

UPDATE

(PLEASE PRINT ALL REQUIRED INFORMATION)

01		CATEGORY		REPORT TYPE		REPORT SOURCE		DOCKET NUMBER				EVENT DATE				REPORT DATE									
7	8	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	CONT	D	I	0	L	0	5	0	-	0	2	6	7	0	2	0	6	7	6	0	4	1	1	7	6

02	DURING WEEKLY SURVEILLANCE ON 1A STANDBY GENERATOR, THE 1B	80
03	ENGINE PARTIALLY DECLUTCHED UNDER LOAD. CLUTCH ENGAGING	80
04	TORQUE WAS CHANGED TO REQUIRED VALUE. THE PROCEDURE HAS	80
05	BEEN REVISED FOR CLARITY.	80
06	(AO 50-267-74/04)	80

SYSTEM CODE		CAUSE CODE	COMPONENT CODE					PRIVATE COMPONENT SUPPLIER	COMPONENT MANUFACTURER				VIOLATION	
07	EE	D	E	N	G	I	N	E	A	C	I	7	0	N
7	8	9	10						43					48

08 THE CLUTCH ENGAGING MECHANISM WAS IMPROPERLY ADJUSTED. THE
7 8 9 80
09 PROCEDURE WAS NOT SPECIFIC ENOUGH TO ASSURE THAT MECHANICAL
7 8 9 80
10 STOP AND THE ENGAGING TORQUE VALUE WOULD BE SET PROPERLY
7 8 9 80

FACILITY STATUS		% POWER			OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
11	G	000					B	SURVEILLANCE TEST		
7 8	9	10	11	12	13		44	45	46	60

FORM OF ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE	
12	3	3	NA	44	NA	80	

NUMBER				TYPE	DESCRIPTION
13	000	2	LA		

NUMBER				DESCRIPTION	
1	4	0	0	0	NA

15 VA 80

TYPE			DESCRIPTION
15	7	8	9
7	8	9	10
			80

PUBLICITY	8311080118 760414 PDR ADOCK 05000267 S PDR
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7. B. 9

7 8 9

NAME: ROGER HELLER

PHONE: 571-7844 Ext 1455

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P Letter	Region IV,	
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Director of Nuclear Reactor Regulation - - - - -		1 (copy of Howard's letter, mailogram, & Licensee Event Report)
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*Indicates a xerox copy of the letter to the Director, ERDA-SCEPO, is sent with the copy of the report.

REPORT DATE: April 14, 1976

ABNORMAL OCCURRENCE 76/04A

Page 1 of 3

OCCURRENCE DATE: February 6, 1976

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

REPORT NO. 50-267/76/04A

Final

IDENTIFICATION OF
OCCURRENCE:

The clutch on "B" engine 1A standby generator moved in the declutch direction under load. This is identified as an abnormal occurrence per Section 2.1, paragraph (f) of the Fort St. Vrain Technical Specifications.

CONDITIONS PRIOR
TO OCCURRENCE:

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

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

Power	RTR _____	0	MWth
	FLECT _____	0	MWe
Secondary Coolant	Pressure _____	0	psig
	Temperature _____	70	°F
	Flow _____	0	#/hr.
Primary Coolant	Pressure _____	160	Psia
	Temperature _____	86	°F Core Inlet
		86	°F Core Outlet
	Flow <u>All 4 helium circulators</u>		#/hr.
	were self-turbining.		

The 1A standby generator diesel engines had been locally started and the generator loaded to 50% per the weekly surveillance procedure, SR 5.6.1a-W. The standby generator set continued in operation for approximately one hour when a standby generator trouble alarm was received in the main control room. The operator went to the standby generator room and discovered the clutch arm had moved slightly in the declutch direction and actuated the switch. Load was reduced to 25% and the engine was manually declutched.

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

It was found that the clutch had engaged, but not fully. Full engagement requires that the clutch control linkage move over center position so that the spring tension is normal. The clutch was adjusted so it would go to a position just on center. At this position, the clutch is engaged but could snap out of center position to either the fully engaged position or the disengaged position. The clutch did not disengage but the linkage moved far enough in the disengage direction that it actuated the limit switch giving a diesel generator trouble alarm in the control room.

The clutch actuating solenoid was checked for leakage. It was found to be satisfactory and reinstalled. A check of the clutch engaging torque was made and found to require 225 foot pounds. It should have been between 155 and 204 foot pounds. The clutch mechanism torque had been adjusted on January 12, 1976, per Preventive Maintenance Procedure 92.10, quarterly inspection. This was the first operation of the diesel generators under load following that inspection. At this point it was evident that either the clutch engaging mechanism was improperly adjusted or that something in the control linkage had changed. Two mechanics were assigned to individually inspect the clutch, linkage, and operator and determine if a mechanical problem existed. It was found that of two mechanics using the procedure to accomplish the requirement of independently inspecting and adjusting the clutch operating mechanism, each had used a different method of determining the torque value required to engage the clutch and each had a different approach to determine the mechanical stop settings on the clutch control arm. The procedure was not specific enough to assure that the mechanical stop and the engaging torque value would be set properly.

CORRECTIVE
ACTION:

The mechanics were instructed as to the proper method of determining the torque value and the correct mechanical stop settings. The clutch engaging torque of "B" engine was readjusted to 190 foot pounds.

Revision four of the procedure (Preventive Maintenance Procedure 92.10) has been completed to specifically state the clearance required on the mechanical stops and the correct method of determining the torque values. Also, since the occurrence date the other three standby generator diesel engine clutch settings have been verified using the accepted method. No further corrective action is anticipated or required.

FAILURE DATA/SIMILAR REPORTED OCCURRENCE:

Abnormal Occurrence 50-267/74/23 concerning engine 1A reports a similar occurrence but a different cause.

PROGRAMMATIC IMPACT:

None

CODE IMPACT:

None

Submitted by:

H. W. Hildyard, Jr.

H. W. Hildyard, Jr.
Technical Services Supervisor

Reviewed by:

Frank M. Mathie

Frank M. Mathie
Superintendent, Maintenance

Approved by:

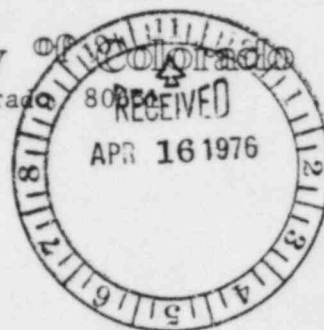
Frederic E. Swart

Frederic E. Swart
Superintendent, Nuclear Production



Public Service Company

P. O. Box 361, Platteville, Colorado



April 14, 1976
Fort St. Vrain
Unit No. 1
P-76095

Mr. E. Morris Howard, Director
Nuclear Regulatory Commission
Region IV
Office of Inspection and Enforcement
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. 50-267/76/04A, Final, submitted per the requirements of the Technical Specifications.

Also, please find enclosed one copy of the Licensee Event Report for Abnormal Occurrence Report No. 50-267/76/04A.

Very truly yours,

Frederic E. Swart
Superintendent, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

FES/alk

cc: Mr. Roger S. Boyd

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