



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 19, 1994

Docket No. 50-293

Mr. E. Thomas Boulette, Ph.D
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Dear Mr. Boulette:

SUBJECT: GENERIC LETTER 89-10, SUPPLEMENT 5, "INACCURACY OF MOTOR-OPERATED VALVE DIAGNOSTIC EQUIPMENT" (TAC NO. M87987)

On June 28, 1993, the NRC staff issued Supplement 5, "Inaccuracy of Motor-Operated Valve Diagnostic Equipment," to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," requesting nuclear power plant licensees and construction permit holders to: (1) reexamine their motor-operated valve (MOV) programs and to identify measures taken to account for uncertainties in properly setting valve operating thrust to ensure operability, and (2) evaluate the schedule necessary to consider the new information on MOV diagnostic equipment inaccuracy and to take appropriate action in response to that information. Within 90 days of receipt of Supplement 5 to GL 89-10, licensees were required (1) to notify the NRC staff of the diagnostic equipment used to confirm the proper size, or to establish settings, for safety-related MOVs, and (2) to report whether they had taken actions or planned to take actions (including schedule) to address the new information on the accuracy of MOV diagnostic equipment.

The NRC staff has reviewed the responses, and has found that, for the most part, licensees and permit holders have been actively addressing the uncertainties regarding the accuracy of MOV diagnostic equipment. The increased inaccuracy of MOV diagnostic equipment can raise questions regarding: (1) the adequacy of torque switch settings to provide sufficient thrust while not exceeding thrust or torque structural limits and (2) the capability of actuator motors at current settings. In their responses, licensees and permit holders indicated that many MOVs had the potential for underthrusting or overthrusting as a result of the higher than expected inaccuracy of MOV diagnostic equipment. Consequently, some licensees reported that MOVs have been retested, adjusted, or modified to resolve the concerns regarding the accuracy of MOV diagnostic equipment.

In your response dated October 21, 1993, you stated that you use MOV diagnostic equipment manufactured by Liberty Technologies, Teledyne Engineering, and ITI-MOVATS. You stated that you had reviewed MOVs setup using the ITI-MOVATS TMD in accordance with ITI-MOVATS Engineering Report 5.2. You also stated that you had reviewed the Liberty Technologies' Part 21 notice (dated October 2, 1992) and that no operability problems were found. You

9404270260 940419
PDR ADOCK 05000293
P PDR

210032

NRC FILE CENTER COPY

DF01/10

April 19, 1994

stated that you would complete updating the test results by December 31, 1993. You stated that two MOVs required corrective action due to overthrust and overtorque. Corrective actions for these valves included overhaul and retesting to establish baseline conditions. You stated that you planned a design modification for those two MOVs in April 1995. You reported two additional VOTES issues: (a) concern about data outside the calibration range; and (b) the accuracy when using the BFSL calibration method. You stated that you found no operability concerns from these two issues. You stated that you would complete revision of test results by February 1994. You stated that to determine overall accuracy of the measurements you conservatively analyze the total system error based on individual error reports provided by the equipment manufacturers. You are developing a test validation program to bound any test equipment uncertainties that is scheduled for completion prior to the next scheduled maintenance outage (revised schedule is October/November 1994).

During a future inspection, the NRC staff will discuss your resolution of the MOV diagnostic equipment accuracy issue. In particular, the staff will discuss: (1) your method used to address the Liberty Technologies' Part 21 notice; (2) the basis that the two overthrust/overtorque MOVs remained capable of performing their safety function; and (3) your method for addressing the two additional VOTES issues and the results.

This completes all efforts on TAC No. M87987. If you have any questions regarding this issue, please call me at (301) 504-3041.

Sincerely,

Original signed by

Ronald B. Eaton, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

DISTRIBUTION:

Docket File	SLittle	AHansen
NRC & local PDRs	REaton	
PDI-3 Reading	OGC	
SVarga	ACRS (10)	
JCalvo	JLinville, RI	
WButler	TScarborough	

*previously concurred

OFFICE	PDI-3:LA	*EMEB	PDI-3:PM	PDI-3:D	
NAME	SLittle	JNorberg	REaton:dt	WButler	
DATE	4/19/94	04/19/94	4/19/94	4/19/94	

OFFICIAL RECORD COPY

DOCUMENT NAME: A:\GL89-10.PIL

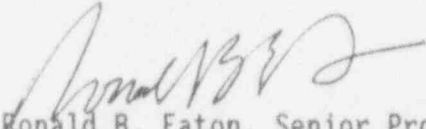
April 19, 1994

stated that you would complete updating the test results by December 31, 1993. You stated that two MOVs required corrective action due to overthrust and overtorque. Corrective actions for these valves included overhaul and retesting to establish baseline conditions. You stated that you planned a design modification for those two MOVs in April 1995. You reported two additional VOTES issues: (a) concern about data outside the calibration range; and (b) the accuracy when using the BFSI calibration method. You stated that you found no operability concerns from these two issues. You stated that you would complete revision of test results by February 1994. You stated that to determine overall accuracy of the measurements you conservatively analyze the total system error based on individual error reports provided by the equipment manufacturers. You are developing a test validation program to bound any test equipment uncertainties that is scheduled for completion prior to the next scheduled maintenance outage (revised schedule is October/November 1994).

During a future inspection, the NRC staff will discuss your resolution of the MOV diagnostic equipment accuracy issue. In particular, the staff will discuss: (1) your method used to address the Liberty Technologies' Part 21 notice; (2) the basis that the two overthrust/overtorque MOVs remained capable of performing their safety function; and (3) your method for addressing the two additional VOTES issues and the results.

This completes all efforts on TAC No. M87987. If you have any questions regarding this issue, please call me at (301) 504-3041.

Sincerely,



Ronald B. Eaton, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

Mr. E. Thomas Boulette

Pilgrim Nuclear Power Station

cc:

Mr. Edward S. Kraft,
Vice President of Nuclear
Operations & Station Director
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

Mr. H. Vernon Oheim
Manager, Reg. Affairs Dept.
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

Resident Inspector
U. S. Nuclear Regulatory Commission
Pilgrim Nuclear Power Station
Post Office Box 867
Plymouth, Massachusetts 02360

Mr. David F. Tarantino
Nuclear Information Manager
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Chairman, Board of Selectmen
11 Lincoln Street
Plymouth, Massachusetts 02360

Mr. Thomas Rapone
Secretary of Public Safety
Executive Office of Public Safety
One Ashburton Place
Boston, Massachusetts 02108

Office of the Commissioner
Massachusetts Department of
Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Mr. David Rodham, Director
Massachusetts Emergency Management
Agency
400 Worcester Road
P.O. Box 1496
Framingham, Massachusetts 01701-0317
Attn: James Muckerheide

Office of the Attorney General
One Ashburton Place
20th Floor
Boston, Massachusetts 02108

Chairmen, Citizens Urging
Responsible Energy
P. O. Box 2621
Duxbury, Massachusetts 02331

Mr. Robert M. Hallisey, Director
Radiation Control Program
Massachusetts Department of
Public Health
305 South Street
Boston, Massachusetts 02130

Citizens at Risk
P. O. Box 3803
Plymouth, Massachusetts 02361

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

W. S. Stowe, Esquire
Boston Edison Company
800 Boylston St., 36th Floor
Boston, Massachusetts 02199

Mr. Paul J. Hamilton
Licensing Division Manager
Boston Edison Company
600 Rocky Hill Road
Plymouth, Massachusetts 02360-5599