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PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215 / 770-5381

March 9, 1982

Mr. R. C. Haynes
Director, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
FINAL REPORT OF A DEFICIENCY INVOLVING
DEFECTS IN AGASTAT GP SERIES RELAYS
ERs 100450/100508 FILE 821-10
PLA-1022

Reference: PLA-984 dated December 23, 1981

Dear Mr. Haynes:

This letter serves to provide the Commission with a final report on a deficiency involving defects in Agastat GP Series auxiliary control relays.

The deficiency was originally reported by telephone to Mr. E. C. McCabe of NRC Region I by Mr. A. R. Sabol of PP&L on November 24, 1981 and was considered to be potentially reportable. The referenced letter provided the Commission with an interim report on the subject deficiency.

The attachment to this letter contains a description of the deficiency, its cause, an analysis of safety implications and the corrective action taken and planned. This information is furnished pursuant to the provisions of 10 CFR 50.55(e).

Since the details of this report provide information relevant to the reporting requirements of 10 CFR 21, this correspondence is considered to a so discharge any formal responsibility PP&L may have in compliance thereto.

We trust the Commission will find this report to be satisfactory.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

JBW:sab

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cc: Mr. Richard C. DeYoung (15)
Director-Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. McDonald, Director
Office of Management Information & Program Control
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Gary Rhoads
U. S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

FINAL REPORT

Subject:

Agastat GP series auxiliary control relays

Description:

The Agastat GP relay is a general purpose, auxiliary control relay, used as a contact multiplier. This relay is used in various safety-related circuits at Susquehanna SES. A problem has been identified with the contacts of the relay.

When the relay is operated, the contacts occasionally fail to transfer (the normally open contacts fail to close when the relay is energized, or the normally closed contacts fail to close when the relay is de-energized). The GP relay has four single pole, double throw contacts; normally one or two sets of contacts fail to transfer.

Cause:

Defective relays were sent to Agastat Corporation, Grafton facility, for analysis. It was determined that the relay bases were improperly manufactured. This resulted in insufficient clearance between the contact arm and the divider in the relay base between the sets of stationary contacts.

Agastat has modified the design of the relay base on newer model relays. With the old design, the contact divider was a uniform height across the entire relay base. The new relay has a stepped contact divider, which provides sufficient clearance between the contact arm and the divider. The new relay bases were manufactured after August, 1977.

Analysis of Safety Implications:

The Agastat GP relays are used in the start and run circuits for the Emergency Diesel Generators. The failure of these relays to properly operate could adversely affect the safe operation of the plant by preventing the diesel generators from starting and performing their safety functions. These relays are used in other safety-related circuits where contact failures would also prevent or degrade safety system functions. Therefore, PP&L has determined that this condition is reportable under the provisions of 10 CFR 50.55(e).

Corrective Action:

All Agastat GP series relays used in safety related applications except those having the stepped contact divider, will be returned to the Agastat Corporation for rework. Agastat will replace improperly manufactured relay bases with new, properly manufactured bases.

PP&L's scope of work will be coordinated through PP&L NCR's 81-255 and 81-364 and Work Authorization WA-U21067. Bechtel will be requested to coordinate their scope of work to accomplish the corrective action.

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-III-82-28 Date: March 15, 1982

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the staff on this date.

Facility: Consumers Power Company
Palisades Nuclear Power Station
Docket No. 50-255
Jackson, MI

Licensee Emergency Classification:
_____ Notification of Unusual Event
_____ Alert
_____ Site Area Emergency
_____ General Emergency
__X__ Not Applicable

Subject: OUTAGE GREATER THAN 48 HOURS -- MAIN TRANSFORMER OVERHEATING

At 3 a.m. (EST) March 12, 1982, licensee personnel, investigating a burning smell, discovered a "hot spot" on the main transformer. The transformer was cooled using a fire hose and by manually activating the transformer deluge fire protection system. Reactor power was reduced from about 93 per cent to 2 per cent and the generator was taken off the line at 5:46 a.m. The Covert, MI, fire department was placed on alert, but was not dispatched to the site.

The licensee is continuing to investigate the cause of the "hot spot" which occurred between busswork and the transformer body. Current expectation is that the evaluation and resolution of the problem will be completed on March 17.

The reactor is being maintained critical at about 2 per cent power.

The resident inspector arrived at the site at 5:15 a.m., March 12, and is continuing to monitor the licensee's activities.

There has been no known news media interest. Neither the licensee nor Region III (Chicago) plan to issue a news announcement.

The State of Michigan is being notified.

The NRC duty officer was notified of the transformer problem at 5:32 a.m., March 12, via the ENS telephone. Additional details were provided by the resident inspector. This information is current as of 9 a.m. (EST), March 15.

Contact: R. Knop RCK
384-2547

D. Boyd DBoyd
334-2546

R. L. Spessard
384-2552

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Rev. 1/29/82