

## **Omaha Public Power District**

1623 HARNEY & OMAHA. NEBRASKA 68102 . TELEPHONE 536-4000 AREA CODE 402

February 27, 1981

To ADM/DMB:

PDR LPDR NSIC

ADM/TIDC

ADM/RSB

Mr. K. V. Seyfrit, Director U. S. Nuclear Regulatory Commission Office of Inspection and Enforcement Region IV 611 Ryan Plaza Drive, Suite 1000 Arlington, Texas 76011

Reference: Docket No. 50-285

Dear Mr. Seyfrit:

Omaha Public Power District's letter dated June 6, 1980, was submitted in response to IE Bulletin 80-06 regarding Engineered Safety Feature (ESF) reset controls. In the enclosure to the letter, the District indicated that 43 components were to receive engineering evaluation to determine the need for additional corrective action. As requested by Mr. Wagner of the Commission, a summary of the results of the engineering evaluations is attached.

Sincerely,

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W. C. Jones Division Manager Production Operations

WCJ/KJM/TLP:jmm

Attachment

cc: U. S. Nuclear Regulatory Commission Office of Inspection and Enforcement Washington, D.C. 20555

> LeBoeuf, Lamb, Lriby & MacRae 1333 New Hampshire Avenue, N.W. Washington, D.C. 20036



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# TABLE 1

/alve/Equipment	Name	Analyses
PCV-521	Cont. Valve for Waste Disposal Gas to Stack	Note 1
HCV-480	Inlet Shutdown Heat Exchanger 4A	Note 2
HCV-484	Outlet Shutdown Heat Exchanger 4A	Note 2
HCV-481	Inlet Shutdown Heat Exchanger 48	Note 2
HCV-485	Outlet Shutdown Heat Exchanger 4B	Note 2
HCV-489A	Inlet to AC-1A	Note 3
HCV-489B	Outlet to AC-1A	Note 3
HCV-490A	Inlet to AC-18	Note 3
HCV-490B	Outlet to AC-18	Note 3
HCV-491A	Inlet to AC-1C	Note 3
HCV-491B	Outlet to AC-1C	Note 3
HCV-492A	Inlet to AC-1D	Note 3
HCV-4928	Outlet to AC-1D	Note 3
PCV-2909	Leakage Cooler 4A Pressure Operated Control Valve	Note 4
PCV-2929	Leakage Cooler 4B Pressure Operated Control Valve	Note 4
PCV-2949	Leakage Cooler 4C Pressure Operated Control Valve	Note 4
PCV-2969	Leakage Cooler 4D Pressure Operated Control Valve	Note 4
CH-4A	Boric Acid Pump	Note 5
CH-4B	Boric Acid Pump	Note 5
FCV-269	Boric Acid Control Valve Downstream of FCV-269Y	Note 6
LCV-218-2	Volume Control Tank Outlet and Low Level Isolation	Note 7
HCV-2808A	Inlet LPSI-1A	Note 8
HCV-2808B	Outlet LPSI-1A	Note 8
HCV-2809A	Inlet LPSI-18	Note 8
HCV-2809B	Outlet LPSI-18	Note 8
HCV-2810A	Inlet HPSI-2A	Note 8
HCV-2810B	Outlet HPSI-2A	Note 8
HCV-2811A	Inlet HPSI-2B	Note 8
HCV-28118	Outlet HPSI-28	Note 8
HCV-2812A	Inlet HPSI-2C	Note 8

# TABLE 1 (Continued)

Name	Analyses
Outlet HPSI-2C	Note 8
Inlet Containment Spray SI-3A	Note 8
Outlet Containment Spray SI-3A	Note 8
Inlet Containment Spray SI-3B	Note 8
Outlet Containment Spray SI-38	Note 8
Inlet Containment Spray SI-3C	Note 8
Outlet Containment Spray SI-3C	Note 8
Deaerator Vacuum Pump	Note 9
Deaerator Vacuum Pump	Note 9
Reactor Coolant Drain Tank Pump	Note 10
Reactor Coolant Drain Tank Pump	Note 10
Containment Spray Valve	Note 11
Containment Spray Valve	Note 11
	<u>Name</u> Outlet HPSI-2C Inlet Containment Spray SI-3A Outlet Containment Spray SI-3A Inlet Containment Spray SI-38 Outlet Containment Spray SI-38 Inlet Containment Spray SI-3C Outlet Containment Spray SI-3C Deaerator Vacuum Pump Deaerator Vacuum Pump Reactor Coolant Drain Tank Pump Reactor Coolant Drain Tank Pump Containment Spray Valve

## Note 1:

The function performed by PCV-521 is to exhaust gas from the gas decay tanks to atmosphere. Valve PCV-521 will go open upon ESF reset. Although the Stack Radiation Monitor Signal will immediately close the valve upon excessive radiation in the stack, the District is processing EEAR 80-52 to modify the control circuit such that PCV-521 remains closed when the accident signal is reset.

