

SUPPLEMENTARY INFORMATION

1. Report No. 50-302
2. Facility: Crystal River Unit #3
3. Report Date: 12 May 1978
4. Occurrence Date: 4 February 1978
5. Determination of Cause and Corrective Action:

This event has been carefully studied to determine what caused the situation in which the valve operator for FWV-15 was not changed as required by the upgrading of the steam line rupture matrix. A review of files and records has been accomplished and a historical sequence of related events compiled. Based on our review the following conclusions have emerged:

- A) The basic problem was that no Field Change Order (FCO) or Engineering Change Notice (ECN) was written to change out the motor operators on FWV-14 and FWV-15, even though FCO's and ECN's were written to incorporate the other portions of the steam line rupture matrix modifications. This resulted primarily from the fact that the valves themselves were not within the Quality scope. The electrical and control portions were within the Quality scope, and thereby received more rigorous program controls, as opposed to the valves. ECN's were written for the Quality portions of the system. This is an unusual situation whereby a non-safety-related system was modified to become a safety-related system. The changes were made prior to the system becoming safety-related and thus did not receive the same degree of consideration.
- B) ECN's were the vehicle used to notify Construction, Testing, and Quality of changes needed to be implemented to safety related systems. ECN's were formally reviewed by Testing to determine retest requirements. Since no ECN existed for the changeout for FWV-14 and 15 operators, test procedures did not reflect the new closure time requirements.
- C) It was circumstantial that the FWV-14 operator had been changed out. The new operators had been ordered as part of the modification package. The FWV-14 operator had been delivered to the site on 2/9/76, while the FWV-15 operator was still at the factory. On 3/30/76, the original FWV-14 operator failed. The operator was replaced with the new operator (<34 second closure time). Work was completed by 4/7/76, at which time the FWV-15 operator had still not arrived on site.

POOR ORIGINAL

8008040 978

- D) This event is an isolated case and does not indicate generic inadequacies in the Quality Program existing at that time. It appears that all aspects of the program functioned as intended with the exception of no ECN for changeout of the valve operators. The error was discovered through application of SP-136 "Engineered Safeguards Actuation System Sensor Response Time Test" and was corrected by installation of the proper FWV-15 operator.
- E) Even though no ECN was written, other checks existed which would normally detect an error of this nature and should have uncovered the problem during the Testing and/or Startup phase. Examples of these are:
1. Even though TP-275-1 required FWV-14 and 15 to be timed, there was no acceptance criteria noted.
 2. No GT-20 Form can be found for review of FSAR Amendment 48 versus TP-275-1. A GT-20 Form exists for FSAR Amendment 45, but Amendment 45 did not give the valve closure time requirement. Amendment 48 added the time requirement of <34 seconds.
 3. The Engineering Test Working Group review of TP-275-1 results was performed by the electrical section, rather than the mechanical section who ordered the new operators. Most other valves with "time requirement" were tested in a functional or operational procedure which were reviewed by the mechanical section.
 4. The same Test Engineer ran retests of TP-275-1 on FWV-14 on 4/27/77 and timed at 28 seconds, and on FWV-15 on 5/26/77 and timed at 90 seconds. No discrepancy was noted, nor did the Test Working Group review note any discrepancy in the operating times.

Based on the above discussion, and our in-depth review of the situation, we are confident that no generic QA program lapses or deficiencies are indicated by the occurrence of this event. This was an isolated case where the original modification package was incomplete and the error managed to remain undetected by normal checks and considerations through a portion of the program. The problem was subsequently identified through our surveillance program, reported accordingly and proper corrective action implemented.

The documentation package assembled during this review is available for on-site review if desired.