MEMORANDUM TO:

FROM:

SUBJECT: RECOMMENDED ACTION IN RESPONSE TO THE NRC STAFF EVALUATION OF USING THE CROSSFLOW ULTRASONIC FLOWMETER TO DETERMINE FEEDWATER FLOW RATE AND TO ACHIEVE INCREASED THERMAL POWER

REFERENCES: (1) "Improved Flow Measurement Accuracy Using Crossflow Ultrasonic Flow Measurement Technology," ABB Combustion Engineering, CENPD-397-P-A, ML052070504, May 31, 2000. (Proprietary)

(2) Gresham, James A., "CROSSFLOW Ultrasonic Flow Measurement System Standard and Non-Standard Installations (Proprietary / Non-proprietary)," Letter to NRC from Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company, LTR-NRC-06-35, May 31, 2006.

In the attached NRC staff assessment, the we find that (1) the existing previously approved Reference 1 topical report is no longer acceptable as a basis for using CROSSFLOW to determine feedwater flow rate, (2) a basis has not been established for such use that acceptably addresses the issues discussed in the assessment, and (3) CROSSFLOW is not acceptable for use in determination of feedwater flow rate for either measurement uncertainty recapture power uprate (MUR) or power recovery (PR) purposes. Therefore, we recommend issuing an order requiring that licensees stop using CROSSFLOW until the issues have been acceptably resolved.

Reference 2 stated that the following (b)(4) licensees use or plan to use CROSSFLOW for PR by applying 10 CFR 50.59:

(b)(4)

and the following (b)(4) use or plan to use CROSSFLOW for MUR under 10 CFR 50.92 requests for license amendments:

(b)(4)

N-1

The Calvert Cliffs and Ft. Calhoun MUR amendment requests are before the NRC staff for review and these can addressed by rejecting the requests. No order is necessary. Orders should be issued to the other licensees, including Calvert Cliffs for use of CROSSFLOW in PR.

Attachment As Stated

Contact:

cc: J. Wermiel
T. Martin
G. Shukla
T. Alexion
A. Howe
I. Ahmed
W. Lyon
J. Nakoski