

P. O. Box 361, Platteville, Colorado 80651

May 7, 1975

MAY 10, 1975

Mr. E. Morris Howard, Director
Nuclear Regulatory Commission
Region IV
Office of Inspection and Enforcement
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76012

REF: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Mr. Howard:

Enclosed please find a copy of Abnormal Occurrence Report No.
50-267/75/11, Final, submitted per the requirements of *
Technical Specifications.

Very truly yours,

H. Larry Brey
Superintendent-Operations
Fort St. Vrain Nuclear
Generating Station

HLB:11

cc: Mr. Angelo Giambusso

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REPORT DATE: May 2, 1975

ABNORMAL OCCURRENCE

OCCURRENCE DATE: April 24, 1975

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

REPORT NO. 50-267/75/11

Final

IDENTIFICATION OF
OCCURRENCE:

A question was raised concerning the seismic adequacy of helium bottles and their restraints which supply pressure to the reactor reserve shutdown system. Preliminary indications were that the bottles did not have adequate support and restraint to insure their function during a seismic event.

CONDITIONS PRIOR
TO OCCURRENCE:

<u> </u>	Steady State Power	<u> </u>	Routine Shutdown
<u> </u>	Hot Shutdown	<u> </u>	Routine Load Change
<u> X </u>	Cold Shutdown	<u> </u>	Other (specify)
<u> </u>	Refueling Shutdown	<u> </u>	
<u> </u>	Routine Startup	<u> </u>	

The major plant parameters at the time of the event were as follows:

Power	Rtr.	<u>0.0</u>	MWth
	Elect.	<u>0.0</u>	MWe
Secondary Coolant	Pressure	<u>1233</u>	psig
	Temperature	<u>190</u>	°F
	Flow	<u>2974 x 10³</u>	#/hr.
Primary Coolant	Pressure	<u>388</u>	psig
	Temperature	<u>212</u>	°F Core Inlet
		<u>223</u>	°F Core Outlet
	Flow	<u>48 x 10³</u>	#/hr.

DESCRIPTION OF
OCCURRENCE:

Preliminary calculations indicated that the helium bottles supplying the Reserve Shutdown System did not have adequate restraint to insure continued functional ability during a Design Basis Earthquake. The support system had not been certified.

APPARENT CAUSE
OF OCCURRENCE:

<u> X </u>	Design	<u> </u>	Unusual Service Cond. Including Environ.
<u> </u>	Manufacture	<u> </u>	Component Failure
<u> </u>	Installation/Constr.	<u> </u>	Other (specify)
<u> </u>	Operator		
<u> </u>	Procedure		

ANALYSIS OF
OCCURRENCE:

The support of the Reserve Shutdown System bottles was analyzed by Sargent and Lundy Engineers, Chicago, Illinois, Design Architect/Engineer for Fort St. Vrain. This analysis was based on appropriate seismic criteria established for the continued safe operation of Class I components. The analysis proved that corrective measures would be required.

An inspection was made to insure that all associated piping was supported in accordance with established criteria for the support of two inch and under, Class I lines. The piping and valves were found to be adequately supported.

CORRECTIVE
ACTION:

New bottle racks were designed and installed. Additional support members were added below the bottles which increased the natural vertical frequency of the support system to well within the "rigid" range. Lateral braces were added to the RSD instrument racks (to which the bottle racks are attached) to increase the natural horizontal frequency of the system to well within the "rigid" range. An additional support was added to each of the thirty seven lines which attach to the helium pressurizing bottles for greater protection of those lines.

FAILURE DATA/
SIMILAR REPORTED OCCURRENCES:

There has been no failure of any component associated with the Reserve Shutdown bottles or instrument racks. Seismic design deficiencies for several dissipated Class I components were earlier reported via Abnormal Occurrence Report No. 50-267/74/19.

PROGRAMMATIC IMPACT:

None

CODE IMPACT:

None

Submitted: _____

Jim Reader
Jim Reader
Site Engineer
Fort St. Vrain Nuclear
Generating Station

Approved: _____

Frederic E. Swart
Frederic E. Swart
Superintendent Nuclear Production
Public Service Company of Colorado