NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

SAMUEL F. MANNO
VICE PRESIDENT
NUCLEAR CONSTRUCTION

December 30, 1982

Office of Inspection and Enforcement
Region I
Attention: Mr. R. W. Starostecki, Director
Division of Project and Resident Programs
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Re: Nine Mile Point Unit 1
Docket No. 50-410

Dear Mr. Starostecki:

Enclosed is a final report in accordance with 10CFR50.55(e) for the deficiency regarding HFA relay contact setting. This condition was reported by telephone to Mr. G. Kelley, of your staff, on August 10, 1982. An interim report on this matter was submitted to you with my letter dated August 31, 1982.

Very truly yours,

S. F. Manno
Vice President
Nuclear Construction

/djm
Enclosure
xc: Mr. R. D. Schulz, Resident Inspector

Director of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

IE27

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT UNIT 2
DOCKET NO. 50-410

FINAL REPORT FOR A REPORTABLE
DEFICIENCY UNDER 10CFR50.55(e)

Description of the Deficiency

The problem concerns the incorrect "wipe setting" of contacts on some HFA relays after disassembly/reassembly. Qualification of the relay was performed with calibrated contacts; therefore a relay with less than a minimum wipe setting does not fall within the component qualification limits. General Electric reported this problem to the Nuclear Regulatory Commission under 10CFR21 on July 27, 1982. This matter was reported to Mr. G. Kelley of Nuclear Regulatory Commission Region I on August 10, 1982, and an interim report was provided on August 31, 1982.

Analysis of Safety Implications

The safety hazards associated with this problem - had it remained uncorrected - are described in the attached General Electric letter to Mr. S. F. Manno (Niagara Mohawk) dated July 29, 1982. HFA relays are planned for use in various safety related applications at Nine Mile Point Unit 2.

Corrective Action

For Nine Mile Point Unit 2, two HFA relays are installed in HPCS Diesel Generator local panel H22-P028. This panel is in storage at the site. These two relays will be adjusted in accordance with General Electric Service Information Letter No. 44, Supplement 4. Those HFA relays installed in panels located in General Electric, San Jose will be corrected prior to shipment to Nine Mile Point Unit 2 in accordance with Repair/Modification Bulletin RG002 (General Electric, San Jose issued).

In addition, Stone and Webster Engineering Corporation will review balance of plant HFA relays for the above-reported deficiency and corrective action will be provided in accordance with General Electric Service Information letter 44, Supplement 4.

ATTACHMENT

NUCLEAR POWER

SYSTEMS DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVE., SAN JOSE, CALIFORNIA 95125
MC 394, (408) 925-3574

July 29, 1982
Responds to:
NMP2- 4500
JO #12177

RECEIVED
AUG 5 1982
S. F. MANNO

Mr. S. F. Manno
Vice President - Nuclear Construction
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, NY 13202

Dear Mr. Manno:

SUBJECT: NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION - UNIT 2
10CFR PART 21, REPORTABLE CONDITION HFA RELAY CONTACT SETTING

This letter is to inform you that we have notified Richard C. DeYoung of the NRC on July 27, 1982 of a reportable defect per 10CFR Part 21. The defect occurred in the installation of HFA Relays in control room panels and racks.

The enclosed evaluation dated July 23, 1982 identifies all pertinent information required by 10CFR Part 21.

For NMP2, two HFA Relays are installed in local panel H22-P028. This panel is in storage at the site. Other HFA Relays are installed in panels that are still in the factory and therefore not reportable.

Very truly yours,

C. G. Lewis
Project Manager
Nine Mile Point 2

CGL:hjr/C07288

Attachment

cc: W. R. D'Angelo
R. J. Hall
R. E. Miller
J. P. Ptak
C. C. Zappile

REPORTABLE CONDITION

1. Name and address of the individual or individuals informing the Commission.

   Dr. Glenn G. Sherwood, Manager of Safety and Licensing Operation
   General Electric Company, 175 Curtner Avenue, San Jose, CA 95125

2. Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

   Electrical panels incorporating HFA relays.

3. Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

   General Electric Company, Nuclear Energy Business Operation, San Jose, California

4. Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

   The defect is the incorrect "wipe setting" of normally closed (NC) contacts on some HFA relays converted from normally open (NO) by GE shop and/or field personnel. ("Normally closed" means closed in the deenergized state.) Qualification was performed with calibrated contacts, so a relay with less than a minimum wipe setting does not fall within the component qualification limits. The safety hazard created is the potential for a NC contact in the HFA relay to fail to actuate engineered safety systems properly during a seismic event. For example, the Reactor Protection System Recirculation Pump Trip (RPT) circuit breaker trip coils are energized by NC HFA relay contacts. During normal operation the HFA relay NC contacts are kept open by energizing the coil. This prevents the RPT circuit breaker trip coils from being actuated. Should an event occur requiring the actuation of the trip coils, the energy to the HFA relay coil would cease, releasing the contact arm to make contact with the stationary arm, thereby energizing the RPT circuit breaker trip coil. The failure to initiate RPT per design may create thermal transients which threaten the fuel thermal safety limits which are designed to assure fuel cladding integrity.

5. The date on which the information of such defect or failure to comply was obtained.

   July 26, 1982

6. In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

   Plants under construction or prior to operating license turn over.

6. Continued

LaSalle 1 & 2	242	HFAs ea	Zimmer 1	216	HFAs
Susquehanna 1 & 2	231	HFAs ea	Shoreham	304	HFAs
Grand Gulf 1 & 2	24	HFAs ea	Hanford	261	HFAs
Perry 1 & 2	38	HFAs ea	Fermi 2	286	HFAs
Limerick 1 & 2	4	HFAs ea	Clinton	58	HFAs

(Not all relays have normally closed contacts.)

Safety systems using HFA relays:

ADS (Automatic Depressurization System)
RHR (Residual Heat Removal System)
LPCS (Low Pressure Core Spray System)
RCIC (Reactor Core Isolation Cooling)
HPCI (High Pressure Cooling Injection)
HPCS (High Pressure Core Spray)
CS (Core Spray)
RPS (Reactor Protection System)

Operating GE BWR plants also use HFA relays in varying quantities. The extent of this defect is not known for operating plants, since the current state of calibration of the HFAs for these plants is not known by GE. The risk associated with continued plant operation is not substantial during the upcoming calibration period. Operating plant experience has not yielded evidence of uncalibrated HFA relays causing potential safety hazards. It is likely that most of the operating plant HFA relays have already been readjusted in the field at some point in time. Of those HFA relays that need readjustment, few, if any, would be applied in system logic that requires operation during a seismic event in order to maintain plant safety. These points, coupled with the very low probability of occurrence of a design basis seismic event, provide justification for continued plant operation while the HFA relays are being checked.

7. The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

Issuance of GE Field Disposition Instructions (FDI) to all affected BWRs under construction instructing that all safety related HFAs be checked and recalibrated, if necessary, using GE-PSMBD Instructions, GEH 2024, "Multicontact Auxiliary Relay Type HFA 51. and/or GE-PSMBD Instructions GEK 45484, Multicontact Auxiliary Relay Type HFA 151.
FDI Issue Dates: 2/12/82-LaSalle #1; 2/19/82-Susquehanna #1 & #2, Grand Gulf #1 & #2; 2/20/82-LaSalle #2; 2/24/82 Zimmer, Shoreham, Hanford; 3/10/82-Clinton; 3/19/82-Perry #1 & #2, Limerick #2.

GE - San Jose issued Repair/Modification Bulletin RG002 "HFA Relay Magnetic Coil Assembly Replacement and Contact Inspection/Adjustment" 2/12/82. This Bulletin provides instruction to GE shop personnel in the correct adjustment procedure for relay wipe setting.

GE SIL (Service Information Letter) 44 Supplement 4 will be issued to inform operating plants of the potential HFA relay anomalies, and the corrective action to resolve such anomalies.

8. Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licenses.

None

EG:lm:pes/16F-3
7/23/82