Docket Nos. 50-250
and 50-251

JAN 12 1984

DISTRIBUTION
Docket File
NRC PDR
L PDR
ORB#1 Rdg
DEisenhut
OELD
NSIC
EJordan
JTaylor
ACRS (10)
DMcDonald
CParrish
Gray File
BWright - EQB

Mr. J. W. Williams, Jr.
Vice President
Nuclear Energy Department
Florida Power and Light Company
P. O. Box 14000
Juno Beach, Florida 33408

Dear Mr. Williams:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING VENT/PURGE VALVE OPERABILITY FOR TURKEY POINT PLANT UNITS 3 AND 4

By letter dated March 4, 1983, you submitted Revision 1 to the Henry Pratt Stress Reports dated July 28, 1980 and June 27, 1980. Revision 1 considers non-uniform approach flow in determining stresses and operability of the Turkey Point 54" and 48" containment purge valves.

The staff and our consultant, Brookhaven National Laboratory, have reviewed your March 4, 1983 submittal. Based on our initial review we have determined that additional information identified in Enclosure 1 is necessary for us to complete the review. We request that this information be provided by March 30, 1983.

The reporting and/or bookkeeping requirements requested in this letter affect fewer than ten respondants; therefore, OMB clearance is not required under PL 96-511.

Sincerely,

ORIGINAL SIGNED BY

Steven A. Varga, Chief
Operating Reactors Branch
Division of Licensing

Enclosure
Request for Additional Information

cc: w/enclosure
See next page

ORB#1:DL
DMcDonald;ps
1/12/84

C-ORB#1:DL
SVarga
1/12/84

Docket Nos. 50-250
and 50-251

JAN 12 1984

JAN 12 1984

DISTRIBUTION
Docket File
NRC PDR
L PDR
ORB#1 Rdg
DEisenhut
OELD
NSIC
EJordan
JTaylor
ACRS (10)
DMcDonald
CParrish
Gray File
BWright - EQB

Mr. J. W. Williams, Jr.
Vice President
Nuclear Energy Department
Florida Power and Light Company
P. O. Box 14000
Juno Beach, Florida 33408

Dear Mr. Williams:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING VENT/PURGE VALVE OPERABILITY FOR TURKEY POINT PLANT UNITS 3 AND 4

By letter dated March 4, 1983, you submitted Revision 1 to the Henry Pratt Stress Reports dated July 28, 1980 and June 27, 1980. Revision 1 considers non-uniform approach flow in determining stresses and operability of the Turkey Point 54" and 48" containment purge valves.

The staff and our consultant, Brookhaven National Laboratory, have reviewed your March 4, 1983 submittal. Based on our initial review we have determined that additional information identified in Enclosure 1 is necessary for us to complete the review. We request that this information be provided by March 30, 1983.

The reporting and/or bookkeeping requirements requested in this letter affect fewer than ten respondants; therefore, OMB clearance is not required under PL 96-511.

Sincerely,

ORIGINAL SIGNED BY

Steven A. Varga, Chief
Operating Reactors Branch
Division of Licensing

Enclosure
Request for Additional Information

cc: w/enclosure
See next page

ORB#1:DL
DMcDonald;ps
1/12/84

C-ORB#1:DL
SVarga
1/12/84

J. W. Williams, Jr.
Florida Power and Light Company

Turkey Point Plants
Units 3 and 4

cc: Harold F. Reis, Equire
Lowenstein, Newman, Reis and Axelrad
1025 Connecticut Avenue, N.W.
Suite 1214
Washington, DC 20036

Bureau of Intergovernmental Relations
660 Apalachee Parkway
Tallahassee, Florida 33130

Norman A. Coll, Esquire
Steel, Hector and Davis
1400 Southeast First National
Bank Building
Miami, Florida 33131

Mr. Henry Yaeger, Plant Manager
Turkey Point Plant
Florida Power and Light Company
P.O. Box 013100
Miami, Florida 33101

Mr. M. R. Stierheim
County Manager of Metropolitan
Dade County
Miami, Florida 33130

