

LICENSEE EVENT REPORT

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

LICENSEE CODE ②	N E F C S 1
LICENSE NUMBER ③	0 0 - 0 0 0 0 0 - 0 0
LICENSE TYPE ④	4 1 1 1 1
CAT ⑤	
REPORT SOURCE ⑥	L
DOCKET NUMBER ⑦	0 5 0 0 0 2 8 5
EVENT DATE ⑧	0 9 1 7 8 2
REPORT DATE ⑨	0 9 1 7 8 2

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

During the re-review of all electro-pneumatic (E/P) valve positioners at the Fort Calhoun Station, the District determined that the Safety Injection (SI) leakage cooler control valves PCV-2909, 2929, 2949, and 2969 should be included as part of the safety-related electrical equipment that is environmentally qualified. This LER is being submitted based on the non-existence of analysis or test qualification data for these Honeywell Model No. 67400-023 positioners and the consequences of failure of these positioners. Their failure could result in the opening of the subject valves due to instrument air leakage and, thus, provide a potential path for diverting part of the required SI flow from the reactor during an accident situation. The District is reporting this potential problem as required by IE Bulletin 79-01B.

SYSTEM CODE ⑪	CAUSE CODE ⑫	CAUSE SUBCODE ⑬	COMPONENT CODE ⑭	COMP. SUBCODE ⑮	VALVE SUBCODE ⑯
S H	B	A	I N S T R U	C	Z

⑰ LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 2	—	0 1 8	/	0 1	T	—	0

ACTION TAKEN ⑱	FUTURE ACTION ⑲	EFFECT ON PLANT ⑳	SHUTDOWN METHOD ㉑	HOURS ㉒	ATTACHMENT SUBMITTED ㉓	NPRD-4 FORM SUB. ㉔	PRIME COMP. SUPPLIER ㉕	COMPONENT MANUFACTURER ㉖
X	F	Z	Z	0 0 0 0	Y	N	N	H 2 6 0

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ㉗

During the 1983 refueling outage, scheduled to commence in January, 1983, the District will modify the control circuit and solenoid valves associated with these positioners to ensure the subject valves remain closed during an accident situation. In the interim, continued operation is justified because the probability of this accident scenario is remote and the Operations staff has been instructed by issuance of an Operations Memorandum to fail the instrument air to these valves if the control room panel indication shows that any of these valves are opening during an accident. By securing air to these E/P positioners, the valves are failed in the desired closed position.

FACILITY STATUS ㉘	% POWER ㉙	OTHER STATUS ㉚	METHOD OF DISCOVERY ㉛	DISCOVERY DESCRIPTION ㉜
E	0 8 5	NA	Z	System Re-Review for Qualification

ACTIVITY RELEASED ㉝	CONTENT OF RELEASE ㉞	AMOUNT OF ACTIVITY ㉟	LOCATION OF RELEASE ㊱
Z	Z	NA	NA

PERSONNEL EXPOSURES

NUMBER ㊲	TYPE ㊳	DESCRIPTION ㊴
0 0 0	Z	NA

PERSONNEL INJURIES

NUMBER ㊵	DESCRIPTION ㊶
0 0 0	NA

LOSS OF OR DAMAGE TO FACILITY ㊸

TYPE ㊷	DESCRIPTION
Z	NA

PUBLICITY

ISSUED ㊹	DESCRIPTION ㊺
Z	NA

NRC USE ONLY

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LER No. 82-018
Omaha Public Power District
Fort Calhoun Station Unit No. 1
Docket No. 05000285

ATTACHMENT NO. 1

Safety Analysis

The District recently conducted a re-review of the need to include electro-pneumatic (E/P) positioners/controllers as part of the safety-related electrical equipment at the Fort Calhoun Station which must be environmentally qualified. Electrical equipment that must be qualified is that equipment which performs a critical function during an accident. Resulting from this re-review, the District determined that E/P's should not be exempted (as previously determined) from the environmental qualification criteria. All E/P positioners/controllers that perform a critical function at the Fort Calhoun Station, except the Honeywell E/P positioners associated with the SI leakage cooler system, are Fisher Model No. 546 controllers which have complete qualification documentation. The District has recently completed an industry-wide search for test or analysis qualification documentation for the Honeywell E/P positioners and no documentation could be located. With no definitive qualification data available for these E/P's, the District conservatively assumed that a failure of a Honeywell E/P during a Design Basis Accident (DBA), which could then permit the leakage of instrument air across the E/P and drive the applicable isolation valve (PCV-2909, 2929, 2949, or 2969) open. The opening of one or more of these valves would then partially divert SI flow through the one-inch leakage cooler line and reduce SI flow to the reactor where this coolant flow is needed.

The District believes the interim corrective action identified in Attachment No. 2 is sufficient to justify continued operation until a modification can be completed to permanently resolve this potential E/P positioner failure concern. The Fort Calhoun Station operators have been instructed by an Operations Memorandum to fail instrument air to these E/P's if control room indication identifies that the leakage cooler isolation valves are opening during a DBA; thus, ensuring the valves reclose to preclude SI flow loss. Position indication of PCV-2909, 2929, 2949, and 2969 during all operating conditions is considered reliable since these valves are equipped with LOCA qualified limit switches. Accordingly, these administrative procedures will ensure that adequate SI flow will be provided to the RCS upon a LOCA condition.

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ATTACHMENT NO. 2

Corrective Action

As an interim measure, an Operations Memorandum has been issued that requires the operators to monitor valves PCV-2909, 2929, 2949, and 2969 under accident conditions and to fail air to containment if these valves move from the closed position. By securing air to these electro-pneumatic (E/P) positioners, the valves will fail to their closed position.

The District will issue an Engineering Evaluation and Assistance Request to redesign the valve actuation circuit such that a fully LOCA qualified solenoid valve will vent air from the valve diaphragm upon de-energization. Therefore, the E/P positioner can have no impact on valve position without energizing this solenoid. This modification will be completed during the 1983 refueling outage.

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ATTACHMENT NO. 3

Failure Data

This is the first reportable occurrence involving non-qualification of an electro-pneumatic positioner.