



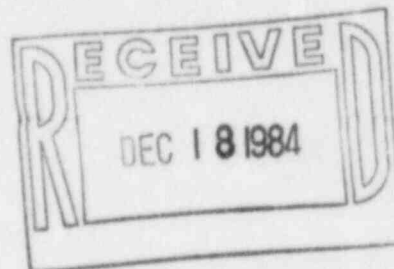
Public Service Company of Colorado

P.O. BOX 840 · DENVER, COLORADO 80201

December 11, 1984
Fort St. Vrain
Unit No. 1
P-84508

Regional Administrator
Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Attention: Mr. E. H. Johnson



DOCKET NO. 50-267

SUBJECT: Fort St. Vrain Storage Pond
Freezing

- REFERENCES: 1) MRC Letter Dated 10/1/79,
Seyfrit to Millen, (G-79167);
IE Bulletin 79-24
2) PSC Letter Dated 11/1/79,
Warembourg to Seyfrit,
(P-79254)

Dear Mr. Johnson:

In an October 25, 1984 telephone conversation between Messrs. Johnson, Wagner and Caldwell, NRC Region IV, and Messrs. Alps, Novachek and Holmes, PSC, a concern was expressed about freezing of the circulating water makeup storage ponds, valves, pumps and/or pipelines. PSC has completed a review of the capability of safely shutting down the Fort St. Vrain plant during extremely cold weather.

The 26 plant trouble reports (PTRs) associated with freezing of water in the circulating water, service water or fire water systems have been studied. None of the PTRs examined was found to represent a loss of the Safe Shutdown Cooling capabilities of the FSV plant. Only one of these PTRs represented freezing of safety related piping. It reported the freezing of valve V4508 in the fire water riser in

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the main cooling tower. This valve, which is a boundary valve but not in the Safe Shutdown Cooling flow path, was replaced.

PSC has responded to Reference 1, which requested a field check of safety-related process, instrument, and sampling lines that could possibly freeze during extremely cold weather. In response to this bulletin, as reported in Reference 2, PSC's check of those lines that could possibly freeze during extremely cold weather revealed that all such lines were either inside heated buildings, heat traced, or heat traced and insulated. PSC considered these measures adequate protection against freezing.

A check was also made with FSV Operations personnel concerning recollections of any recent freezing of Safe Shutdown Cooling water path piping. There is no knowledge of any such piping that may have frozen resulting in possible loss of the Safe Shutdown Cooling capability of Fort St. Vrain. Freeze up of plant piping in extremely cold weather could limit plant startup if the plant has been shutdown for a period of time without water flowing through the Safe Shutdown Cooling water systems and without operable heaters.

Formation of ice on the surface of the circulating water makeup ponds during extremely cold weather is likely only during periods of low flow of makeup water into the ponds. Makeup water circulating within the ponds inhibits the formation of ice. Formation of ice will reduce the amount of water available for Safe Shutdown Cooling. The ponds are normally maintained at a level of 24 million gallons of water. This permits the formation of over 15 inches of ice without reducing the remaining water storage level to the Technical Specifications makeup water storage limit of 20 million gallons of water. The transformation into ice of any of the water in the makeup water storage ponds does not change the operating requirement for a minimum of 20 million gallons of water. That is, in the accident analyses credit is not taken for the ice. A recent onsite inspection of the Safe Shutdown Cooling water path for potential freezing verifies PSC's previous response in Reference 2.

If you have any questions or comments please contact Mr. M. H. Holmes at (303) 571-8409.

Very truly yours,

Lawrence Brey
H. L. Brey
Executive Staff Assistant
Electric Production

HLB/AHW:pa