

NOV 18 1977

Docket No. 50-346

Toledo Edison Company  
ATTN: Mr. Lowell E. Roe  
Vice President, Facilities  
Development  
Edison Plaza  
300 Madison Avenue  
Toledo, Ohio 43652

Docket File  
NRC PDR  
Local PDR  
LWR 1 File  
R. S. Boyd  
R. C. DeYoung  
D. B. Vassallo  
F. J. Williams  
J. Stolz  
L. Engle  
E. Hylton  
R. J. Mattson  
D. Ross  
J. P. Knight  
R. Tedesco  
H. Denton  
V. A. Moore  
R. H. Vollmer

M. L. Ernst  
W. P. Gammill  
ELD  
IE (3)  
D. Crutchfield  
V. Stello  
K. Goller  
G. Lear  
J. Hannon  
W. Haass  
  
bcc: JRBuchanan, NSIC  
TBAbernathy, TIC  
ACRS (16)

Gentlemen:

SUBJECT: PWR HPSI AND LPSI FLOW RESISTANCE - DAVIS-BESSE, UNIT 1

A large number of PWR High Pressure and Low Pressure Safety Injection Systems (HPSI and LPSI) utilize a common low pressure and a common high pressure header to feed the several cold (and in some cases hot) leg injection points. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration; (2) provide a proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses; and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses. Many plants have either manual or motor operated valve(s) in the lines to each injection point that have electrical or mechanical stops which have been adjusted during pre-operational testing of the plant to ensure that these flow requirements are satisfied.

In view of the safety function associated with the proper setting of valves used to throttle flow in these systems, we consider it appropriate that periodic verification be made of these valve positions. Accordingly, we request that you determine if throttle valves are used to obtain the required flow distribution in the HPSI or LPSI systems. If throttle valves are used, we request that you propose changes to your technical specifications to incorporate the surveillance requirements given in the enclosure.

In the event valves are not utilized to throttle flow in your systems, you should advise us of this fact and no further action will be required.

ECLS /

GD

OFFICE →						
SURNAME →						
DATE →						

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NOV 18 1977

Toledo Edison Company

- 2 -

The above action should be completed within 60 days of receipt of this letter. In the event you should desire further discussion of this matter, please contact us.

Sincerely,

Original Signed by

John F. Stolz

John F. Stolz, Chief  
Light Water Reactors Branch No. 1  
Division of Project Management

Enclosure:  
Technical Specifications

cc w/enclosure:  
Mr. Donald H. Hauser, Esq.  
The Cleveland Electric Illuminating Company  
P. O. Box 5000  
Cleveland, Ohio 44101

Gerald Charnoff, Esq.  
Shaw, Pittman, Potts and Trowbridge  
1800 M Street, N. W.  
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Leslie Henry, Esq.  
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300 Madison Avenue  
Toledo, Ohio 43604

OFFICE →	LWR	LWR 1			
SURNAME →	LEH/rd	JStolz			
DATE →	11/18/77	11/18/77			

ENCLOSURE

SAMPLE SURVEILLANCE TECHNICAL SPECIFICATIONS FOR  
PWR HPSI AND LPSI SYSTEM THROTTLE VALVE STOPS

1. The correct position of each electrical and/or mechanical position stop for the following throttle valves shall be verified:
  - a. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the HPSI or LPSI System is required to be operable.
  - b. At least once per 18 months.

HPSI System

Valve Number

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

LPSI System

Valve Number

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

2. A flow balance test shall be performed during shutdown to confirm the following minimum injection flow rates following completion of HPSI or LPSI system modifications that alter system flow characteristics:

HPSI System - Single Pump

Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm

LPSI System - Single Pump

Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm
Injection Leg	_____	>	_____	gpm

Bases

The purpose of these surveillance requirements is to provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.