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William J. Museler
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Watts Bar Nuclear Plant

SEP 21 1992

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

WATTS BAR NUCLEAR PLANT (WBN) - CATEGORY I PIPE - U-BOLT SUPPORT ARRANGEMENTS

During the NRC's Civil Integrated Design Inspection (IDI) conducted between July 13, 1992 and August 7, 1992, an issue was identified regarding the effectiveness of U-Bolt design and installation procedures. NRC questioned the methodology for achieving effective U-Bolt tensile forces necessary to provide for stable pipe support configurations. In response, evaluations were performed and an overall corrective action plan identified.

Additional efforts, including a load test which correlated well with revised design and installation methods, have been completed. More detailed information regarding the key elements of the action plan are described below.

Key Elements

The key elements of the U-bolt action plan are:

- Update design methodology: Finalize the methodology to determine the proper preload force for all WBN U-bolt trapeze and single strut/snubber applications considering the major controlling parameters; e.g., pipe size, U-bolt size, seismic load, swing angle of 5°, thermal and pressure effects, relaxation/seating effects, pipe and U-bolt stress, and material.

- Revise installation procedures and add Belleville washer design concept/installation requirements to control and stabilize tensile loads in the bolts.

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- Verification of analytical and installation approaches by in-place testing of representative configurations and evaluation of test data.

- Finalize design calculations to document the results from the methodology and test applications. Calculations provide the method and how to apply it for WBN U-bolts and the related technical justification.

- Implementation of reinstallation steps for total population to ensure proper alignment and bolt tensile loads prior to system turnover for testing.

Flow Chart of Activities

The enclosure depicts the planned flow of activities.

TVA would like the opportunity to discuss this issue further with the staff. Please contact P. L. Pace at (615) 365-1824 regarding the staff's availability to meet on this subject.

Very truly yours,

W. J. Museler

William J. Museler

Enclosure
cc (Enclosure):
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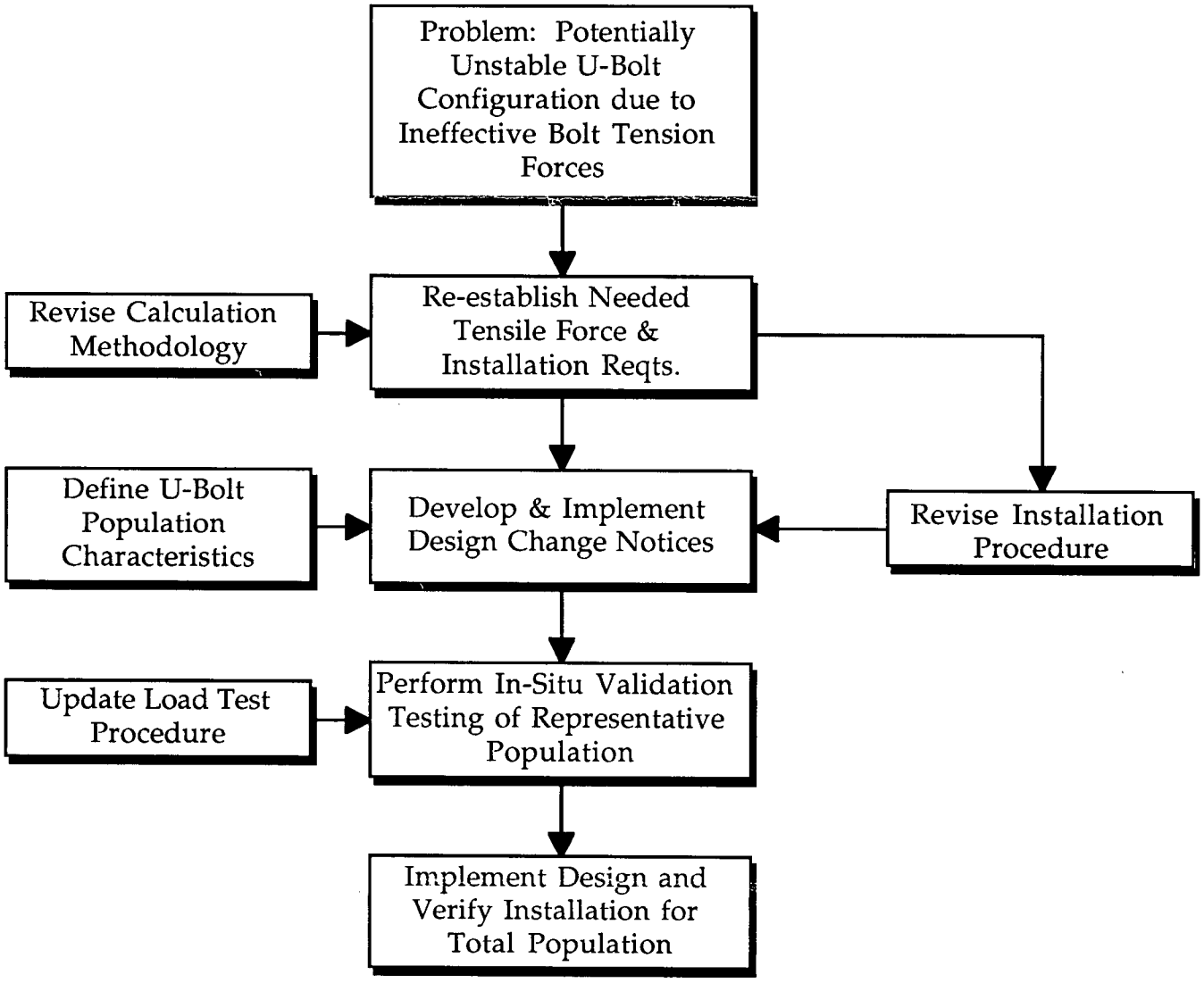
Flow Chart of Action Plan



WAM 9/8/92