STAKING OF LIMITORQUE VALVE OPERATORS

San Onofre Nuclear Generating Station
Units 2 and 3

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes a deficiency related to improper staking of locking nuts for Limitorque operators installed on motor operated valves.

BACKGROUND

By letter dated March 9, 1979, Southern California Edison Company reported a condition involving improper staking of valve operators. The condition was originally identified by a letter dated August 4, 1978 from Combustion Engineering, the NSSS Supplier for Units 2 and 3. A subsequent investigation was conducted at the San Onofre jobsite which identified valves supplied by both Combustion Engineering and Bechtel which lacked proper staking of associated operator locking nuts.

DISCUSSION

The following discussion is responsive to 10CFR50.55(e)(3).

Description of the Deficiency

The condition is identical to that described in Circular 79-04 forwarded by a NRC letter dated March 16, 1979. Ninety-six (96) valves procured by Bechtel and Combustion Engineering with Limitorque operators for San Onofre Units 2 and 3 have been identified as being suspect.

Analysis of Safety Implications

Improperly staked lock nuts coupled with vibration could cause the lock nut to back out. In turn, this condition might allow the stem nut to move axially and to become disengaged from the splines which could cause a loss of drive

to the valve stem. If this condition was not detected during startup testing conditions or during required plant surveillance testing and/or maintenance, the safety related valves with Limitorque operators could fail to operate when required.

Cause and Corrective Action

The cause of the problem was that valve suppliers did not assure that the staking of the lock nuts on the valve operators was performed during valve assembly. The following corrective action steps have been taken:

1) All valves with Limitorque operators have been identified and placed within the nonconformance control system.

2) Rework of valves by staking is being provided in accordance with instructions provided by Limitorque.

3) Suppliers of these type of valves were notified of this condition and the action required.

4) Personnel responsible for source inspection and surveillance of the affected valve suppliers have been notified of this condition and have been instructed to only accept valves which are properly staked in the future.

CONCLUSION

All valves which did not have proper staking of the valve operator locking nuts have been identified. Action is in progress to correct the condition.