



## Omaha Public Power District

1623 HARNEY 3 OMAHA, NEBRASKA 68102 \* TELEPHONE 536-4000 AREA CODE 402

December 7, 1979

Director of Nuclear Reactor Regulation  
ATTN: Mr. Robert W. Reid, Chief  
Operating Reactors Branch No. 4  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Reference: Docket No. 50-285

Gentlemen:

The Omaha Public Power District received a letter from the Commission, dated October 23, 1979, requesting that the District inform the Staff of our commitment to operate in conformance with the interim position, enclosed with the letter, and provide information which demonstrates that purge and vent valve operability verification is being pursued on an expedited basis. The District has reviewed the interim position and hereby commits to operating in conformance with it. With respect to item 2.b. of the interim position, Fort Calhoun Station containment ventilation isolation signals are adequately segregated to ensure that, as a minimum, at least one of the automatic safety injection actuation signals is uninhibited and operable to initiate valve closure when any other isolation signal is blocked, reset, or overridden. This statement is supported by the discussion attached to this letter.

As noted in our letter of September 28, 1979, the District is currently evaluating the operational characteristics of the Fort Calhoun's 42" purge valves according to the guidance provided by the Staff's document entitled "Guidelines for Demonstration of Operability of Purge and Vent Valves". The valve manufacturer, Allis Chalmers (AC), has been authorized to assist us in this effort. Valve testing has been completed by AC and results will be available to the District by the end of December, 1979, after which these testing results will be evaluated on an expedited basis to verify operability of Fort Calhoun Station purge valves.

Sincerely,

W. C. Jones  
Division Manager  
Production Operations

WCJ/KJM/BJH:jmm

Attach.

cc: LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N. W.  
Washington, D. C. 20036

1579 360

7912140 397

A034  
3  
//1

Attachment

The Fort Calhoun Station containment relief line is a two inch line equipped with two d.c. solenoid operated pneumatic isolation valves, HCV-746A and HCV-746B, mounted inside and outside of containment, respectively. (Reference drawing 11405-M-1\*) The valves' fail safe position is closed, via a spring in the operator. The solenoids are wired (safety grade cabling and installation) to the control room, where remote manual open and close and automatic close functions are provided. These functions are provided via a relay seal-in type circuit which energizes to open the valve (both the relay and solenoid energize) and de-energizes to close the valve. The valves fail closed on loss of either, or both, air supply or d.c. control power. (Reference drawing 11405-E-54)

Automatic closure of the containment isolation valves by their control circuit is accomplished by de-energizing (thus opening) either of the two accident auxiliary relay contacts in the valve relay control circuit. These relay contacts are 742A-1 and A94-1/VIAS for HCV-746A and 742B-1 and B94-1/VIAS for HCV-746B. The relays are de-energized on receipt of an accident actuation response signal. (Reference drawing 11405-E-55)

As installed, two redundant trains (A and B) are provided to ensure mitigation of an accident. HCV-746A is associated with the A train and HCV-746B is associated with the B train.

Each safety train is provided with accident 86 lock-out relays (electrically actuated, manually reset) which are actuated by the accident detection instrument matrix. Three parameters are monitored. These are pressurizer pressure (which actuates the Pressurizer Pressure Low Signal, PPLS, in a two out of four logic matrix); containment pressure (which actuates Containment Pressure High Signal, CPHS, in a two out of four logic matrix); and containment atmosphere radiation and auxiliary building stack radiation (which actuates Containment Radiation High Signal, CRHS, in a one out of five logic). The accident signals are then fed into initiation lock-out relays which, depending on the accident signal combination, initiate safety equipment action to mitigate an accident.

PPLS or CPHS initiate Safety Injection Actuation Signal (SIAS), PPLS or CPHS initiate Containment Isolation Actuation Signal (CIAS), PPLS and CPHS initiate Containment Spray Actuation Signal (CSAS), and CRHS initiate Ventilation Isolation Actuation Signal (VIAS). SIAS and CSAS also provide a backup actuation of VIAS. (Reference drawings 161-F-597 and 161-F-598, sheets 6, 7, and 8)

The signals previously discussed are the prime signals; that is, initiation of a safety train is accomplished by the relay associated with the safety train. Each safeguard train is also

\*All drawings referenced in this discussion were provided to the Staff in a meeting held in Bethesda, Maryland on August 23, 1979.

1579 361

equipped with a duplicate set of lock-out relays (the derived signal) which are actuated from the opposite train (i.e., PPLS train A will actuate the derived signal lock-out relay A1, which is associated with train B equipment). The derived signal accident lock-out relay in turn actuates SIAS, VIAS, CSAS, and CIAS derived signal relays which independently actuate safety equipment of the safety train. (Reference drawings 161-F-597 and 161-F-598, sheets 6, 7, and 8)

During monthly testing of the prime signals (the derived signals are tested each refueling), the derived signal to the opposite channel is blocked (i.e., if A channel is being tested, the A1 relays associated with B channel are blocked). (Reference drawings 161-F-597 and 161-F-598, sheets 6, 7, and 8) The A train CIAS panel is also bypassed via a test switch in containment isolation panel AI-43A or B. (Reference drawing 11405-E-55) This alignment blocks the derived signal CIAS and VIAS closure via the A94-1 and B94-1 VIAS relays to both HCV-746A and HCV-746B and bypasses the prime signal CIAS closure of the train being tested. At all times during testing, the redundant prime VIAS and CIAS, via the previously discussed logic, are available to close, both HCV-746A and HCV-746B, if required, via the A94-1/VIAS and B94-1/VIAS relays. (Reference drawing 11405-E-55) In addition, the actuation of VIAS on the channel being tested will close HCV-746A and HCV-746B since no bypasses are installed. The only other installed bypass is for PPLS which is used at 1650 psia for reactor cooldown. The other SIAS actuation signal, CPHS, cannot be blocked. (Reference drawings 161-F-597 and 161-F-598, sheet 6)

The testing scenario described above utilizes the only installed blocks, resets, and overrides which are permitted to be used by Fort Calhoun Station procedures.

1579 362