Note to Ken Heitner 6/28/87 Background

From Joe Scinto

Re: FtSt Vrain 82% Package

63576

I have a couple of comments on this.

1) How was the limitation on operation above 35% imposed? By Order? by Confirmatory Action Letter?

I can't tell whether this letter is the right way to authorize the increase to 82% and to impose 82% as a new limit. This needs to be reviewed by Mr. Sohinki's division.

2) The first SER - on SSE and Tornados - appears to be based primarily on the Oak Ridge TER. Somewhere the STAFF needs to adopt the Oak Ridge work (something like "the NRC staff has reviewed the Oak Ridge TER and agrees with Oak Ridge's evaluations and conclusions, except as discussed below..")

At the bottom of p.2 and top of p.3 there is a discussion of certain (unclear) contingencies(?) in the Oak Ridge TER. It's hard to tell what they are, what they relate to, whether we are agreeing with them or disagreeing with them and why?

What does the last sentence of the para at the top of p.2 say? It's some sort of paraphrase of App. R. Is there any conclusion associated with this statement?

P.3 You need to do more to explain how you draw an probability conclusion about water hammer etc. "from these qualitative statements".

2) The SER on the reheater contains a bunch of metallurgical facts -- but there is almost no connection between all this info and a conclusion that the plant can operate safely.

3) The SER on firewater in the EES says the objective of the applicants analysis was to show that the primary pressure boundary will remain intact; but all this SER deals with is creep collapse without explanation of why it is so limited.

cc:SSohinki
EChan

These comments were resolved with S. Sohinki and E. Reis of OGC on 6/29/87

8711120109 870628
CF ADOCK 05000267
[redacted] CF

Background

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 . PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

APR 27 1987

In Reply Refer To:
Docket: 50-267

Public Service Company of Colorado
ATTN: Robert O. Williams, Jr.
Vice President, Nuclear Operations
P. O. Box 840
Denver, Colorado 80201-0840

Dear Mr. Williams:

In accordance with the provision of Section IV of the Confirmatory Order Modifying License issued for the Fort St. Vrain Nuclear Generating Station on April 6, 1987, I am herewith providing written authorization for the Fort St. Vrain reactor to operate in excess of 10 percent of full power.

Nothing in this release shall be construed to modify or change the aforementioned order, as this is the release specified in that order. In effect, you are now released to operate up to 35 percent of full power.

Sincerely,

Robert D. Martin

Robert D. Martin
Regional Administrator

cc:
Manager, Nuclear Production
Fort St. Vrain Nuclear Stat
16805 WCR 19½
Platteville, Colorado 80651

P. Tomlinson, Manager, Quality
Assurance Division
(same address)

T. Murley, Director
Nuclear Reactor Regulation

Colorado Radiation Control Program Director

Colorado Public Utilities Commission

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Table 4.2-7

PERFORMANCE RANGE OF VARIABLE FOR EACH STEAM GENERATOR MODULE

Operating Condition Performance Range	Dimensions	Full Load (100%)			One Quarter Load (25%)		
		Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
Helium							
Flow	lb/hr	278,490	284,170	289,850	81,800	83,500	85,200
Outlet Pressure	psia	686	686	686	589	589	589
Inlet Temperature	°F	1,357	1,427	1,467	1,121	1,231	1,341
Outlet Temperature	°F	736	742	747	612	577	561
Pressure Drop	psi	≈3.47	≈3.47	≈3.47	≈0.36	≈0.36	≈0.36
Feedwater/Main Steam							
Flow	lb/hr	170,000	192,110	206,500	36,600	48,030	59,600
Outlet Pressure	psia	2,512	2,512	2,512	2,419	2,419	2,419
Inlet Temperature	°F	403	403	403	301	301	301
Outlet Temperature	°F	1,005	1,005	1,005	1,000	1,000	1,000
Pressure Drop	psi	≈520	≈590	≈670	≈29	≈45	≈65
Reheat Steam							
Flow	lb/hr	187,150	187,150	187,150	45,400	45,400	45,400
Outlet Pressure	psia	600	600	600	151	151	151
Inlet Temperature	°F	673	673	673	567	567	567
Outlet Temperature	°F	967	1,002	1,022	926	1,001	1,075
Pressure Drop	psi	≈42	≈42	≈42	≈11	≈11	≈11

2512
670
3182 psia

panels, control room control panel and control devices required for automatic initiation of associated fire suppression systems.

Two sensing types of detectors are utilized: ionization type detectors and thermal detectors. Thermal detectors may be rate of rise, continuous strip, or heat actuated devices (HADs).

In the event that detectors for vital areas become inoperable, fire watches are established until the detectors can be returned to service, in accordance with Technical Specifications.

9.12.3.3. Fire Suppression Systems

Fire Water Systems. The fire protection water supply system provides a reliable water supply for suppressing fires in both the reactor and turbine buildings by supplying fire water to the wet pipe sprinkler systems, deluge system, fixed water spray systems, manual hose reels and yard fire hydrants as shown in Figure 9.12-1. Two redundant 100% capacity fire water pumps are provided, each rated for 1500 gpm at 125 psig TDH. The main pump is electric motor driven, and the standby pump is diesel engine drive. Each pump has its own driver with independent power supplies and controls and is located in a separate room, divided by a minimum 3-hour fire rated concrete wall.

The fire water pumps take suction from independent pits which communicate directly with the main cooling tower basin. Fire water is supplied to the main cooling tower basin from two storage ponds via a circulating water makeup pump. The normal cooling tower water make up rate exceeds the rate at which water is used by the fire water systems. The water inventory in each pond is maintained at approximately 13 million gallons by water pumped from two river sources.

A 20,000 gallon fire water storage tank located approximately 132 feet above grade level maintains a constant head in the system. The storage tank capacity and head also supplements the fire water pumps as a source of water making frequent starting of a fire water pump unnecessary for minor demand on the system.

Water for fire suppression is provided from the fire water pumps to the station by means of a 10 inch underground main loop surrounding the station. The fire water is then distributed to the wet pipe sprinkler systems, deluge systems, fixed water spray systems, manual hose stations and fire hydrants via two entries from the underground loop. Alarm monitored check valves are provided in each of the nine fire water supply risers in the station to alert control room personnel to the demand for fire water. These water suppression systems are shown in Figure 9.12-2.

The wet pipe sprinkler systems utilize thermally activated fusible link spray nozzles and are connected with fixed piping to the fire water supply system such that water will be discharged immediately from the nozzles opened by fire. The wet pipe sprinkler system protects the following areas: the steam driven boiler feed