#### UNITED STATES



### NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 1000 ARLINGTON, TEXAS 76011

November 26, 1980

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In Reply Refer To: RIV Docket No. STN 50-482/IE Information No. 80-29 Supplemental No. 1

Kansas Gas & Electric Co. Attn: Mr. Glenn L. Koester Vice President-Nuclear Post Office Box 208 Wichita, Kansas 67201

Gentlemen:

This IE Information Notice is provided as an early notification of a possible significant matter. It is expected that recipients will review the information for possible applicability to their facility. No specific action or response is requested at this time. If further NRC evaluations so indicate, an IE Circular or Bulletin will be issued to recommend or request specific licensee actions. If you have questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

Sincerely,

Karl Director

Enclosures: 1. IE Information Notice No. 80-29 Supplement No. 1 2. List of Recently Issued IE Information Notices

cc: w/enclosures Messrs. Nicholas A. Petrick, SNUPPS D. T. McPhee, Kansas City Power and Light Company Gerald Charnoff, Shaw, Pittman, Potts & Trowbridge E. W. Creel, Kansas Gas and Electric Company

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UNITED STATES NUCLEAR REGULATORY COMMISSION OFFICE OF INSPECTION AND ENFORCEMENT WASHINGTON, D. C. 20555

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## BROKEN STUDS ON TERRY TURBINE STEAM INLET FLANGE

### Description of Circumstances:

In the original Information Notice the failed Terry Turbine steam inlet flange studs were identified as probably manufactured from ASTM-A193-Grade B7 steel. Subsequently, the vendor has informed the NRC that the bolting material used at ANO-1 was AISI C-1117 steel. Independent laboratory analyses by the NRC and Arkansas Power and Light have verified that the bolting material was a re-sulphurized, re-phosphorized cold drawn carbon steel.

From the analysis performed, the failure was caused by high overload which resulted in a primarily brittle transgranular fracture (cleavage) in probably less than 10 cycles. This is consistent with the operating experience (water slugging) and the inherent low toughness of the bolting material used.

Licensees are encouraged to review the materials selected for safety-related bolting applications considering especially those situations where impact loadings could occur. The use of low toughness carbon steel (re-sulphurized free machining plain carbon steel) for bolting is discouraged by the NRC; particularly in situations where possible high loading conditions could be anticipated.

This Information Notice is provided as an early notification of a possibly significant matter that is still under review by the NRC staff. It is expected that recipients will review the information for possible applicability to their facility. No specific action or response is requested at this time. If you have any questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

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# LISTING OF RECENTLY ISSUED IE INFORMATION NOTICES

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Information Notice No.	Subject	Date Issued	Issued To
80-37	Containment Cooler Leaks and Reactor Cavity Flooding at Indian Point Unit 2	10/24/80	All nuclear power facilities holding power reactor Operating Licenses (OLs) or Construction Permits (CPs)
80-38	Cracking in Charging Pump Casing Cladding	10/30/80	All Pressurized Water Reactor Facilities holding power reactor Operating Licenses (OLs) and Construction Permits (CPs)
80-39	Malfunctions Of Solenoid Valves Manufactured By Valcor Engineering Corporatio	10/31/80 m	All light water reactor facilities holding power reactor Operating Licenses (OLS) or Construc- tion Permits (CPS)
80-40	Excessive Nitrogen Supply Pressure Actuates Safety-Relief Valve Operation to Cause Reactor Depressuriza- tion	11/7/80	All power facilities with an Operating License (OL) or Construction Permit (CP)
80-41	Failure of Swing Check Valve in the Decay Heat Removal System at David- Besse Unit No. 1	11/10/80	All power reactor facilities with an Operating License (OL) or Construction Permit (CP)
80-42	Effect of Radiation on Hydraulic Snubber Fluid	11/24/80	All power reactor facilities with an Operating License (OL) or Construction Permit (CP) Enclosure