Central File
50-280
281

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 26, 1979

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Serial No. 757/091279A
PO/RMT:baw
Docket Nos: 50-280
50-281
50-338
50-339
License Nos: DPR-32
DPR-37
NPF-4
CPPR-78

Dear Mr. O'Reilly:

Subject: IE Bulletin 79-23

This is in response to IE Bulletin No. 79-23, "Potential Failure of Emergency Diesel Generator Field Exciter Transformer". Our responses for North Anna Power Station Unit Nos. 1 and 2 and Surry Power Station Unit Nos. 1 and 2 are attached.

Very truly yours,

C. M. Stallings

C. M. Stallings
Vice President-Power Supply
and Production Operations

Attachment

cc: Director, Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D. C. 20555

790641 ccp

7911090159

A02

NORTH ANNA POWER STATION
RESPONSE TO IE BULLETIN 79-23
POTENTIAL FAILURE OF EMERGENCY DIESEL GENERATOR
FIELD EXCITER TRANSFORMER

1. Determine whether or not connections have been made between low KVA rated transformers and high KVA rated EDGs without adequate limitations on the flow of circulating currents. If applicable, provide a description of the corrective action being taken to address this problem.

RESPONSE

Problems as described in IE Bulletin 7-23 do not apply to either of the North Anna Units' 1 and 2 emergency diesel generator sets.

The primary windings of the potential transformer (referred to as excitation power transformer in the IE Bulletin) at North Anna are an "open delta" connection to the generator. No neutral line exists on the high side of the potential transformer.

NAME PLATE DATA

Emergency Diesel Generator

Mfr.: Fairbanks Morse
Model: 38708 1/8
Engine: 12 cylinder, OP turbo-charged diesel
Generator: Type TGZDJ

Potential Transformers

Mfr.: Westinghouse PC-60 Potential, 5 KV Ins. Class
Ratio: 35 to 1, 60 Hz
Primary volts: 4200/4200 Y
Style: 2780A99G02

2. Provide a schedule for the completion of a sustained full-load operation test of the EDGs for a duration of not less than 24 hours, or provide the results of the similar long duration, full-load test which has already been completed on the EDGs installed for an interval of not less than 24 hours, of which 22 hours should be at a load equivalent to the continuous rating of the diesel generator and 2 hours at a load equivalent to the 2 hour rating of the diesel generator. The test should also verify that the voltage and frequency requirements are maintained and that the cooling system functions within design limits.

RESPONSE

A sustained full-load operation test on the diesel generator for a duration of not less than 24 hours has been completed on Unit 2 during preoperational testing. This test was conducted on September 13-14, 1979. The diesel generators were loaded to 3025 Kw for 2 hours and 2750 Kw for the re-

maining 22 hours. Test results showed the diesel generators operated satisfactorily with respect to voltage and frequency requirements and that the cooling system functions within design limits.

A sustained full-load operation test on Unit 1 diesel generators will be performed prior to cycle 2 start-up. Presently, Unit 1 is undergoing a refueling outage, and both units are undergoing extensive design modifications to their offsite power system. Unit 1 is not expected to return to operation until December 5, 1979.

SURRY POWER STATION
RESPONSE TO IE BULLETIN 79-23
POTENTIAL FAILURE OF EMERGENCY DIESEL GENERATOR
FIELD EXCITER TRANSFORMER

1. Determine whether or not connections have been made between low KVA rated transformers and high KVA rated EDGs without adequate limitations on the flow of circulating currents. If applicable, provide a description of the corrective action being taken to address this problem.

2. Provide a schedule for the completion of a sustained full-load operation test of the EDGs for a duration of not less than 24 hours, or provide the results of the similar long duration, full-load test which has already been completed on the EDGs installed at your facility. The test should demonstrate full-load carrying capability for an interval of not less than 24 hours, of which 22 hours should be at a load equivalent to the continuous rating of the diesel generator and 2 hours at a load equivalent to the 2 hour rating of the diesel generator. The test should also verify that voltage and frequency requirements are maintained and that the cooling system functions within design limits.

RESPONSE

As directed by I.E. Bulletin 79-23, we have inspected the neutral connections of the EDGs and completed sustained full-load operations on the three EDGs at Surry's Unit Nos. 1 and 2. Utilizing Special Test 58, it was determined that no common connections of neutrals existed. The three EDGs were then operated for a period of not less than 24 hours at a full-load of 2750 KW. No problems were experienced during the test. Based on available manufacturer's data, no 2 hour rating exists on the EDGs.