



November 9, 1998
RC-98-0177

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
NRC BULLETIN 88-08: THERMAL STRESSES IN
PIPING
CONNECTED TO REACTOR COOLANT SYSTEMS

Reference: 1. Ollie S. Bradham letter to Document Control Desk,
dated December 19, 1988
2. Gary J. Taylor letter to Document Control Desk,
RC-96-0054, dated August 27, 1996

In SCE&G's December 19, 1988 response letter to NRC Bulletin 88-08, SCE&G committed to submit, to the NRC, the results of any stratification evaluation that classifies the condition, based on fatigue cumulative usage factor (CUF), as moderate or severe. The ranges of CUF for moderate or severe classifications were arbitrarily established by VCSNS. For a stratification condition to be classified as moderate, the predicted (40 year) total CUF, design basis value plus any contribution from stratification, must be between 0.001 and 0.7. For a severe classification, the total CUF must be greater than 0.7.

For over seven years, SCE&G has been monitoring (top and bottom pipe temperatures) of nine lines believed to be susceptible to stratification. Two other lines, in the residual heat removal (RHR) system, have been monitored for over three years. During this time, two evaluations were performed. One evaluation of stratification in a Safety Injection (SI) line resulted in a forty year CUF of only 0.00006 to be added to design basis values. The other evaluation

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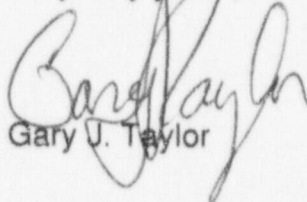
of stratification in an RHR line resulted in an additional CUF of 0.036 (Ref.: August 27, 1996 letter RC-96-0054). With this experience on stratification conditions, SCE&G now believes that the lower threshold value of 0.001 for a moderate classification is too low. The classification and reporting criterion committed to by SCE&G was conservatively established until such time as SCE&G gained experience of the stratification conditions and was better able to qualify the potential effects.

V. C. Summer Nuclear Station Technical Specification 3/4.5.2, Emergency Core Cooling System (ECCS) T_{avg} greater than or equal to 350°F, requires the identification to the NRC of any safety injection nozzle subjected to an ECCS actuation with a calculated CUF of greater than 0.7. The classification and reporting criterion committed to in IEB 88-08, as it stands now, differs from that used for Safety Injection (T.S. 3/4.5.2). SCE&G feels that it would be prudent to have the same standard for both. Raising the classification and reporting threshold poses no increased threat to nuclear safety.

Based on the above, SCE&G will classify as moderate any stratification condition that results in a total CUF, based on design basis values plus any contribution from stratification, of between 0.1 and 0.7. In addition, SCE&G will only report to the NRC the results of stratification evaluations that classify the condition as severe (CUF between 0.7 and 1.0).

Should you have questions, please call Mr. Kelley Marsh, (803) 345-4796, at your convenience.

Very truly yours,



Gary J. Taylor

RKM/GJT/dr

c: J. L. Skolds
W. F. Conway
R. R. Mahan
R. J. White
L. A. Reyes
L. M. Padovan
NRC Resident Inspector

General Managers
J. B. Knotts, Jr.
NSRC
RTS (CBA 960006)
RTS (IEB 880008)
File (810.46; 815.02)
DMS (RC-98-0177)

STATE OF SOUTH CAROLINA :
 :
COUNTY OF FAIRFIELD :

TO WIT :

I hereby certify that on the 9th day of November 1998, before me, the subscriber, a Notary Public of the State of South Carolina personally appeared Gary J. Taylor, being duly sworn, and states that he is Vice President, Nuclear Operations of the South Carolina Electric & Gas Company, a corporation of the State of South Carolina, that he provides the foregoing response for the purposes therein set forth, that the statements made are true and correct to the best of his knowledge, information, and belief, and that he was authorized to provide the response on behalf of said Corporation.

WITNESS my Hand and Notarial Seal

Michael J. Bauone
Notary Public

My Commission Expires

My Commission Expires July 13, 2005]
Date