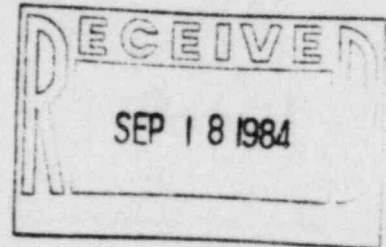




of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

September 13, 1984
Fort St. Vrain
Unit #1
P-84351



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

ATTN: Mr. Eric H. Johnson

SUBJECT: PCRV Pressurization
Above 100 psia

- REFERENCE: 1) PSC Letter, Lee to Johnson, Dated 8/22/84, (P-84310)
- 2) NRC Letter, Johnson to Lee, Dated 6/28/84, (G-84215)

Dear Mr. Collins:

The purpose of this letter is to clarify statements that were made in Reference 1) regarding the method that we would employ to enhance moisture removal should our request for relief from the 100 PSIA PCRV pressure restriction be granted.

The current restriction of maintaining the PCRV pressure at < 100 psia has significantly reduced our capability for removing remaining moisture from the primary coolant, particularly when it is combined with the low circulator helium inlet temperatures that now exist (< 100°F).

When moisture is introduced into the PCRV via the circulator bearing water auxiliary system, it accumulates in the insulation near the affected circulator. The rate of moisture removal from the insulation is dependent on a number of variables, but the two major parameters are the differential pressure across the circulator inlet to outlet plenums, and, less importantly, the temperature of the primary coolant.

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Historically, we have determined that the best mechanism for increasing the circulator differential pressure is to pressurize the PCRV and then to operate the affected circulator at a relatively high speed. This method of operation increases the helium mass flow rate through the circulator diffuser, resulting in a higher circulator differential pressure and an increase in the rate of moisture removal from the insulation. It also results in a larger helium mass flow rate through the purification system.

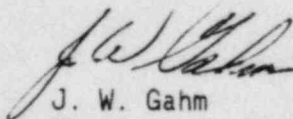
The above method can be somewhat enhanced by increasing the temperature of the primary coolant. In order to accomplish this, auxiliary boiler steam is admitted to the reheat section of the steam generator(s) to heat the primary coolant as it passes over the steam generator tubing.

Typical PCRV pressures and primary coolant temperatures are in the 150-300 psia and 250-400°F ranges under the described moisture removal effort. Obviously, the exact pressures and temperatures are dependent on a number of plant conditions which may exist at the time. As always, the Fort St. Vrain Technical Specifications will govern our activities. We will, of course, maintain the reactor in a shutdown condition until released to startup by the NRC.

Since restricting the PCRV pressure to < 100 psia is in no way related to the control rod drive situation currently under investigation, and since continued high moisture levels in the PCRV are not desirable, we request relief from the 100 psia PCRV pressure restriction imposed by Reference 2).

If you have any questions, please contact Mr. Chuck Fuller of my staff at (303) 785-2224.

Sincerely,



J. W. Gahm
Manager, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

JWG/djc