



FPL

Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

April 14, 2008

L-2008-081
10 CFR 50.90

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

RE: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Proposed License Amendment
Request for Additional Information Response
Alternative Source Term Amendment – TAC Nos. MD6173 and MD6202

On July 16, 2007, Florida Power and Light Company (FPL) submitted the St. Lucie Unit 1 and 2 Alternative Source Term (AST) license amendment requests via FPL letters L-2007-085 and L-2007-087. As a result of the submittals, the NRC requested additional information. This correspondence provides the FPL response to the NRC Request for Additional Information (RAI) received by letter dated March 19, 2008.

The no significant hazard analyses submitted with FPL letters L-2007-085 and L-2007-087 remain bounding. In accordance with 10 CFR 50.91(b)(1), a copy of the proposed amendment was forwarded to the State Designee for the State of Florida.

Please contact Ken Frehafer at 772-467-7748 if there are any questions about this submittal.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 14th day of April 2008.

Very truly yours,

Gordon L. Johnston
Site Vice President
St. Lucie Plant

GLJ/KWF

Attachment

cc: Mr. William A. Passetti, Florida Department of Health

A001
NRR

RESPONSE TO MARCH 19, 2008
NRC REQUEST FOR ADDITIONAL INFORMATION
ST. LUCIE PLANT, UNITS 1 AND 2
TECHNICAL SPECIFICATION AMENDMENT FOR
ALTERNATIVE SOURCE TERM
(TAC. Nos. MD6173 and MD6202)

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.67, Florida Power & Light Company (the licensee) is requesting a license amendment for St. Lucie Unit No. 1 to adopt alternative source term (AST) as allowed in 10 CFR 50.67. The licensee stated that analyses were performed for Loss-of-Coolant Accident, Fuel-handling Accident, Main Steam Line Break, Steam Generator Tube Rupture, Reactor Coolant Pump Shaft Seizure (Locked Rotor), Control Element Assembly Ejection, and Inadvertent Opening of a Main Steam Safety Valve, based on a bounding allowable control room unfiltered air in-leakage of 500 cfm. Increased values for control room unfiltered in-leakage were assumed. The following additional information is requested to clarify the following items.

NRC Question 1:

In accordance with Regulatory Guide 1.183, evaluations may need to be performed regarding the ability of the damper to close against increased containment pressure or the ability of the ductwork downstream of the dampers to withstand increased stresses. Confirm whether any evaluations were performed and documented to determine the adequacy of the damper to close against any increased containment pressure. Provide a summary of the structural evaluation of the damper.

NRC Question 2:

Provide a summary of the structural evaluations for the ductwork (and duct supports) downstream of the dampers. Include information about the duct sizes, analysis methodology, design codes utilized, load combinations, stress levels and margins.

FPL Response to Questions 1 and 2:

The isolation function of the Unit 1 containment purge system is performed by two series isolation valves in both the inlet and the exhaust lines. All containment purge isolation valves close automatically on activation of a containment isolation signal.

Travel stops have been installed on the purge isolation valves to limit the valves to 40 degrees open (90 degrees being full open). This opening was determined in consultation with the valve's supplier, and is such that the critical valve parts will not be damaged by DBA-LOCA loads. In addition, shop tests performed by the valve supplier demonstrated that, since fluid dynamics tend to close a butterfly valve, purge valve closure time during a LOCA was less than or equal to the no-flow time.

The isolation valves are Seismic I, safety related valves. The required isolation time for these valves, as well as for all of the containment isolation valves outlined in Table 6.2-16 of the Unit 1 UFSAR, is unchanged by the implementation of the Alternative Source Term. Neither the valves nor the associated ductwork are impacted by, or being modified to support, implementation of the Alternative Source Term. As such, the existing structural design and analyses remain valid.

NRC Question 3:

Provide a list of any mechanical equipment items and or systems requiring modification as a result of the implementation of AST term at Saint Lucie Unit 1.

- a) Indicate whether the equipment is new or existing.*
- b) Describe the location of the equipment and seismic qualification method employed such as the plant licensing basis or an NRC-endorsed industry standard.*
- c) Provide the results of the seismic qualification of the equipment indicating whether any modification or re-design is necessary.*

FPL Response to Question 3:

The control circuit for the Unit 1 control room outside air intake radiation monitors is being modified to ensure the circuit fails safe under loss of power conditions. As currently designed, the Unit 1 control room outside air intake will not be isolated on a high radiation signal under LOOP conditions. The Unit 1 control room outside air intake radiation monitors are powered from non-essential loads and, as such, are not energized by the emergency diesel generators (EDGs). In addition, under loss of power conditions, the control circuit fails such that it does not initiate the required isolation signal.

Prior to implementation of the Alternative Source Term License Amendment, the control circuit for the Unit 1 control room outside air intake radiation monitors will be reconfigured such that it initiates an isolation signal under loss of power conditions. No new equipment will be installed. The only modification will be the reconfiguration of the existing control circuit for the existing radiation monitors.

The Unit 1 radiation monitor sample probes are located in the control room outside air intake ducts. The radiation monitors are located on the 62' elevation of the Reactor Auxiliary Building. The monitors are seismically mounted. As discussed above, the control circuit for the radiation monitors is being modified to ensure an isolation signal is initiated under loss of power conditions.