco Services Incorporated (ESI) QC inspector while inspecting the strut installation in accordance with Bechtel installation specification 5L340JS1002 (Pipe Support Field Fabrication and Installation).

The root cause of this problem appears to be a "stacking up of tolerances". The calculated clearance for size 6, 10, and 14 struts with the additive "worst case" tolerances results in a zero clearance situation between the eye-rod and rear bracket even without the presence of forging trim on the eye-rod. Fabrication tolerances are apparently being met, but those specified tolerances can result in zero clearance. Additional measurements have been taken to determine if the interference exists because of the eye-rod, bracket, or both. The base thickness of seven machined rear brackets were checked at random in the yard and were found to be in tolerance.

III. Corrective Action

The pipe support installation specification (5L340JS1002), which also covers installation of snubbers, has been revised to include a requirement for visible clearance between the eye-rod and bracket or clamp bolt spacer. The relevant quality control procedure has been amended to specifically require an inspection for that visible clearance. NPSI has also provided their QC inspectors with criteria to use in the inspection of the eye-rods prior to shipment to STP.

Eye-rods used on struts in Quality Class 1, 2 and 3 pipe supports that had been QC-accepted prior to the changes noted above will be reinspected. This reinspection will be included in the overall reinspection program of Ebasco QC-accepted pipe supports established as a result of the deficiencies reported to the NRC on May 30, 1985 (IRC #252). The estimated completion date for this reinspection is December 1985. Deficiencies found as a result of the reinspection will be documented, evaluated and appropriately dispositioned. NPSI has authorized STP to grind the forging "trim" back to within specified acceptable dimensions if necessary.

An evaluation has concluded that the deficiency described above involving excess eye-rod forging trim on Class 7 pipe support struts and snubbers would neither adversely affect safety-related systems, structures or components nor reduce the functional capability of Quality Class 7 supports. It is therefore unnecessary to reinspect pipe supports installed in Quality Class 7 systems.

IV. Recurrence Control

The procedure and specification changes described above, in conjunction with NPSI quality control, will prevent recurrence of this deficiency.

V. Safety Analysis

These pipe supports are used extensively on safety-related piping systems. Had this deficiency remained uncorrected the integrity of safety-related piping systems could not be assured.

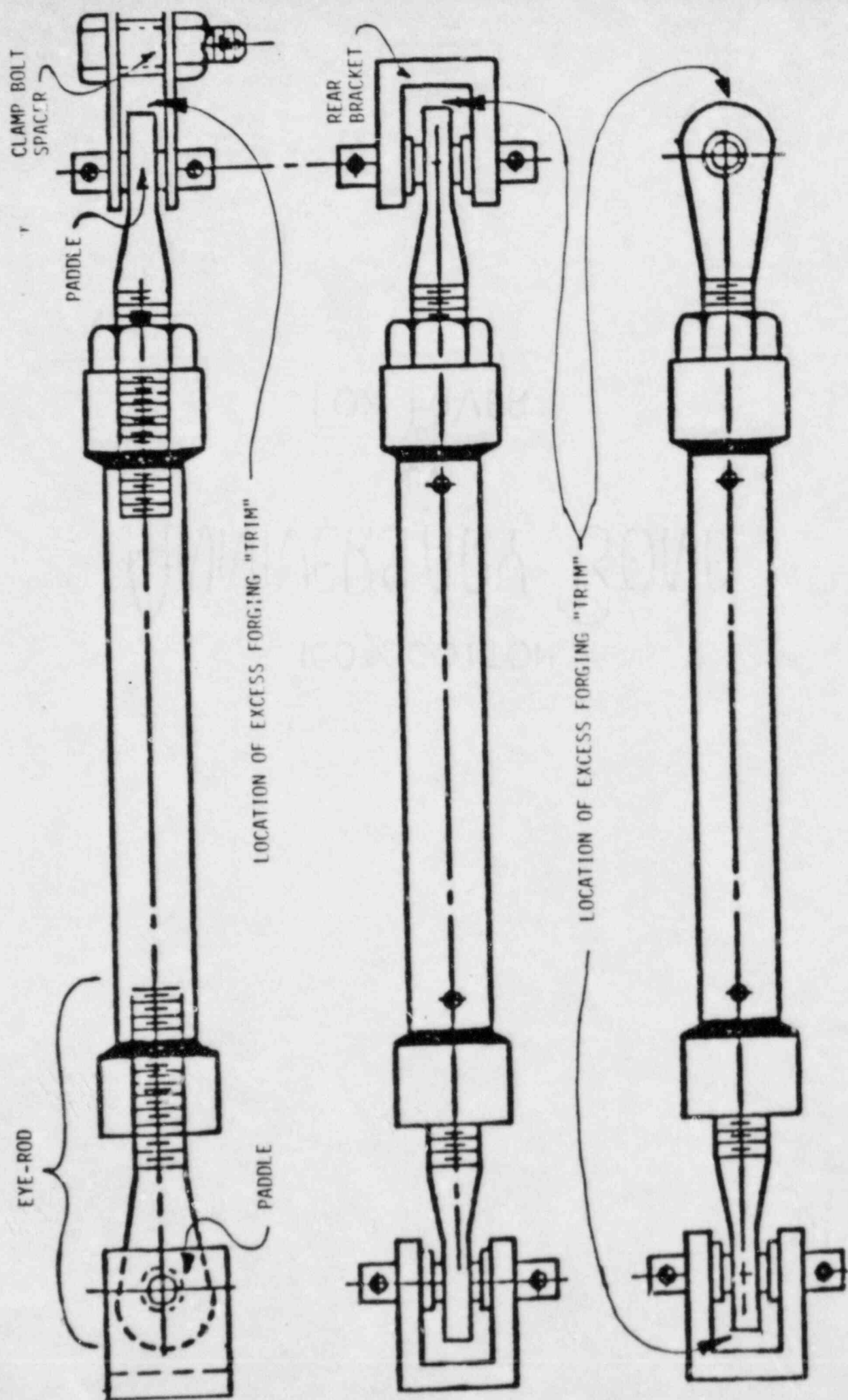


FIGURE 1
ST-HL-AE-1312