



Public Service Company of Colorado

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February 1, 1982
Fort St. Vrain
Unit No. 1
P-82029

FSV-24F

Mr. John T. Collins, Regional Administrator
Nuclear Regulatory Commission
Region IV
Office of Inspection and Enforcement
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76012



Subject: Class 1E and Non-Class 1E
120 VAC Instrument Buses

References: 1) P-80240, Swart to
Seyfrit, 7/21/80
2) P-80087, Swart to
Stello, 4/25/80

Dear Mr. Collins:

As a result of IE Bulletin 79-27, PSC committed to several modifications to the Instrument Power System at Fort St. Vrain.

Two of our proposed upgrades continue to pose implementation problems for us due to the unavailability of Class 1E equipment. The purpose of this letter is to update you on our efforts to meet these commitments.

A.) STATIC TRANSFER SWITCHES

One commitment is to install transfer switches to automatically provide a backup power source to noninterruptible 120 VAC instrument buses 1, 2, and 3 and 120/208V interruptible bus 3 following loss of the preferred source.

Our investigations indicated that a very short transfer time is required to prevent disturbances and/or trips to systems that are primarily controlled by electronic devices. This mandates the use of static transfer switches to provide the desired throwover.

Two separate sets of bids for the subject Class 1E Static Transfer Switches were solicited. In each case, no acceptable bids were received. The manufacturer of the existing Class 1E inverters would not bid on upgrading their own product line.

Reevaluation of the project has resulted in a decision to replace the existing Class 1E inverters for noninterruptible buses 1, 2, and 3 with new Class 1E inverters already having Static Transfer Switches. We have identified one manufacturer willing to supply this equipment. The inverter for noninterruptible instrument bus 3 is now on order and procurement specifications are being prepared for noninterruptible instrument buses 1 and 2.

The purchase of new inverters with static transfer switches already incorporated solves part of our unavailability problems but creates new problems in regards to equipment size. The new inverters are considerably taller than the existing units and will not fit into the existing location. The only solution we have been able to come up with for this problem is to locate the new inverters in a planned addition to FSV's 480 volt switchgear room. This would allow implementation of the new inverters during 1983. This leaves us with two unresolved problems in regards to the new bus transfer design, the purchase of Class 1E instrument power transformers for the backup sources, and the purchase of a non class 1E static transfer device for interruptible bus 3.

As far as the transformers are concerned, we have received 7 unacceptable bids. However, we have recently obtained a new lead concerning a potential manufacturer. If this lead falls through, we will purchase transformers based on electrical characteristics and engineering judgement, and have Seismic and Environmental Qualification Tests performed by a third party.

We have not been able to identify a source for a static transfer switch for our interruptible bus 3.

B.) SPEED VALVE POWER SUPPLIES

The remaining commitment from IE-79-27 that we have been unable to fulfill is the changing of the power source for the Helium Circulator Water Turbine Speed Valves.

A proposed Design Change (Change Notice) was issued in June of 1981 to implement the proposed power source changes.

Review of the design change prompted further discussions regarding design enhancement. It was concluded that it would be more desirable to take the following approach:

Provide dual power sources (switched) to the water turbine speed valves in lieu of just changing power sources. The other valves in the water turbine drive system are already dual power sourced. It is felt that this change will accomplish our original goal while also providing greater operational flexibility.


To implement this change, it is necessary to provide additional "MASTER" signal modifiers in the Helium Circulator speed measurement and control system. Some of these modules will be Class 1E and have a delivery of October 1982.

Conclusions

The difficulty we have encountered in purchasing relatively minor Class 1E equipment has been totally beyond original expectations. We feel that we have proceeded in good faith to meet our original commitments but have been unable to do so because of the unwillingness of manufacturers to supply the Class 1E equipment.

The schedule now indicates that we can implement all of the desired modifications during the third refueling at Fort St. Vrain.

Very truly yours,


for H. L. Brey, Manager
Nuclear Engineering Division

HLB/MEN:pa