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REPORT DATE: January 22, 1979

REPORTABLE OCCURRENCE 73-40

OCCURRENCE DATE: December 27, 1978

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FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO
P. O. BOX 361
PLATTEVILLE, COLORADO 80651

REPORT NO. 50-267/78-40/03-L-0

Final

IDENTIFICATION OF
OCCURRENCE:

A high range moisture monitor became inoperable and was not tripped reducing the degree of redundancy below that required by LCO 4.4.1. This is a violation of LCO 4.4.1 and is reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

EVENT
DESCRIPTION:

On December 27, 1978, while increasing reactor power from 51% to 56% and raising electrical power to 156 Mw, the nitrogen cooling system for the moisture monitors suffered an upset due to ice forming on the penetrations.

The cooling gas flows to the moisture detectors became unstable and several of the loop moisture monitors stopped servoing. Instrument personnel working on the equipment monitored the mirror temperatures of the detectors and attempted to rebalance gas flows to the moisture monitors.

Three loop monitors had quit servoing, though all three were in the acceptable range of less than or equal to 27°F. The normal set point of loop monitors is 21.8°F. While instrument personnel were trying to restore these three loop monitors to normal operation, the cooling gas flow to MM-1115, a high level moisture monitor, became inadequate and it quit servoing. When the mirror temperature was checked it had drifted to 68.7°F in excess of the limit (less than or equal to 67°F) required by LCO 4.4.1. The cooling flows were rebalanced and MM-1115 returned to operation.

Later, at 1210 hours, instrument personnel working on the flow imbalances again noted MM-1115 was not servoing and was inoperable. The cooling could not be regained and MM-1115 would have been tripped, but two loop moisture monitors in each loop were already tripped due to loss of cooling flows. LCO 4.4.1, Note f, allows an inoperable instrument not to be tripped if a protective action would result. MM-1115 was returned to service by 1440 hours and all monitors were in normal operation by 2300 hours on December 28, 1978.

This resulted in operation under a degraded mode as permitted by LCO 4.4.1 and is reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

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CAUSE
DESCRIPTION:

The inoperability of the moisture monitors was due to unstable gaseous nitrogen supply to the detector heads. The failure to trip the high range moisture monitor was due to work in progress on the high level moisture monitor at the time of the event. The latter failure to trip M4-1113, based on Note f of LCO 4.4.1, was due to the protective action which would have occurred.

CORRECTIVE
ACTION:

Cooling flows to the moisture monitors were balanced and all moisture monitors returned to service.

No other corrective action is anticipated or required.

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