

SNUPPS

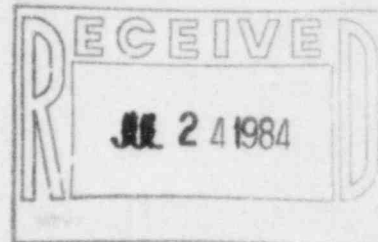
Standardized Nuclear Unit  
Power Plant System

5 Choke Cherry Road  
Rockville, Maryland 20850  
(301) 869-8010

July 20, 1984

SLNRC 84-103 FILE: 0491.10.2  
SUBJ: Gould/Rundel Selector Switch  
Failures, 10C. 55(e) Report  
84-01

Mr. John T. Collins  
Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
Suite 1000, Parkway Central Plaza  
Arlington, Texas 76012



Docket Nos. STN 50.482 and STN 50-483

Ref: a) SLNRC 84-0028, dated 2/9/84: Subject as Above  
b) SLNRC 84-0067, dated 4/13/84: " " "

Dear Mr. Collins:

The reference letters describe generic deficiencies in the Gould/Rundel 4-position selector switches installed in the SNUPPS Callaway and Wolf Creek plants. The references further address design modifications and improvements in manufacturing and test controls subsequently implemented by Gould/Rundel to correct these deficiencies and to eliminate the erratic behavior experienced with the 4-position devices. Notwithstanding the design and manufacturing improvements implemented by the manufacturer and corrective measures established by Bechtel Power Corporation, in the form of increased shop inspection, additional failures have been experienced at Wolf Creek with these units. Included are failures in the 2-position switches which are of a design similar to the 4-position units.

Since issuance of the reference reports, failures have been observed at Wolf Creek in two(2) 4-position selector switches and three (3) 2-position selector switches, all manufactured by Gould/Rundel. Examination of Gould/Rundel manufacturing and Bechtel shop inspection records indicate satisfactory functional performance testing of all five (5) of these units prior to release for shipment. No new failures have been experienced at Callaway since issuance of the reference reports nor have any been noted with the 3-position units installed at Callaway and Wolf Creek.

The precise cause of failure of the current batch of Gould/Rundel switches located at Wolf Creek is uncertain. Evaluation of the basic design indicates both the 2- and 4-position units to be susceptible to damage during handling, installation and/or checkout testing. The design and manufacturing/QC improvements addressed previously have been unsuccessful in eliminating the inherent cause(s) of these failures. It should be noted however, there has been no indication of failure once the units are satisfactorily installed and functionally tested.

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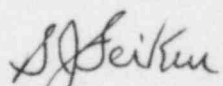
The 3-position devices also manufactured by Gould/Rundel, have had no report of failure or operating difficulty. Examination of these units indicate they are different in design from the 2- and 4-position units. Rather than utilizing a shaft acting on contact actuators through nylon cams, the 3-position switch utilizes twin rods, acted on by a heavy stepped cylindrical cam mechanism, to actuate the contacts. Furthermore, except for two(2) rods that protrude slightly from the rear, the 3-position switch has no contact actuators which protrude from the main body of the switch assembly as in the case of both the 2 and 4-position units. Consequently, it appears the design of the 3-position is not susceptible to the type of failures observed with the 2- and 4-position devices.

To fully resolve this matter and eliminate the potential for further failure, actions are being initiated at Wolf Creek to change out and replace all 2 and 4-position Gould/Rundel switches with qualified devices procured from an alternate switch supplier. Changeout and replacement at Wolf Creek will be accomplished on or before start of commercial operations. To permit continuation of testing at Wolf Creek, the five (5) failed units will be replaced with similar Gould/Rundel devices pending receipt of qualified switches from an alternate supplier.

Union Electric will separately assess the impact of these failures, if any, upon Callaway Plant and will address the issue of reportability under the terms of its operating license.

The supplement is intended as the final report on the subject matter. If you have any questions or desire further information, please contact the undersigned.

Very truly yours,

  
S. J. Seiken, Manager  
Quality Assurance

SJS/dck/6b18

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