Resident Inspector
Turkey Point Nuclear Generating Station
U.S. Nuclear Regulatory Commission
Post Office Box 1207
Homestead, Florida 33030

Regional Radiation Representative
EPA Region IV
345 Courtland Street, N.W.
Atlanta, GA 30308

Mr. Jack Shreve
Office of the Public Counsel
Room 4, Holland Building
Tallahassee, Florida 32304

Administrator
Department of Environmental
Regulation
Power Plant Siting Section
State of Florida
2600 Blair Stone Road
Tallahassee, Florida 32301

James P. O'Reilly
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, GA 30303

Martin H. Hodder, Esquire
1131 N.E. 86th Street
Miami, Florida 33138

Request for Additional Information
Turkey Point 3 and 4
Containment Vent/Purge Valve Operability

1. Provide evidence that the dynamic torque coefficients (C_{TS}) used to determine the dynamic torques (T_D) based on the worst case valve installation configuration apply to the Henry Pratt Model RA 48 and 54 inch valves.

   You have indicated that the T_D used in your analysis are based on a worst case (relative to T_D prediction) valve installation configuration, i.e., elbow type fitting upstream-shaft out of plane, leading edge of disc closing toward the outer elbow wall. Information has not been provided to show how the C_{TS} were developed for the RA design basis on the worst configuration described. The ratio of C_T (elbow-shaft out of plane) to C_T (straight pipe) can vary given the same conditions from one valve design to another and has been reported to be greater than 2.0 in some instances.

   Evidence deemed acceptable to the staff is a confirmation that a bench test program involving valves of the RA design was conducted and that the inlet piping and valve orientation configuration included the worst case installation described.

   Information available from other valve manufacturers indicates that for a given valve design at the same conditions the ratio of C_T (elbow-shaft in plane) to C_T (straight pipe) is greater than 1.0 and C_T (elbow-shaft out of plane) to C_T (straight pipe) is greater than 2.0 in some instances. Based on limited elbow testing information available, the staff believes that where bench tests did not include elbows in the piping a factor of 1.5 times C_T (straight pipe) for an elbow-shaft in plane configuration and a factor of 3.0 times C_T (straight pipe) for an elbow-shaft out of plane configuration would yield conservative values of T_D.

   Based on this, the staff would accept the use of 1.5 times C_T (straight pipe) to predict T_D developed in the in-service valves having elbow-shaft in plane configurations and 3.0 times C_T (straight pipe) for valves having elbow-shaft out of plant configuration.

2. Provide information which demonstrates that the stress levels in all the parts listed in the two Table-1s are within the design stress allowables when the valves are operated from the blocked positions.

The March 4, 1983 submittal did not contain information to demonstrate that the stress levels in all the valve components are within the design stress allowables when the valves are operated from the blocked positions, i.e., 35° (48 inch) and 30° (54.0 inch). The submittal included the Henry Pratt stress reports which were based on valve operation from the 90° (full open) position. The stress level summary tabulations (Table-1) provided in the reports showed the stress levels calculated for S(4), S(20A), S(24), S(44), S(46), S(52), S(53) and S(58) in the 48-inch valves and S(4), S(20A), S(24), S(46), S(53), and S(58) in the 54-inch valves exceed the design stress allowables.

3. The following table is a summary of the information presented to demonstrate that the valve actuators are capable of closing the valves when operated from the blocked positions.

Valve Size Inches)	Blocked Position (°)	Maximum Valve Torque (in-lbs)	Minimum Operator Rating (in-lbs)
48	35	51,642	87,000
54	30	41,416	75,000

The information as presented is necessary to demonstrate that the valve actuators are capable of closing the valves against the DBA/LOCA related loads. The acceptance by the staff of the demonstration of actuator capability is contingent on either of the following:

1. Presentation of evidence that the C_T values used to predict T_{DS} are applicable to the RA design when installed in the worst case configuration.

2. Presentation of information which shows that conservative safety factors were applied to C_T (straight pipe) values when used to predict T_{Ds} in an RA valve that includes an elbow in the piping configuration.