



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V  
1990 N. CALIFORNIA BOULEVARD  
SUITE 202, WALNUT CREEK PLAZA  
WALNUT CREEK, CALIFORNIA 94596

TIC

September 12, 1979

Docket No. 50-344

Portland General Electric Company  
121 S. W. Salmon Street  
Portland, Oregon 97204

Attention: Mr. Charles Goodwin  
Assistant Vice President

Gentlemen:

Enclosed is IE Bulletin 79-23 which requires action by you with regard to your power reactor facility(ies) with an operating license or a construction permit.

Should you have questions regarding this Bulletin or the actions required of you, please contact this office.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. H. Engelken".

R. H. Engelken  
Director

Enclosures:

1. IE Bulletin No. 79-23
2. List of IE Bulletins  
Issued in the Last  
Six Months

cc w/enclosures:  
C. P. Yundt, PGE  
F. C. Gaidos, PGE

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

September 12, 1979

IE Bulletin No. 79-23

POTENTIAL FAILURE OF EMERGENCY DIESEL GENERATOR FIELD EXCITER TRANSFORMER

Description of Circumstances:

Florida Power and Light Company recently reported a problem encountered during a 24-hour full load test of the emergency diesel generators (EDG) at their Turkey Point facility. Approximately 10 hours into the test, the A-EDG tripped due to a differential-relay lockout on B and C phases; the B-EDG was manually stopped, thus interrupting the test at that point in time.

Subsequent investigation and testing by the licensee revealed a design error on both the A and B EDGs which resulted in overheating of the Exciter Power Transformers (EPTs) at sustained high load operation.

The following nameplate data applies to the equipment installed at Turkey Point:

Emergency Diesel Generator

General Motors (Electro-Motive Division)  
Model EMD-999-20  
Engine-turbocharged, 2 cycle,  
EMD design 20-645E4  
Generator-EMD-design Model A-20

Exciter Power Transformer

GE-single phase  
Model-9T24Y1004  
Serial-MD  
Cycles-60  
KVA 15  
Insulation-4160 V

The manufacturer's findings and recommendations regarding the above problem are described below:

"A potential problem can exist if the neutral of the generator and the neutral of the primary windings of the excitation control power transformer (EPT) are connected together, or a connection exists between the neutrals, or a connection exists between the neutrals and the ground. If these conditions exist, high circulating currents may exceed transformer rating and cause transformer failure.

DUPLICATE DOCUMENT

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