


120

NRC FORM 690 (11-2002) NRCMD 10-159		U.S. NUCLEAR REGULATORY COMMISSION		FOR PROCESSING USE ONLY	
DIFFERING PROFESSIONAL OPINION -- APPEAL				1. DPO CASE NUMBER DPO-2006-006	
INSTRUCTIONS: Prepare this form legibly and submit three copies to the address provided in Block 12 below.				2. DATE APPEAL RECEIVED	
3. NAME OF SUBMITTER Evangelos C. Marinos		4. POSITION TITLE Branch Chief		5. GRADE GG-15	
6. OFFICE/DIVISION/BRANCH/SECTION NRR/DORL/LPLII-1		7. BUILDING OWN	8. MAIL STOP O 8G-9a	9. SUPERVISOR Catherine Haney	
10. DESCRIBE THE DIFFERING PROFESSIONAL OPINION. DESCRIBE THE PRESENT SITUATION, CONDITION, METHOD, ETC., WHICH YOU BELIEVE SHOULD BE CHANGED OR IMPROVED. (Continue on Page 2 or 3 as necessary.) In August of 1999 Combustion Engineering / AMAG (now Westinghouse /AMAG) submitted Topical Report CENPD-397-P-A, "Improved Flow Measurement Accuracy Using Crossflow Ultrasonic Flow Measurement Technology" for staff review. The staff issued a Safety Evaluation Report (SER) on the Crossflow instrument dated March 20, 2000, accepting the documented accuracy of Crossflow. Prior to issuance of the SER , however, the Caldon Corporation, a competitor to Westinghouse/AMAG, starting from February 15, 2000 to present, has been challenging the adequacy of the Crossflow instrument to meet its claimed accuracy. As a result of this challenge, NRR management established an "Independent Task Group" to re evaluate the staff conclusions on the acceptability of the Crossflow instrument. (See continuation next page)					
11. DESCRIBE YOUR REASONS FOR SUBMITTING AN APPEAL (IN ACCORDANCE WITH THE GUIDANCE PRESENTED IN NRC MANAGEMENT DIRECTIVE 10.159). (Continue on Page 2 or 3 as necessary.) The reason for submitting this appeal is that the OD's decision, dated June 29, 2007, relies in part, on the DPO panel's report that I believe failed to: 1. Recognize the Management Conclusions in the allegation response to Caldon that "the NRC determined that it is an issue of license compliance rather than safety," and " reasonable assurance does not foreclose the possibility that nonconforming conditions could occur that would result in plant operation above the licensed power level. Plant procedures can provide the means by which nonconforming conditions can be identified and corrected." These conclusions were stated in the allegation response by the entire Management after careful consideration of all the facts presented in numerous briefing sessions. There have been no credible performance data to invalidate the Management conclusions. 2. Acknowledge that all Nuclear Power Plants licensed to operate with the Westinghouse/AMAG Ultrasonic Flow Meter (UFM) for MUR power uprate have not reported over- power conditions. 3. Acknowledge that the panel's report on over-power conditions, relate to the miss-use of the instrument at Byron and Braidwood in a non-MUR power uprate application, where NRC approval was not granted and that installation was made prior to approval of the topical report by the staff. (See continuation next page)					
SIGNATURE OF SUBMITTER 		DATE 7/18/07		SIGNATURE OF CO-SUBMITTER (if any) DATE	
12. SUBMIT THIS FORM TO: Differing Professional Opinions Program Manager Office of: Enforcement Mail Stop: O 14E1		13. ACKNOWLEDGMENT 13. SIGNATURE OF DIFFERING PROFESSIONAL OPINIONS PROGRAM MANAGER (DPOPM) DATE OF ACKNOWLEDGMENT			
14. DECISION <input type="checkbox"/> Appeal sustained <input type="checkbox"/> Appeal denied (see attached) Differing Professional Opinion Closed DATE A-120					

DIFFERING PROFESSIONAL OPINION (Continued)

CONTINUE ITEM 10 AND/OR ITEM 11 FROM PAGE 1. (Indicate the block number to which this information applies.)

(Continuation for item 10)

Documentation and references, submitted with the DPO, provide a detailed record of the evolution of the issue and the Task Group's contradictory and unsupported conclusions intended to reverse the staff acceptance of the Crossflow instrument and thus accommodate Caldon in its relentless pursuit to gain market advantage. This will damage our Nuclear Industry's options to apply sound technologies to assure safety and efficiency in the use of our national resources.

I have made presentations to management and I have extensively documented the technical basis which was used by management in rejecting the Caldon allegation, in support of the agency conclusions on the acceptability of the Crossflow instrument, as stated in the March 20, 2000 SER. The facts presented by Westinghouse/AMAG, myself and the I&C Branch (during my assignment as the Chief of the Branch), that reaffirm the adequacy of the Crossflow instrument have not been adequately considered and presently the instrument has been declared unacceptable for feedwater flow measurement. The staff and management that have declared the instrument unacceptable are responsible for the unsupported conclusions previously reached in the Task Group Report, notwithstanding that the Task Group Report conclusions were invalidated by the allegation response to Caldon formally concurred by the Task Group Report authors.

(Continuation for item 11)

4. Acknowledge that the topical incorporated the SER provisions for in-situ testing in specific applications where the instrument does not meet its expected calculated accuracy during implementation and prior to declaring the instrument operable. Such provisions were applied to licensed plants with MUR, listed below, including the Fort Calhoun and Calvert Cliffs Plants with amendments to their license for implementing the instrument in MUR power uprate. These two plants are being held hostage by the authors of the present SER which requires withdrawal of the original topical report, notwithstanding the authors' concurrence on the original SER that approved the technology and more importantly their concurrence on the Management Decision, in the allegation response, to reject Caldon's relentless pursuit to eliminate the competition by using ex-NRC officials to pressure the staff and force withdrawal of the Westinghouse/AMAG topical.

5. Recognize that Westinghouse /AMAG are not in a position to assure that in-situ calibration will be conducted to national consensus standards. This task is performed at the site, albeit with oversight from the vendor, as it has been performed at the Fort Calhoun and Calvert Cliffs Plants. The in-situ testing provisions agreed upon by Westinghouse/AMAG, as stated in the reference documentation to my DPO, were proposed in the Bulletin that I was directed to prepare and a draft of which was presented at a public meeting and before the ACRS. However, under violent objection against these provisions by Caldon, who would have been also required to demonstrate capability of their instrument through the same testing, the Bulletin was not issued. Caldon's objection was based on their claim that the venturi loop proposed for in-situ testing the UFM instrument is not sufficiently accurate, while they have subsequently used the venturi to justify their instrument performance at Beaver Valley. My documentation and reports to IG, provide details of the reasons for the Management decision not to publish the Bulletin.

6. Adequately quantify their concern that a bias that may exist in some instances can cause an increase in the instrument inaccuracy by more than the .5% uncertainty assumed by Westinghouse/AMAG. However, since this perceived inaccuracy could well be within the .6% power penalty licensees are accepting when using this instrument, the additional margin provides reasonable assurance that regulatory requirements are not violated. Moreover, the panel has concluded that the theoretical uncertainty argument on the instrument bias is resolved by the Westinghouse/AMAG commitment to require licensees, using the Crossflow instrument, to validate its performance against the venturi loop.

List of Plants Licensed by NRC with the Westinghouse/AMAG UFM :

Pilgrim	Hatch 1, 2
Kewaunee	South Texas 1, 2
Hope Creek	San Onofre 1, 2
Salem 1, 2	