

## (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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Attachment to LER 78-21/3L  
Northeast Nuclear Energy Company  
Millstone Nuclear Power Station, Unit 1  
Provisional License Number DPR-21  
Docket Number 50-245

IDENTIFICATION OF OCCURRENCE:

The gas turbine generator output breaker inadvertently tripped during surveillance.

CONDITIONS PRIOR TO OCCURRENCE:

Prior to the occurrence, the unit was operating at a steady state power level of 100 percent.

DESCRIPTION OF OCCURRENCE:

On September 14, 1978, at 2100 hours, while performing routine surveillance, the gas turbine tripped while the output voltage was being adjusted. Investigation at the gas turbine local control panel revealed an "exciter trouble/power loss" and a "gas generator overspeed alarm." The gas turbine generator was removed from service and the required surveillance for Automatic Pressure Relief Subsystem, low pressure cooling and a containment cooling was started in accordance with Technical Specification 4.5.F.3. While testing the Core Spray System a leaking flange gasket was detected on the Core Spray "A" System.

APPARENT CAUSE OF OCCURRENCE:

An investigation was initiated which revealed that the gas turbine trip was caused by a faulty gas generator speed switch. Limit 3A, overspeed was found to have a decreasing trip point as the circuitry temperature increased. All other speed limits including the 3B overspeed circuit, functioned properly.

ANALYSIS OF OCCURRENCE:

The gas turbine is one of two emergency power supplies that are utilized for Engineered Safeguard Systems. The loss of the gas turbine would mean the loss of the Feedwater Coolant Injection System, one loop of the low pressure Coolant Injection System and one loop of the Core Spray System. The entire spectrum of accidents has been analyzed with respect to the loss of either power supply and has been found acceptable.

At the time of the occurrence, during which the gas turbine was inoperable, the other emergency power supply was operable.

CORRECTIVE ACTION:

After the inspection of the electronic control associated with the gas generator speed switch, it was decided to replace the electronic control containing the limit 3A switch. The spare electronic control was installed and tested satisfactorily. The gas turbine was tested, returned to service, and declared operational at 2215 hours, September 16, 1978.

The electronic control that was replaced was manufactured by the Reliance Electric Company, Model No. 927-01-031. All speed switches will be tested for temperature effect and improved ventilation will be provided. Additionally, the previously mentioned core spray leaking flange gasket<sup>+</sup> was replaced with a flexitallic gasket.