JUN 12 1984

Docket Nos.: STN 50-482
and STN 50-483

Mr. D. F. Schnell
Vice President - Nuclear
Union Electric Company
P. O. Box 149
St. Louis, Missouri 63166

Mr. Glenn L. Koester
Vice President - Nuclear
Kansas Gas & Electric Company
P. O. Box 208
Wichita, Kansas

Gentlemen:

Subject: Request for Additional Information - Steam Generator Tube Rupture Event

In Supplement 3 to the Callaway Safety Evaluation Report, the staff concluded that your submittal on the steam generator tube rupture (SGTR) event had provided sufficient information to permit plant operation through the first cycle. The staff also noted that it would be forwarding a request for additional information on the SGTR event.

Enclosed is a request for additional information on this subject. Please provide your response within 90 days of receipt of this letter. If you require any additional assistance or clarification, please contact the appropriate project manager.

Sincerely,
ORIGINAL SIGNED BY:

B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing

Enclosure: As stated

cc: See next page

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Mr. D. F. Schnell
Vice President - Nuclear
Union Electric Company
Post Office Box 149
St. Louis, Missouri 63166

cc: Mr. Nicholas A. Petrick
Executive Director - SNUPPS
5 Choke Cherry Road
Rockville, Maryland 20850

Gerald Charnoff, Esq.
Thomas A. Baxter, Esq.
Shaw, Pittman, Potts & Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

Mr. J. E. Birk
Assistant to the General Counsel
Union Electric Company
Post Office Box 149
St. Louis, Missouri 63166

Mr. John Neisler
U. S. Nuclear Regulatory Commission
Resident Inspectors Office
RR#1
Steedman, Missouri 65077

Mr. Donald W. Capone, Manager
Nuclear Engineering
Union Electric Company
Post Office Box 149
St. Louis, Missouri 63166

A. Scott Cauger, Esq.
Assistant General Counsel for the
Missouri Public Service Comm.
Post Office Box 360
Jefferson City, Missouri 65101

Mr. Donald Bollinger, Member
Missourians for Safe Energy
6267 Delmar Boulevard
University City, Missouri 63130

Ms. Marjorie Reilly
Energy Chairman of the League of
Women Voters of Univ. City, MO
7065 Pershing Avenue
University City, Missouri 63130

Mayor Howard Steffen
Chamois, Missouri 65024

Mr. Fred Luekey
Presiding Judge, Montgomery County
Rural Route
Rhineland, Missouri 65069

Professor William H. Miller
Missouri Kansas Section, American
Nuclear Society
Department of Nuclear Engineering
1026 Engineering Building
University of Missouri
Columbia, Missouri 65211

Mr. Robert G. Wright
Assoc. Judge, Eastern District
County Court, Callaway County,
Missouri
Route #1
Fulton, Missouri 65251

Lewis C. Green, Esq.
Green, Hennings & Henry
Attorney for Joint Intervenors
314 N. Broadway, Suite 1830
St. Louis, Missouri 63102

Mr. Earl Brown
School District Superintendent
Post Office Box 9
Kingdom City, Missouri 65262

Mr. Samuel J. Birk
R. R. #1, Box 243
Morrison, Missouri 65061

Mr. Harold Lottman
Presiding Judge, Dasconade County
Route 1
Owensville, Missouri 65066

Eric A. Eisen, Esq.
Birch, Horton, Bittner and Moore
Suite 1100
1140 Connecticut Avenue, N. W.
Washington, D. C. 10036

cc: (cont'd):

Mr. John G. Reed
Route #1
Kingdom City, Missouri 65262

Mr. Dan I. Bolef, President
Kay Drey, Representative
Board of Directors Coalition for
the Environment
St. Louis Region
6267 Delmar Boulevard
University City, Missouri 63130

Mr. James G. Keppler
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

CALLAWAY/WOLF CREEK STEAM GENERATOR TUBE RUPTURE (SGTR)

1. Submit SGTR analyses for both the "offsite power available" and "loss of offsite power "(LOOP) cases. Your submittal should contain sufficient backup information to justify the results (e.g. plots or tabulations of pressurizer pressure and level, ruptured steam generator inventory, break flow rate, etc. versus time). List all operator actions credited to mitigate this accident, and justify the operator actions times assumed.

2.a. Your preliminary submittal of March 16, 1984, indicates that the first operator action, i.e., isolation of the auxiliary feedwater to the faulted SG, is performed 16 minutes after the event. Your submittal also indicates that based on simulator data and because control of SG water level is "a common operation," the availability of high and low SG level alarms, the operator action time is adequate, and consistent with the guidance of ANS Draft Standard 58.8 (ANSI N660) for a condition III event. However, the staff notes that the SGTR is a condition IV event, for which ANSI N660 prescribes a minimum time margin for operator action of 20 minutes. Also,

we question that SG level control following SGTR is a common operation. Therefore we require further justification for the assumed operator action time.

b. Justify that primary/secondary pressure equalization can occur only 8 minutes after initiation of RCS cooldown, as indicated in your March 16, 1984, submittal.

3. Demonstrate that failure of an auxiliary feedwater (AFW) valve in the open position is the most limiting failure with regard to steam generator overfill, as indicated in your March 16, 1984 submittal. Also specify what indications are available and the operator actions required to terminate AFW flow. Justify that the time available, i.e. 10 minutes after actuation of S.G. high level alarm, is adequate to perform the proper actions.

4. Discuss whether the steam generator safety valves would function properly if their actuation pressures are reached with the steam lines filled with liquid, and whether they would reseat at the proper pressure.

5. Justify your conclusion that in the event of SG overfill the possibility of damaging water hammer is extremely remote. You state that liquid would enter the steam line slowly, that the steam and water in the steam line would be at nearly the same temperature, and therefore condensation shocks would not occur. Provide analyses to justify these conclusions.

6. As stated in your March 16, 1984 letter, the steam generator atmospheric relief valves are needed for SGTR mitigation, and are properly qualified. Therefore, you should develop and propose suitable Tech. Specs to ensure the operability of these valves consistent with the analyses. What is the minimum number of ADVs necessary for SGTR mitigation?