

FROM: Wisconsin Public Service Corp Green Bay, Wisc. E. W. James			DATE OF DOC 5-3-74	DATE REC'D 5-6-74	LTR X	MEMO	RPT	OTHER
TO: J. F. O'Leary			ORIG 2 signed	CC	OTHER	SENT AEC PDR XXX SENT LOCAL PDR XXX		
CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D		DOCKET NO:		
	XXX			2		50-305		
DESCRIPTION: Ltr furn info re abnormal occurrence 50-305-74-5 of 4-24-74 in which diesel generator 1A failed to start				ENCLOSURES: ACKNOWLEDGED DO NOT REMOVE				
PLANT NAME: KEWAUNEE								

FOR ACTION/INFORMATION 5-7-74 GMC

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WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

May 3, 1974

Mr. J. F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545



Dear Mr. O'Leary:

Subject: Docket 50-305
Operating License DPR-43
Abnormal Occurrence Report

In accordance with the requirements of Technical Specifications Paragraphs 1.0.a1(d) and 6.6.2.a and Regulatory Guide 1.16, we submit:

Report Number: 50-305/74-5

Report Date: May 3, 1974

Occurrence Date: April 24, 1974

Facility: Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

Identification of Occurrence: Diesel Generator 1A Failure to Start

Conditions Prior to Occurrence: Reactor at 8% Power
Normal Operating Temperature - 547°F
Normal Operating Pressure - 2235 psig
Dumping Steam to the Condenser
Turbine at 1800 RPM

Description of Occurrence:

A reactor trip occurred due to low steam generator level and steam flow greater than feedwater flow, followed by a turbine trip, which in turn causes the diesels to start automatically. Diesel 1B started but diesel 1A failed to start. Upon investigation it was discovered that the "Auto-Off-Manual" switch



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appeared to be in the "Auto" position, the contacts apparently were not closed. The switch was rotated to ascertain that the switch was centered in "Auto" and contacts were closed. The diesel was successfully started.

Designation of
Apparent Cause of
Occurrence:

Faulty Switch

Analysis of
Occurrence:

Located on each local diesel generator engine control panel is a three position maintained contact switch. The switch is labeled "Auto-Off-Manual". The switch permits either local, remote (control room) or automatic start of the diesel. When the switch is in "Manual", the diesel can be started from the local panel only. In both the "Manual" and "Off" positions, an alarm light on the local alarm panel indicates "Not in Auto", and in the control room an alarm light indicates "Diesel 1A on Local Control". A separate light is provided for diesel 1B. When the switch is in "Auto", the lights on the local panel and in the control room are de-energized. The lights are energized from contacts in the "Off" and "Manual" positions of the switch.

The switch on the local control panel is normally in the "Auto" position to permit either remote start or automatic start of the diesel. The diesel will start automatically upon receipt of several signals, one of these being turbine trip. Earlier in the afternoon a turbine trip occurred and both diesels started automatically.

The occurrence described herein occurred at 1932 on April 24, 1974. The reactor was at 8% power and the secondary plant was experiencing a water hammer and the moisture separator relief valve lifted. This in turn caused a low level signal in steam generator 1B and a steam-feedwater flow mismatch causing the reactor to trip. This verified that the instrumentation measuring level and flow was responding as required. The turbine was tripped following the reactor trip and both diesels should have started automatically. Diesel 1B did start as required, but Diesel 1A failed to start. Upon investigation, it was found that the local switch appeared to be in the "Auto" position; none of the

alarm lights, noted above, were energized which verifies that the switch was not in the "Off" position. The equipment operator rotated the switch to "Off" to "Manual" and back through "Off" to "Auto", and the control room operator then started the diesel successfully.

During our investigation, we discovered that between the time of the earlier trip and this trip, approximately three (3) hours, that AEC Operator Examinations were in progress and some of these personnel were at the local control panel and that maintenance personnel were performing maintenance on the vibration monitoring equipment. It is possible that the switch may have been accidentally bumped, although discussions with the personnel involved indicate that they did not deliberately move the switch, nor are they aware of accidentally bumping the switch.

It was further discovered during an examination of the switch to determine the amount of play that existed in the switch handle that an audible "click" existed. This prompted a request for a test of the diesel start to determine whether the switch was faulty. The test consisted of starting the diesel from the control room when the local switch was turned to "Auto" to assure contact closure. The diesel started successfully. The local switch was then turned slightly until the "click" was audible, but definitely established that it was not in "Off" since the "Not in Auto" light did not come on. The control room was requested to start the diesel; it did not start. The switch was then turned to firm "Auto" position and the diesel was capable of start.

The switch on diesel 1B local panel was also checked and the same "click" was evident. We, therefore, believe that the local switch is at fault and necessary steps are being taken to correct the condition.

Since diesel 1B started automatically and was available to provide emergency power if required, there was no hazard to the general public.

Corrective Action:

A work request has been issued to examine the switch for diesel 1A to determine the cause as to why the switch can be turned to allow the "Auto" contacts to open without the switch going to "Off" to get the alarm. The results will determine what final action

May 3, 1974

is to be taken for both switches. In the meantime, instructions have been issued to have the equipment operator check the switches each shift to verify that they are in the firm "Auto" position. This will be done while the plant is in operation and also prior to starting up the plant. Upon final corrective action being completed, the check each shift will be discontinued.

Failure Data:

The switch is a J. P. Simmons, Part Number 10250T4023, three position maintained contact switch supplied by Western Engine with the diesel.

Sincerely,



E. W. James
Senior Vice President
Power Generation & Engineering

EWJ:sna

cc - Mr. James G. Keppler