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SEP 05 1984

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VICE-PRESIDENT  
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BOOKET NUMBER 50-352 02  
PROP. & UTIL. ENG. 50-353 02

DOCKETED  
USNRC

'84 SEP 10 A11:39

Dr. Thomas E. Murley, Director  
Office of Inspection and Enforcement - Region I  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Subject: Limerick Generating Station, Units 1 & 2  
Significant Deficiency Report No. 157 (Attachment 1)  
ASCO Solenoid Valves Installed on Velan Air  
Operated Valves  
NRC Construction Permit Nos. CPPR-106 and 107

Reference: Telecon - J. P. Evans (PECo) to Jane Grant (USNRC),  
dated 9/4/84

File: QUAL 2-10-2 (SDR No. 157)

Dear Dr. Murley:

In compliance with 10CFR50.55(e), we are submitting our  
Significant Deficiency Report concerning ASCO solenoid valves  
installed on Velan air operated valve assemblies.

We trust that this satisfactorily resolves the item. Please do  
not hesitate to contact us if further information is required.

Sincerely,

*J. S. Kemp*

Copy to: Director of Inspection and Enforcement  
United States Nuclear Regulatory Commission  
Washington, DC 20555

S. Chaudhary, Resident NRC Inspector (Limerick)

JNM/pd09048403

Attachment

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S PDR

cc: Judge Lawrence Brenner	(w/enclosure)
Judge Peter A. Morris	(w/enclosure)
Judge Richard F. Cole	(w/enclosure)
Judge Christine M. Kohl	(w/enclosure)
Judge Gary J. Edles	(w/enclosure)
Judge Reginald L. Gotchy	(w/enclosure)
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Atomic Safety & Licensing Appeal Board	(w/enclosure)
Atomic Safety & Licensing Board Panel	(w/enclosure)
Docket & Service Section	(w/enclosure - 3 copies))
James Wiggins	(w/enclosure)
Timothy R. S. Campbell	(w/enclosure)

Limerick Generating Station, Units 1 & 2  
Significant Deficiency Report No. 157  
Concerning Misapplication of ASCO Solenoid Valves

1.0 Introduction

This report concerns the improper application of ASCO Solenoid valves controlling air supply to Velan air operated valves in the Limerick Emergency Service Water System.

2.0 Description of Problem

The existing pilot solenoid valves (ASCO Model NP344A71E) are four way valves incorporating a design that provides the capability to control double acting valve operators (i.e. - ones not provided with spring return to a designated position). The air supply to these pilot solenoids does not ensure complete travel of the solenoid valve piston thus permitting partial venting to the atmosphere of the air supply to the valve operator. As a result, the subject valves occasionally do not stroke when called upon to do so, as was discovered during pre-operational testing.

3.0 Corrective Action to be Taken

The four way solenoid valves on all Emergency Service Water valves are being replaced by three way solenoid valves which will not be subject to the condition described above. The manual shutoff valves upstream of the pilot solenoid valves are also being replaced to increase air supply flow. The affected ESW valves will be tested to verify proper operation after the work is complete. This work will be complete by September 15, 1984.

4.0 Safety Implications

Failure of pilot solenoid valves to stroke the ESW valves could result in loss of emergency service water inventory and/or loss of the required cooling water to safety related ECCS heat exchangers.