May 19, 1983
4410-83-L-0082

Office of Inspection and Enforcement
Attn: Mr. J. M. Allan
   Acting Regional Administrator
Region I
US Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320

The Licensee Event Reports listed in Attachment 1 have been updated and are enclosed as Attachment 2 to this letter.

If you have any questions, please contact Mr. J. J. Byrne of my staff.

Sincerely,

[Signature]

R. K. Kanga
Director, TMI-2

Attachments

CC: Mr. L. H. Barrett, Deputy Program Director - TMI Program Office
   Dr. B. J. Snyder, Program Director - TMI Program Office

GPU Nuclear Corporation is a subsidiary of the General Public Utilities Corporation
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* Event date on original Licensee Event Report was incorrect. This revision corrects the event date.
On November 17, 1980 Emergency Diesel Generator (EDG) DF-X-1P failed to start. The attempt was an effort to raise the EDG ambient temperature due to the previous failure of the jacket coolant heater. The EDG started on the third attempt and then operated properly. This report is submitted under Section 6.9.1.9(b) because the violation of the Tech. Specs. action statement of Tech. Spec. 3.8.1.1(a) was entered inadvertently. This was not a violation of the Tech. Specs. This event had no effect on the plant, its operation, or the health and safety of the public.

An investigation determined the failure to start was a result of not maintaining the diesel at a high enough shutdown ambient temperature as a result of the heater failure, which was induced by the heater's magnetic contactor malfunction. The EDG's ambient shutdown temperature was maintained until heater and contactor replacement was accomplished on December 16, 1980.
LICENSEE EVENT REPORT
NARRATIVE REPORT

TMI-2
LER 80-054/03X-1
EVENT DATE - November 17, 1980

I. EXPLANATION OF OCCURRENCE

On November 17, 1980, an attempt, at 0415 hours, to start the "B" diesel in order to raise the coolant temperature failed. The diesel was checked to determine the cause, but none could be determined. The diesel was then reset and again attempted to start it. Again it failed and no cause could be determined. The diesel was reset and a third attempt was made at 0430 hours. This attempt was successful.

On November 12, 1980, the jacket cooling heater for the "B" Emergency Diesel Generator (EDG) became inoperable. The heaters' purpose is to maintain the diesels' ambient temperature at a level sufficient to enable proper starting of the diesel. As a result of the heater inoperability, an alternate method of maintaining the diesels' ambient temperature was initiated which included increasing the DG room's ambient temperature and by occasionally running the diesel.

Subsequent to the November 12, 1980, heater failure, an investigation identified that the jacket coolant heater magnetic contactor was malfunctioning which we believe induced the failure of the heater.

However, the exact cause of the Failure To Start (FTS) could not be determined from the information available after the failure on 11/17/80. There were two possible causes, 1) the diesel's ambient coolant temperature was too low to allow proper ignition and 2) that the lube oil pressure was not reaching the operating pressure within the trip bypass time.

The final determination of the cause of the FTS was not reached until a second FTS occurred on 11/27/80. During this second event, reported as LER 80-055, additional information was gained which eliminated the second of the two original possible causes for the FTS.

This report is submitted because the Action Statement of 3.8.1.1(a) was entered inadvertently. This is not a violation of the Technical Specifications as the action statement was complied with.

II. CAUSE OF THE OCCURRENCE

The proximate cause of the event was determined to be the low temperature of the EDG. The root cause of the event has been subsequently determined to be the failure of the jacket coolant heaters magnetic contactor which resulted in the heater failure.
III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit 2 facility was in a long-term cold shutdown state. The reactor decay heat was being removed via steam generator which is operating in a 'steaming' mode. Throughout the event there was no Loss of Natural Circulation heat removal in the RCS System.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

IMMEDIATE

The 'B' EDG was declared inoperable and the requirements of the action statement for Section 3.8.1.1(a) were complied with including the return of the 'B' diesel to an operable status.

Information obtained during the investigation led us to believe the low trip condition was the more likely cause, therefore, to avoid starting difficulty, the low jacket coolant temperature criterion for starting the EDG was raised to 85°F. This was based on information obtained from consulting with the EDG manufacturer.

Efforts continued to obtain a replacement heater, but was hindered due to a parts availability problem.

LONG TERM

The faulty heater and contactor were replaced on December 16, 1980, thus restoring the diesel to its normal configuration.

Failure of the contactor was due to an internal mounting screw vibrating loose and jamming in the internal mechanism. To prevent this from happening in the future, locktite (an adhesive substance) was applied to the internal mounting screws on the Cutler-Hammer contactor for each EDG.

V. COMPONENT FAILURE DATA

Magnetic Contactor: Manufactured by Cutler-Hammer
Model #C10CN3 Series A1
Manu. Code #9716858