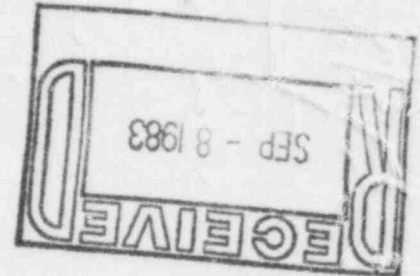




Public Service Company of Colorado

16805 Road 19 1/2, Platteville, Colorado 80651-9298

September 2, 1983
Fort St. Vrain
Unit No. 1
P-83296



Mr. John T. Collins, Regional Administrator
Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Reference: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Mr. Collins:

Enclosed please find a copy of Reportable Occurrence Report No. 50-267/83-030, Preliminary, submitted per the requirements of Technical Specification AC 7.5.2(b)2.

Also, please find enclosed one copy of the Licensee Event Report for Reportable Occurrence Report No. 50-267/83-030.

Very truly yours,

Don Warembourg by Milt McBride

Don Warembourg
Manager, Nuclear Production

DW/djm

Enclosure

cc: Director, MIPC

H005
1/1

REPORT DATE: September 2, 1983

REPORTABLE OCCURRENCE 83-030
ISSUE 0

OCCURRENCE DATE: August 6, 1983

Page 1 of 4

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO
16805 WELD COUNTY ROAD 19 1/2
PLATTEVILLE, COLORADO 80651-9298

REPORT NO. 50-267/83-030/03-L-0

Preliminary

IDENTIFICATION OF
OCCURRENCE:

On several occasions during the period from August 6, 1983, through August 8, 1983, with the reactor operating at power, the helium circulator speed cables demonstrated impedance variations. These impedance variations resulted in the Circulator Speed-High (Steam) channel being inoperable and therefore, constitute operation in degraded modes of LCO 4.4.1, Table 4.4-3, note (f). These events are reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

EVENT
DESCRIPTION:

On August 6, 1983, at approximately 0200 hours with the reactor operating near 70% power, the impedance on one circulator speed cable on 1C helium circulator began to drift. The impedance variation caused the input voltage to drop to zero initiating a Circulator Speed-Low (Steam) Plant Protective System (PPS) single channel trip. However, the loss of voltage to the PPS module associated with the Circulator Speed-High (Steam) inhibited the channel from tripping on high speed since the high speed trip occurs on increasing voltage. The high speed trip channel was, therefore, inoperable. LCO 4.4.1, Table 4.4-3, note (f), states "The inoperable channel must be in the tripped condition, unless the trip of the channel will cause the protective action to occur." The Circulator Speed-High (Steam) circuitry, however, does not contain direct provisions to place that particular circuit in a "tripped" condition without replacing the module with a module which has been wired to initiate the trip signal. Hence, the minimum degree of redundancy (LCO 4.4.1, Table 4.4-3) was not met.

On August 6, 1983, at approximately 1000 hours with the reactor operating near 70% power, the impedance of a circulator speed cable on 1C helium circulator began to vary once again. The impedance variation caused the same plant actions (low speed trip, high speed inoperable) as the first occurrence.

On August 6, 1983, at approximately 2230 hours with the reactor operating near 70% power, a cable impedance variation occurred on 1D helium circulator circuitry. Again, a low speed trip signal was initiated, however, the high speed trip associated with that cable was inoperable.

On August 7, 1983, at approximately 0130 hours with the reactor operating near 70% power, the impedance of a speed cable on 1C helium circulator circuit began to vary. The same actions occurred as in the previous events.

On August 7, 1983, during the morning hours (around 0900 hours) individual speed cable impedance variations on both the 1C and 1D helium circulators caused the same actions as described above.

Again on August 7, 1983, at approximately 1405 hours, the speed indication for 1D helium circulator became erratic. Results Department personnel were called out to stand by in case of another speed cable impedance variation. No speed cable impedance variation occurred on this occasion.

On August 8, 1983, at approximately 0530 hours with the reactor operating near 70% power, the impedance of a speed cable on 1D helium circulator circuit began to vary. The same actions occurred as in the previous events.

CAUSE
DESCRIPTION:

The plant was experiencing above normal temperatures in the vicinity of the Prestressed Concrete Reactor Vessel (PCRVR) bottom head. The high temperatures were a result of a reheat steam leak which is present on a steam generator module in the area. The speed cable impedance variations are assumed to be attributed to the high temperatures that were experienced in the bottom head region as there are several junction boxes associated with the speed cables in that area. Other equipment located in the same vicinity, however, do not show any abnormal effects.

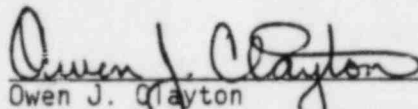
CORRECTIVE
ACTION:

During each event, Results Department personnel were called to investigate. In some of the occurrences, affected speed cables were interchanged with available spares, and in others, erratic speed signals ceased, and the cables were returned to service.

Additional ventilation was installed in the high temperature area to assist in maintaining an acceptable environment for the local equipment. Since placement of the ventilation ducts, no further cable problems have been observed.

During the next plant shutdown, an investigation into the exact cause of the speed cable impedance variations will take place. A supplemental report will be submitted following the investigation.

Prepared By:



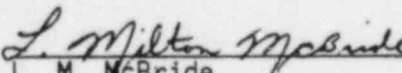
Owen J. Clayton
Senior Technical Services Technician

Reviewed By:



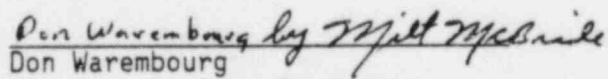
Frank J. Novachek
Technical Services Engineering Supervisor

Reviewed By:



L. M. McBride
Station Manager

Approved By:



Don Warembourg
Manager, Nuclear Production