#### Note 2:

HCV's 480, 481, 484, and 485 are the inlet and outlet valves supplying component cooling water to the shutdown heat exchangers. The engineering evaluation recommended that the control circuitry for valves HCV-480, 481, 484, and 485 be modified to ensure that the valves remain open after ESF reset. The District is processing EEAR 80-53 to modify the control circuits to ensure the valves open on reset of ESF signals.

#### Note 3:

HCV's 489A, 489B, 490A, 490B, 491A, 491B, 492A, and 492B are the inlet and outlet valves supplying component cooling water to the component cooling heat exchangers. The aforementioned valves are open continuously under normal conditions. Actuation of the ESF signal and the subsequent reset of the ESF signal will not affect the operation of these valves. The ESF signal would operate the valves to the open position should any valves be closed. The position of the control switch prevents the operation of these valves to the closed position. No modification to these valves' control circuit is planned.

## Note 4:

PCV's 2909, 2929, 2949, and 2969 are pressure control valves whose main function is to control leakage from the reactor coolant system into the safety injection system. Valves PCV-2909, 2929, 2949, and 2969 will operate only if there is high pressure between the check valves separating the Safety Injection System and Reactor Coolant System. Due to the non-critical function performed by these valves and that Emergency Procedure EP-35 identifies the valves as valves that will change position upon ESF reset, no modifications are planned for PCV's 2909, 2929, 2949, and 2969.

## Note 5:

The function of the boric acid pumps CH-4A and 4B under postaccident conditions is to supply concentrated boric acid to the suction of the charging pumps. Upon reset of the SIAS lockouts, the boric acid pumps are de-energized. Charging fluid is not essential to the safe shutdown of the plant. Alternate supplies to the charging pumps can be taken from the SIRW tank, volume control tank, and the concentrated boric acid gravity feedline. No modifications are planned for the boric acid pumps.

### Note 6:

The function of valve FCV-269 is to supply makeup boric acid solution to the volume control tank. After reset of the ESF signal, FCV-269 will open. Boric acid and demineralized water is supplied to FCV-269 by valves FCV-269Y and FCV-269X, respectively. These valves are controlled by operation action. FCV-269 is not essential to the safe shutdown of the plant and no modifications are required.

## Note 7:

LCV-218-2 supplies borated water from the volume control tank to the suction of the charging pumps. The opening of valve LCV-218-2 upon ESF reset provides an alternate supply for the charging pumps should charging flow be required. Note that charging fluid is not necessary to the safe shutdown of the plant. No modifications for LCV-218-? are planned.

## Note 8:

The function of valves HCV-2808 through 2815A and B is to supply component cooling water to the containment spray and safety injection pump bearing coolers. Upon reset of the ESF signal, the aforementioned valves will close. For each containment spray and safety injection pump operating at the time of ESF reset, annunciation panel A1 on control boards CB-1, 2, and 3 will alarm in the form of bearing cooler no flow alarms. The loss of cooling water can easily be observed and corrective action can be taken. No modifications are planned for valves HCV-2808 through 2815A and B.

#### Note 9:

The function of the deaerator vacuum pumps DW-6A and B is to remove the non-condensable gases in the primary water that is being stored for use. Upon reset of the ESF signal, the pump(s) would start pulling vacuum off of the primary water vacuum deaerator. The pumps are not essential to the safe shutdown of the plant and no modifications are being planned.

#### Note 10:

The function of the reactor coolant drain tank pumps WD-2A and 2B is to control the level in the reactor coolant drain tank. Upon actuation of the ESF signal, the pumps are de-energized regardless of tank level. Valves HCV-500A and B, located on the discharge side of the pumps, are closed and remain closed after ESF reset. The closing of valves HCV-500A and B isolates the containment building from the auxiliary building in post-accident conditions. Upon reset of the ESF signal, the pumps may be energized if the level in the reactor coolant drain tank is high. In post-accident conditions following ESF reset, the reactor coolant drain tank pumps would then be deadheaded against valves HCV-500A and B. The pumps are not essential to the safe shutdown of the plant. Modifications to control circuitry are being considered for the protection of the pump itself and are not safety related whatsoever.

## Note 11:

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Containment spray valves are closed in the first step of Emergency Procedure EP-35 (Reset of Engineered Safeguards) when ESF signals have cleared. The closure is made by operator action through the use of a hand controller located in the control room. No modification is being planned for HCV's 344 and 345. However, EP-35 will be revised to require the hand controllers to be placed in the full open position prior to ESF reset. This action would prevent the deadheading of the containment spray pumps and would keep the pumps available for service.