



James Scarola
Vice President
Harris Nuclear Plant

AUG 03 2001

SERIAL: HNP-01-118

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.9.2
SUPPLEMENTAL INFORMATION

Dear Sir or Madam:

On December 13, 2000, Harris Nuclear Plant (HNP) submitted a proposed license amendment for Technical Specification (TS) TS 3/4.9.2, "Refueling Operations - Instrumentation" and associated Bases. HNP proposed revising 3/4.9.2 to allow alternate methods of monitoring neutron flux during refueling operations. The purpose of this supplemental information is to specify, in the proposed TS, that only wide range flux monitors may be used to substitute for source range neutron monitors. The basis for substituting wide range flux monitors for source range neutron flux monitors is included in the December 13, 2000 letter.

This supplemental information does not affect the conclusions of either the 10 CFR 50.92 evaluation or the Environmental Considerations submitted as part of HNP's December 13, 2000 letter.

CP&L requests that the proposed amendment be issued by August 31, 2001 such that implementation will occur in time for refueling outage 10 at HNP.

Please refer any questions regarding this submittal to Mr. J. R. Caves at (919) 362-3137.

Sincerely,

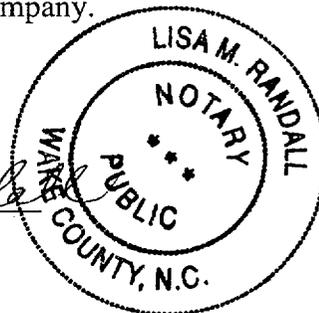
A001

P.O. Box 165
New Hill, NC 27562

T > 919.362.2502
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J. Scarola, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief, and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

Lisa M. Randall
Lisa M. Randall



Notary (Seal)

My commission expires: 6-7-03

MSE/mse

Enclosures:

1. Technical Specification Pages

c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Mel Fry, Director, NC DEHNR
Mr. R. J. Laufer, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator

ENCLOSURE 1 TO SERIAL: HNP-01-118

SHEARON HARRIS NUCLEAR POWER PLANT
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REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATION TS 3/4.9.2
SUPPLEMENTAL INFORMATION

TECHNICAL SPECIFICATION PAGES

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two Source Range Neutron Flux Monitors shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

- a. With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- b. With both of the above required monitors inoperable or not operating, in addition to Action a. above, immediately initiate actions to restore one source range neutron flux monitor to OPERABLE status and determine the boron concentration of the Reactor Coolant System within 4 hours and once per 12 hours thereafter.

SURVEILLANCE REQUIREMENTS

4.9.2 Each Source Range Neutron Flux Monitor shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL CHECK at least once per 12 hours,
- b. A CHANNEL CALIBRATION once per 18 months.

Add

* A Wide Range Neutron Flux Monitor may be substituted for one of the Source Range Neutron Flux Monitors provided the OPERABLE Source Range Neutron Flux Monitor is capable of providing audible indication in the containment and in the control room.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: (1) the reactor will remain subcritical during CORE ALTERATIONS, and (2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the safety analyses and are specified in the cycle-specific COLR. The boron concentration limit specified in the COLR ensures that a core K_{eff} of ≤ 0.95 is maintained during fuel handling operations. The administrative controls over the required valves during refueling operations precludes the possibility of uncontrolled boron dilution of the filled portion of the RCS. This action prevents flow to the RCS of unborated water by closing flow paths from sources of unborated water.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the Source Range Neutron Flux Monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

and/or Wide Range Neutron Flux Monitors

If the audible indication is lost, then enter LCO Action 3.9.2.b.

Add

3/4.9.3 DECAY TIME - DELETED

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE. Penetrations applicable to Technical Specification 3.9.4.b and 3.9.4.c may be opened provided the following administrative controls are in effect:

1. An individual or individuals shall be designated and available at all times, capable of isolating the breached penetration.
2. The breached penetrations shall not be obstructed unless capability for rapid removal of obstructions is provided (such as quick disconnects for hoses).
3. For the Personnel Air Lock, at least one door must be capable of being closed and secured. Additionally, the equipment hatch must be capable of being closed and secured. Equivalent isolation methods may also be used.

The LCO is modified by a Note allowing penetration flow paths providing direct access from the containment atmosphere to the outside atmosphere to be open under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.

Delete

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two Source Range Neutron Flux Monitors* shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

- a. With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- b. With both of the above required monitors inoperable or not operating, in addition to Action a. above, immediately initiate actions to restore one source range neutron flux monitor to OPERABLE status and determine the boron concentration of the Reactor Coolant System within 4 hours and once per 12 hours thereafter.

SURVEILLANCE REQUIREMENTS

4.9.2 Each neutron flux monitor shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL CHECK at least once per 12 hours.
- b. A CHANNEL CALIBRATION once per 18 months.

*A Wide Range Neutron Flux Monitor may be substituted for one of the Source Range Neutron Flux Monitors provided the OPERABLE Source Range Neutron Flux Monitor is capable of providing audible indication in the containment and in the control room.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: (1) the reactor will remain subcritical during CORE ALTERATIONS, and (2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the safety analyses and are specified in the cycle-specific COLR. The boron concentration limit specified in the COLR ensures that a core K_{eff} of ≤ 0.95 is maintained during fuel handling operations. The administrative controls over the required valves during refueling operations precludes the possibility of uncontrolled boron dilution of the filled portion of the RCS. This action prevents flow to the RCS of unborated water by closing flow paths from sources of unborated water.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the Source Range Neutron Flux Monitors and/or Wide Range Neutron Flux Monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core. If the audible indication is lost, then enter LCO Action 3.9.2.b.

3/4.9.3 DECAY TIME - DELETED

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE. Penetrations applicable to Technical Specification 3.9.4.b and 3.9.4.c may be opened provided the following administrative controls are in effect:

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The LCO is modified by a Note allowing penetration flow paths providing direct access from the containment atmosphere to the outside atmosphere to be open under administrative controls. Administrative controls ensure that 1) appropriate personnel are aware of the open status of the penetration flow path during CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, and 2) specified individuals are designated and readily available to isolate the flow path in the event of a fuel handling accident.