

**PRIORITY 1**  
ACCELERATED RIDS PROCESSING

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 PARRISH, J.V.                    Washington Public Power Supply System  
 RECIP. NAME                    RECIPIENT AFFILIATION  
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SUBJECT: Informs that Agastat relay robbin failures was not reportable event per requirements of 10CFR21 or 50.73.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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September 9, 1994  
GO2-94-213

Docket No. 50-397

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21  
AGASTAT RELAY BOBBIN FAILURES  
DUE TO THERMAL BREAKDOWN**

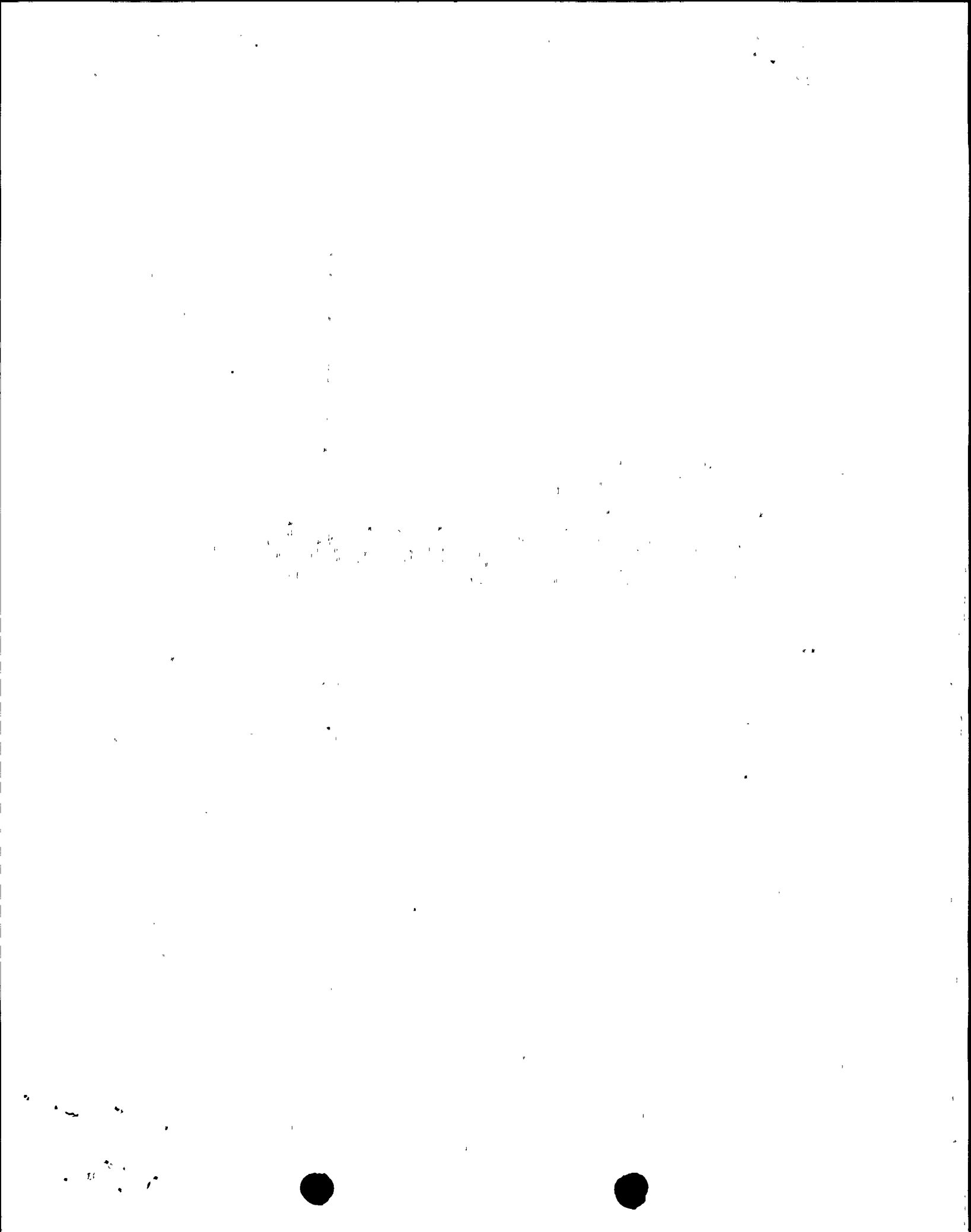
- References:
- 1) GE SIL 384, dated October 1982, "Connection Failures in Agastat Relay Type CR0095 Bases"
  - 2) SER 71-82 (OER 82092A), dated December 1982, "Connection Failures in Agastat Relay Type CR0095 Bases"
  - 3) SER 82068 (OER 82100B), dated January 1984, "Problems Encountered with Certain Agastat GP Series Relays"
  - 4) IEN 84-20 (OER 84029A), dated March 1984, "Service Life of Relays in Safety Related Systems"
  - 5) INP OE 4040, dated July 1990, "Failure of Normally Energized Relays During Safeguards Test"

As discussed below, WNP-2 recently experienced failures of Amerace Corporation Agastat type EGPI relays. This condition was determined to be not reportable per the requirements of either 10 CFR 21 or 10 CFR 50.73. The information provided below is for your use.

Recent failures of Agastat type EGPI relays that were normally energized during power operation prompted an evaluation of the associated failure mechanism. From this evaluation, engineering determined that the nylon bobbin of the EGPI relay deteriorates after prolonged exposure to high temperature. The rate of deterioration depends on relay coil temperature. The

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**AGASTAT RELAY BOBBIN FAILURES  
DUE TO THERMAL BREAKDOWN**

coil temperature generated in a mild environment is high enough to cause deterioration. The failure mode is cracking and structural breakdown of the coil bobbin; in turn, this breakdown can impede the moving relay core's motion and thus preclude the relay contacts from changing state. Other Amerace Corporation relay models having the same bobbin materials and thus potentially being susceptible to this failure mechanism are GPB, GPD, GPI, EGPB, and EGPD. The "E" series relays are nuclear grade. The Supply System uses these nuclear-grade model relays in Nuclear Steam Supply Shutoff and Emergency Core Cooling System actuation instrumentation.

Should you have any questions or desire additional information regarding this matter, please call me or Mr. D. A. Swank at (509) 377-4563.

Sincerely,



J. V. Parrish (Mail Drop 1023)  
Assistant Managing Director, Operations

KEB/bk

cc: LJ Callan - NRC RIV  
KE Perkins, Jr. - NRC RIV, Walnut Creek Field Office  
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