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February 28, 1980

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 50-254
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Mr. Thomas A. Ippolito, Chief
 Operating Reactors - Branch 3
 Division of Operating Reactors
 U.S. Nuclear Regulatory Commission
 Washington, DC 20555

Subject: Dresden Station Units 2 and 3
 Quad Cities Station Units 1 and 2
 Response to Request for Additional
 Information Concerning Containment
 Vent and Purge Systems

References (a): T. A. Ippolito letters to D. L. Peoples
 dated January 21, 1980

(b): C. Reed letter to Messrs. T. A. Ippolito,
 D. L. Ziemann, and A. Schwencer dated
 January 2, 1979

Dear Mr. Ippolito:

Reference (a) requested a response within thirty days to questions concerning the containment vent and purge systems at Dresden Units 2 and 3 and Quad Cities Units 1 and 2.

The attachment to this letter contains our responses to those questions for Dresden 2 and 3 and Quad Cities 1 and 2. Also enclosed are process and instrumentation (P&ID) and schematic drawings of the vent and purge system for each of the four units.

Please address any additional questions you may have concerning this matter to this office.

One (1) signed original and fifty-nine (59) copies of this letter and Attachment and two (2) copies of the drawings are provided for your use.

Very truly yours,

Robert F. Janecek

Robert F. Janecek
 Nuclear Licensing Administrator
 Boiling Water Reactors

Attachment

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Attachment

Dresden Units 2 & 3, Quad Cities Units 1 & 2

Question 1.1: "The over-riding of one type of safety actuation signal should not cause the blocking of any other type of safety actuation signal to the isolation valves."

Response: 1.1 The override of containment vent isolation valve initiation logic is only performed, by procedure, to vent the containment to the Standby Gas Treatment System (SBGTS) following a LOCA. Both high drywell pressure and reactor low water level signals may be overridden in order to decrease containment pressure after an accident. The bypass circuitry involves the permissive to open two 2-inch globe vent valves, (one at a time) one from the drywell and one from the suppression chamber, and an outboard 6-inch butterfly valve to SBGTS. The latter valve has been modified, in accordance with an NRC commitment, to have its open travel restricted to less than 50 degrees. All three of these valves are closed during normal plant operation, and no testing nor operations are performed to inhibit or override the isolation initiation signals. The remaining containment vent and purge valves' closure cannot be overridden. (See reference 2, "Over-ride Circuitry", Item 2.)

Question 1.2: "Sufficient physical features should be provided to facilitate adequate administrative controls."

Response 1.2 The above override circuitry is accessible only through use of a manual key-lock switch in the Control Room. Procedural controls are in effect which limit its usage to post-LOCA containment venting. (See reference 2, "Override circuitry", Item 2)

Question 1.3: "The system level annunciation of the over-ridden status should be provided for every safety system impacted when an over-ride is active."

Response 1.3 Upon manual actuation of the keylock switch, a Control Room alarm will annunciate, indicating that the bypass circuitry is in effect. (See Reference 2, Items 2 & 3)

Question 1.4: "Diverse signals should be provided to initiate isolation of the containment ventilation."

Response 1.4 Containment vent isolation valve closure (Group II) is initiated from either high drywell pressure (2 psig) or reactor vessel low water level (+8 inches). The high drywell pressure setpoint is the same as for ECCS initiation. The reactor vessel low water level setpoint is the same as for reactor scram, Reactor Building Vent isolation, and SBGTS auto-start. These two signals provide adequate and early warning such that valve closures are initiated in advance of possible subsequent low low reactor water level, containment high radiation, and containment high hydrogen concentration conditions.

Question 1.5: "The instrumentation and control systems provided to initiate ESF should be designed and qualified as safety-grade equipment."

Response 1.5: The instrumentation and control systems were designated safety-related and were qualified as such in accordance with accepted practice at the time of design.

Question 1.6: "The overriding or resetting of the isolation actuation signal should not cause the automatic motion of any ESF valve."

Response 1.6: All containment vent and purge isolation valves have recently been modified to require that the control switches be placed in the CLOSE position prior to manual reset, before the valves have a permissive to be re-opened after a Group II isolation. Usage of the override switch for post-LOCA containment venting requires that the override switch be placed to either the DRYWELL or TORUS position to be able to vent the drywell or suppression chamber, respectively. With the control switches for the appropriate valves in the CLOSE position, the valves will not open upon actuation of the override switch. Procedural controls exist to place the control switches for the 2-inch vent and 6-inch vent to SBGTS valves in the CLOSE position prior to commencing post-LOCA containment venting.

References

1. Letter from T.A. Ippolito (NRC) to D.L. Peoples, dated 1-21-80.
2. Letter from C. Reed (CECo) to Messrs. Ippolito, Schwencer, Ziemann (NRC) dated 1-2-79.

DRESDEN/QUAD CITIES
CONTAINMENT VENT AND PURGE
DRAWING LIST

Dresden 2: M-25, 12E2501, 12E2502, 12E2502A, 12E2511, 12E2512

Dresden 3: M-356, 12E3501, 12E3502, 12E3502A, 12E3511, 12E3512

Quad Cities 1: M-34, 4E1501D, 4E1503A, 4E1503B, 4E1509A, 4E1509B

Quad Cities 2: M-76 Sht. 1, 4E2501D, 4E2503A, 4E2503B, 4E2509A,
4E2509B