

REPORT DATE: December 22, 1975

ABNORMAL OCCURRENCE 75/15A

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OCCURRENCE DATE: July 9, 1975

P. O. Box 361, Platteville, Colorado 80651

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

P. O. BOX 361
PLATTEVILLE, COLORADO 80651

REPORT NO. 50-267/75/15A

Final

December 22, 1975

Fort St. Vrain

Unit No. 1

P-75034

IDENTIFICATION OF
OCCURRENCE:

Mr. E. Morris Howard, Director
Nuclear Regulatory Commission on the gasoline engine of
Region IV (45015) on July 9, 1975, the mechanic noticed the
Office of Inspection and Enforcement
Suite 1000

This Arlington, Texas 76012 an abnormal occurrence, as per par
Section (F) of the Technical Specifications.

CONDITIONS PRIOR
TO OCCURRENCE:

Ref: Facility Operating License
No. DPR-34

Steady State Power Routine Shutdown

Docket No. 50-267

Hot Shutdown Routine Load Change

Dear Mr. Howard:

☒ Cold Shutdown ☐ Other (specify)

Enclosed please find a copy of Abnormal Occurrence Report No. 50-267/
75/15A, Final, submitted per the requirements of the Technical Spec-
fications.

☐ Routine Startup

Very truly yours,

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

Power	RTR	0	MWth
	Frederic E. Swart		
	EL Superintendent, Nuclear Production		
	Fort St. Vrain Nuclear		
Secondary Coolant	Pres	Generating Station	psig
FES/alk	Temperature	115	°F
cc: Mr. Roger S. Boyd	Flow	0	\$/hr.
Primary Coolant	Pressure	0.5	psig
	Temperature	115	°F Core Inlet
		115	°F Core Outlet
	Flow	32,500	\$/hr.

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REPORT NO. 50-267/75/15A

Final

IDENTIFICATION OF

REFERENCE:

While repairing a minor oil leak on the gasoline engine of the emergency fire pump (P-4501S) on July 9, 1975, the mechanic noticed that the inlet manifold piping was cracked.

This has been identified as an abnormal occurrence, as per paragraph 2.1, Section (F) of the Technical Specifications.

CONDITIONS PRIOR
TO OCCURRENCE:

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

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

Power	RTR	<u>0</u>	MWth
	ELECT	<u>0</u>	MWe
Secondary Coolant	Pressure	<u>235</u>	psig
	Temperature	<u>115</u>	°F
	Flow	<u>0</u>	#/hr.
Primary Coolant	Pressure	<u>0.5</u>	psig
	Temperature	<u>115</u>	°F Core Inlet
		<u>115</u>	°F Core Outlet
	Flow	<u>32,500</u>	#/hr.

DESCRIPTION OF
OCCURRENCE:

Curing the repair of a small oil leak, inspection of the gasoline engine on the emergency fire pump (P-4501S) found what was thought to be a crack on one of the inlets of the inlet/exhaust manifold. Further checking with a dye-penetrant showed that the manifold had cracks (partial circumferential). At least four of the six cylinder inlets appear to have small cracks. The cracks were in each case located at the junction of the air passage with the mounting flange of the cast iron manifold.

APPARENT CAUSE
OF OCCURRENCE:

_____ Design	_____ Unusual Service Cond. Including Environment
_____ Manufacture	_____ X _____ Component Failure
_____ Installation/Const.	_____ Other (specify)
_____ Operator	_____
_____ Procedure	_____

ANALYSIS OF
OCCURRENCE:

The reason for the cracks in the inlet passage of the manifold has not been identified. Three possible causes of the failure could be:

- 1) Cyclic temperature stresses, because the one piece manifold contains six inlet ports, six exhaust ports, and cooling water passage ways.
- 2) Possibly the manifold was misaligned when installed.
- 3) Combination of vibration and size of the manifold.

The engine was, and is, operable with these cracks. Even with further cracking the engine would be operable but at reduced power.

CORRECTIVE ACTION:

It has been determined that a new manifold is not available. The original manifold will be repaired. The quarterly preventive maintenance inspection procedure has been revised to make a visual inspection of the manifold. The annual preventive maintenance inspection procedure has been modified to include a dye-penetrant check of any suspected cracks.

FAILURE DATA/SIMILAR REPORTED OCCURRENCES:

None

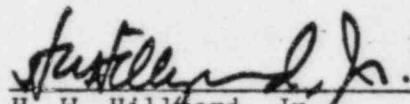
PROGRAMMATIC IMPACT:

None

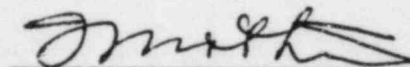
CODE IMPACT:

None

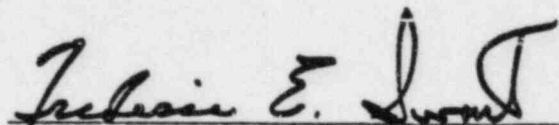
Submitted by:


H. W. Hilliard, Jr.
Technical Services Supervisor

Reviewed by:


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Approved by:


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Superintendent, Nuclear Production