

LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | P | A | B | V | S | 1 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | \_\_\_\_\_ | 5  
7 8 9 14 15 25 26 57 58  
LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT 58

CON'T  
0 1 | L | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 3 | 4 | 7 | 0 | 8 | 2 | 7 | 8 | 0 | 8 | 0 | 8 | 2 | 8 | 8 | 0 | 9  
7 8 60 61 68 69 74 75 80  
REPORT SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | A potential for damage to one or more charging pumps following a secondary side high  
0 3 | energy line break was identified by a Westinghouse 10 CFR 21 report and recently  
0 4 | confirmed to apply to Beaver Valley. Since there are three (3) charging pumps, there  
0 5 | is sufficient redundancy to guarantee that the charging pumps perform their intended  
0 6 | emergency core cooling system function. Therefore, the consequences of this event  
0 7 | would be minimal.

0 8 | \_\_\_\_\_ 80

0 9 | C | G | 11 | B | 12 | A | 13 | Z | Z | Z | Z | Z | Z | 14 | Z | 15 | Z | 16 |  
9 10 11 12 13 18 19 20  
SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE  
17 | 8 | 0 | 21 | 22 | 0 | 6 | 0 | 24 | 26 | 0 | 3 | 28 | 29 | L | 30 | 0 | 32 |  
18 | Z | 19 | Z | 20 | Z | 21 | 0 | 0 | 0 | 0 | 22 | Y | 23 | N | 24 | A | 25 | Z | 9 | 9 | 9 | 26 |  
33 34 35 36 37 40 41 42 43 44 47  
LER/RO REPORT NUMBER EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO.  
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRO-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Following a secondary side high energy line break and subsequent safety injection,  
1 1 | the charging pumps minimum flow line isolation valves close. If all pressurizer  
1 2 | power-operated relief capability were lost, the lowest discharge head charging pump  
1 3 | may not have sufficient flow to prevent damage. Presently, the valves will be  
1 4 | controlled procedurally and minimum flow line isolation on SI signal removed.

1 5 | H | 28 | 0 | 0 | 0 | 29 | Design | 30 | D | 31 | Vendor notification | 32  
7 8 9 10 12 13 44 45 46 80  
FACILITY STATUS % POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION

1 6 | Z | 33 | Z | 34 | N/A | 35 | N/A | 36  
7 8 9 10 11 44 46 80  
ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE

1 7 | 0 | 0 | 0 | 37 | Z | 38 | N/A | 39  
7 8 9 10 11 12 13 80  
PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION

1 8 | 0 | 0 | 0 | 40 | N/A | 41  
7 8 9 10 11 12 80  
PERSONNEL INJURIES NUMBER DESCRIPTION

1 9 | Z | 42 | N/A | 43  
7 8 9 10 80  
LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION

2 0 | N | 44 | N/A | 45  
7 8 9 10 80  
PUBLICITY ISSUED DESCRIPTION

NRC USE ONLY

NAME OF PREPARER

W. S. Lacey

PHONE

412-643-8525

8009050254

Attachment To LER 80-60/03L  
Beaver Valley Power Station  
Duquesne Light Company  
Docket No. 50-334

Description Of Event

A review of the Westinghouse Safety Injection (SI) Termination Criteria following a secondary side high energy line rupture (feedline or steamline rupture at high initial power levels) has revealed a potential for consequential damage of one or more centrifugal charging pumps before the SI termination criteria are satisfied and pump operation is terminated. This concern exists for BVPS which utilizes the charging pumps as Emergency Core Cooling System (ECCS) pumps, where the charging pumps are automatically started, and where the pump miniflow isolation valves are automatically isolated upon SI initiation.

Probable Consequences Of Occurrence

It has recently been determined by the BVPS Test Group that there is a potential for the charging pumps to be damaged prior to termination of SI. It is possible that the pumps could be prevented from performing their intended function during an accident condition. Such consequential damage may adversely impact long-term recovery operations for the initiating event and is not permitted by design criteria. Since there are three charging pumps, there is sufficient redundancy designed into the system to handle the possible loss of a charging pump and still ensure that the ECCS performs its intended function. The health and safety of the general public have not been affected by this potential problem.

Cause Of Event

Following a secondary side high energy line rupture and subsequent SI initiation, the charging pump recirculation (miniflow) line isolation valves automatically close. If the pressurizer power-operated relief valves (PORVs) were not operable due to loss of offsite power, adverse environment inside containment, PORV in manual mode, or the PORV block valve in a closed position due to PORV leakage, the Reactor Coolant System (RCS) pressure would increase because of injection flow and core decay heat generation until it reached the setpoint of the pressurizer code safety valves (about 2485 psig). At this high a back pressure, the charging pumps may not be able to supply sufficient flow to prevent damaging the pumps.

Immediate Corrective Action

To assess this concern with respect to BVPS, a calculational plant-specific evaluation in accordance with Westinghouse recommendations has been performed. Westinghouse submitted a report to the NRC under 10 CFR Part 21 concerning this problem.

Scheduled Corrective Action

Since a plant-specific concern has been identified, it will be resolved by removing the SI valve closure signal from the charging pump miniflow isolation valves. Any valve manipulations will be controlled procedurally. This will ensure that the charging pumps remain adequately protected.