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 AUTH. NAME AUTHOR AFFILIATION  
 HUNTER, R.S. Indiana & Michigan Electric Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 DENTON, L.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards response to 810210 Generic Ltr 81-14 re seismic  
 qualification of auxiliary feedwater sys. Sys is designed,  
 constructed & maintained to withstand safe shutdown  
 earthquake.

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# INDIANA & MICHIGAN ELECTRIC COMPANY

P. O. BOX 18  
BOWLING GREEN STATION  
NEW YORK, N. Y. 10004

August 28, 1981  
AEP:NRC:00486A

DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2  
DOCKET NOS. 50-315 and 50-316  
LICENSE NOS. DPR-58 and DPR-74  
SEISMIC QUALIFICATION OF AUXILIARY FEEDWATER SYSTEMS:  
Generic Letter 81-14

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Denton:

This letter and its attachment provide our response to Mr. D. G. Eisenhower's Generic Letter No. 81-14 dated February 10, 1981 which we officially received on June 18, 1981.

The Cook Plant Auxiliary Feedwater Systems (AFS), with the exception of the Condensate Storage Tanks (CSTs) and its associated piping, are designed, constructed, and maintained to withstand a Safe Shutdown Earthquake (SSE) as determined utilizing the analytical, testing and evaluation methods, and the acceptance criteria consistent with other safety-grade systems of the plant.

The components and equipment listed in the Attachment to this letter have been seismically qualified either by testing or analysis. When qualified by analysis the seismic input is either a specified acceleration, or a response spectrum that bounds the most severe response spectrum for the plant, or the Design Basis Earthquake (DBE) response spectrum for the floor elevation where the respective component or equipment is installed. For those components qualified by analysis, the load combinations include the stresses due to the DBE, dead weight and, for pressure retaining parts, the operating pressure. These resulting stresses were then compared to the allowable stresses from the appropriate codes. For equipment qualified by testing, acceptance is determined by the operability of the equipment subsequent to the test.

Certain safety related switchgear cabinets and motor control centers were found to have insufficient anchorage to prevent overturning during the DBE. As detailed in American Electric Power Service Corporation's August 14, 1981 and August 17, 1981 letters to you, temporary bracing was installed. The permanent modification of

Appl  
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the anchorage has now been completed. As indicated in our August 17, 1981 letter, some of the equipment anchorage which was modified is beyond the scope of Generic Letter 81-14.

Seismic related IE Bulletins 79-02, 79-04, 79-07, 79-14, and 80-11, and IE Information Notice 80-21 have been reviewed for applicability to the AFS. All are applicable to the Cook Plant AFS except for IE Bulletin 79-04. All work applicable to the AFS for IE Bulletins 79-02 and 79-07 is complete; work applicable to the AFS for IE Bulletin 79-14 and 80-11 is presently being completed; IE Information Notice 80-21 is currently under review.

Concerning the CST's, they are seismic class II, and are designed to withstand the Operating Basis Earthquake (OBE). In the unlikely event of a DBE which may result in damage to the CST's, procedures exist and are in place at the Cook Plant to switch AFS pump suction to the essential service water (ESW) system, which is Seismic Class I. This procedure was described in detail in our letter to you dated March 28, 1980, No. AEP:NRC:0307A. The Safety Evaluation Report attached to MR. S. Varga's letter of October 6, 1980 accepted that procedure for switching to the ESW System. Therefore, it is not necessary to walk down the CST's. Nevertheless, the non-seismically qualified piping connected to the CST's has been walked-down and no deficiencies were identified.

Very truly yours,

  
R. S. Hunter  
Vice President

cc: John E. Dolan - Columbus  
R. C. Callen  
G. Charnoff  
R. W. Jurgensen  
D. V. Shaller - Bridgman  
Joe Williams, Jr.  
NRC Region III Resident Inspector - Bridgman

STATE OF NEW YORK     )  
                              )  
COUNTY OF NEW YORK    )

R. S. Hunter being duly sworn, deposes and says that he is the Vice President of Licensee Indiana & Michigan Electric Company, that he has read the foregoing response to Generic Letter 81-14 and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.

Subscribed and sworn to before me this 28<sup>th</sup> day of August, 1981.

Gregory M. Gurican  
Notary Public

GREGORY M. GURICAN  
Notary Public, State of New York  
No. 31-4643431  
Qualified in New York County  
Commission Expires March 30, 1983

ATTACHMENT

SEISMICALLY QUALIFIED AUXILIARY  
FEEDWATER SYSTEM COMPONENTS

<u>COMPONENT</u>	<u>METHOD OF QUALIFICATION (A=ANALYSIS;T=TEST)</u>
Motor Driven Auxiliary Feedwater Pumps	A
Turbine Driven Auxiliary Feedwater Pumps	A
Strainers	A
Instrumentation	T
Instrument Tubing and Supports	A
Valves and Valve Supports	A/T
Piping	A
Pipe Hangers	A
Conduits	A
Cable Troughs	A
Terminal Blocks	A
Motor Control Centers	A/T
DC Valve Control Centers	T
"N" Train Battery Charger	T
"N" Train Battery and Racks	T
Switchgear	T
Switches	T
Relays	T
Contactors	T

<u>COMPONENT</u>	<u>METHOD OF QUALIFICATION (A=ANALYSIS;T=TEST)</u>
Auxiliary Feedwater Pump Motors	A
4 KV Air Circuit Breakers	T
DC Distribution Cabinet (Train N)	T
Auxiliary Feedwater Pump Enclosures	A