

50-461

July 18, 1997

In response refer to:
97-01-21.21

Ref: a) Elgar letter 970422.ecn, 18 July, 1997
b) G.E. Spec. 22A3153, Rev 5
c) ECN N960467A

Illinois Power Company
Clinton Power Station
PO Box 678
Mail Code V920
Clinton, IL 61727

Attention: Mr. Joseph Sipek, Director of Licensing
Fax: (217) 935-5864

Subject: Advisory Report, 10 CFR 2; UPS 103-1-189 Possible Quality Problem.

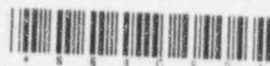
The purpose of this letter is to report a possible 10 CFR 21 reportable condition for your evaluation and action as appropriate.

Reference a) reported an error which occurred in an earlier Engineering Change. Specifically, R47 had been incorrectly installed on the Electric Power Assembly (EPA), which is a subassembly of UPS 103-1-189. Reference a) addresses cause and corrective action for this problem and notes that Elgar's analysis confirms that the error does not cause any degradation to Class 1E systems/functions. However, based on a review of historical information regarding the evaluation which led to the incorporation of R47, it appears that the EPA board does not meet all specifications required by reference b) and therefore may cause degradation of the Reactor Protective System as defined in paragraph 4.3.5.6.3 and related paragraphs.

Specifically, paragraph 4.3.5.6.3, revision 5 of G.E. Specification 22A3153 requires that power being supplied to the load by the UPS be disconnected if an abnormal voltage or frequency condition exists for a duration of four (4) seconds or more. The Elgar Engineering investigation, conducted at Clinton Power's request and which resulted in reference c), determined that while the under/over-frequency circuit can be calibrated to meet the four (4) second delay threshold, the under/over-voltage detection circuit cannot meet this specification due to the R-C Time Constant of the over-voltage circuit input filter components, which by themselves exceed the four (4) second threshold. Elgar recommends that Illinois Power Company evaluate the timing delay requirements applicable to the Reactor Protective System to determine if actual performance is degraded and that Illinois Power take action as appropriate. Elgar Corporation is prepared to assist in this effort at your request.

JEI 9/1

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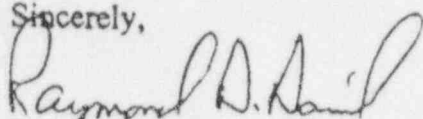


A hard copy of this correspondence will be mailed to the primary addressee. Please contact Ray Daniel or Rob Huft as the primary Elgar contacts regarding this matter:

Ray Daniel
Phone: (619) 458-0206
Fax: (619) 458-0267
E-mail: rayd@elgar.com

Rob Huft
(619) 458-0247
(619) 458-0267
robh@elgar.com

Sincerely,



Raymond D. Daniel
Director, Quality Assurance

cc: NRC Operations Center [Fax (301) 816-5151]; excluding references.

Illinois Power - Roger Gillenwater, Supplier Quality; Don Lukach, Engineering

Elgar Corp. - Ken Kilpatrick, Pres.; Rob Huft, Quality Mgr.; Bill Gaedke, Sustaining Engineer; Tom Moshenrose, Nuclear Customer Service Mgr

POWER REACTOR

EVENT NUMBER: 32648

FACILITY: CLINTON		REGION: 3		NOTIFICATION DATE: 07/18/97		
UNIT: [1] [] []		STATE: IL		NOTIFICATION TIME: 16:55 [ET]		
RX TYPE: [1] GE-6				EVENT DATE: 07/18/97		
				EVENT TIME: 12:00 [CDT]		
				LAST UPDATE DATE: 07/18/97		
NRC NOTIFIED BY: RAY DANIEL, ELGAR CORP.						
HQ OPS OFFICER: DICK JOLLIFFE						
NOTIFICATIONS						
EMERGENCY CLASS: NOT APPLICABLE						
10 CFR SECTION: UNSPECIFIED PARAGRAPH						
CCCC 21.21						
				JOHN MADERA	RDO	
				VERN HODGE	NRR	
UNIT	SCRAM CODE	RX CRIT	INIT PWR	INIT RX MODE	CURR PWR	CURR RX MODE
1	N	N	0	COLD SHUTDOWN	0	COLD SHUTDOWN

EVENT TEXT

-POSSIBLE 10CFR21 REPORTABLE CONDITION RE POTENTIAL DEGRADATION OF RPS UPS-
GENERAL ELECTRIC SPECIFICATION #22A3153, REVISION 5, PARAGRAPH 4.3.5.6.3
REQUIRES THAT POWER BEING SUPPLIED BY REACTOR PROTECTION SYSTEM (RPS)
UNINTERRUPTIBLE POWER SUPPLY (UPS) #103-1-189 BE DISCONNECTED IF AN
ABNORMAL VOLTAGE OR FREQUENCY CONDITION EXISTS FOR A DURATION OF 4 SECONDS
OR MORE.

AN ENGINEERING INVESTIGATION CONDUCTED BY ELGAR CORPORATION, SAN DIEGO, CA,
AT CLINTON'S REQUEST, DETERMINED THAT WHILE THE UNDER/OVER-FREQUENCY
CIRCUIT CAN BE CALIBRATED TO MEET THE 4 SECOND DELAY THRESHOLD, THE
UNDER/OVER-VOLTAGE DETECTION CIRCUIT CANNOT MEET THIS SPECIFICATION DUE TO
THE R-C TIME CONSTANT OF THE OVER-VOLTAGE CIRCUIT INPUT FILTER COMPONENTS,
WHICH BY THEMSELVES, EXCEED THE 4 SECOND THRESHOLD AT CLINTON.

ELGAR CORPORATION RECOMMENDS THAT CLINTON EVALUATE THE TIMING DELAY
REQUIREMENTS APPLICABLE TO THE REACTOR PROTECTION SYSTEM TO DETERMINE IF
ACTUAL PERFORMANCE IS DEGRADED AND THAT CLINTON TAKE ACTION AS APPROPRIATE.
ELGAR CORPORATION IS PREPARED TO ASSIST IN THIS EFFORT AT CLINTON'S
REQUEST.

ELGAR Committed to Quality... Striving for Excellence

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QA Department
Fax Cover Sheet

Date: 7/18/97 Fax #: 301-816-5151

To: NRC Operations Center No. of Pages to Follow: 2

From: Raymond Daniel

Message:

See attached letter.
