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W3F1-2000-0064
A4.05
PR

May 18, 2000

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

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Technical Specification Change Request NPF-38-223,
Low Pressure Safety Injection Allowed Outage Time Increase

Gentlemen:

This correspondence is to provide the NRC Staff with updated information required to complete the review and approval of the previously submitted Technical Specification Change Request (TSCR) NPF-38-223, Low Pressure Safety Injection Allowed Outage Time Increase. The original submittal was made via Letter W3F1-99-0024, dated August 4, 1999. The information contained in this correspondence:

- deletes the requested incorporation of the Configuration Risk Management Program (CRMP) into Technical Specifications (TS) Section 6.0;
- revises the Proposed Marked-up Specifications pages (Attachment B of the original submittal);
- deletes the Proposed Specification pages (Attachment C of the original submittal); and
- deletes the Proposed Combination of NPF-38-223 and NPF-38-222 pages (Attachment D of the original submittal). NPF-38-222 was withdrawn by letter W3F1-2000-0050, so these pages are no longer applicable.

Per discussions with the NRC Staff, the industry implementation plans for the recently revised 10CFR50.65(a)(4) satisfactorily address the CRMP. It is not considered to be necessary to incorporate the program into the Technical Specifications. EOI will proceed to proceduralize the CRMP to support our risk-informed allowed outage time submittals and implementation of the Maintenance Rule, 10CFR50.65(a)(4). This is consistent with the approach recently accepted with

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the issuance of Amendment 163 extending the allowed outage time for the Containment Spray System. Therefore, the request to incorporate CRMP into the TS is hereby deleted from the original submittal of NPF-38-223.

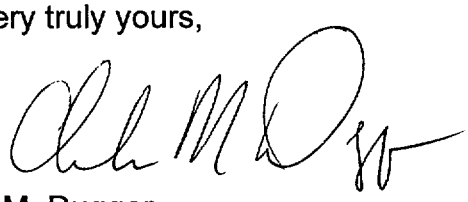
With respect to Attachment B of the original submittal of NPF-38-223, please replace it with enclosed Attachment 1. Changes made to the information of the original Attachment B include: deletion of mark-ups reflecting the CRMP, pagination differences due to the issuance of Amendment 155, and a minor change to the Bases to better clarify the Reactor Coolant System (RCS) temperature value assumed for an uncontrolled cooldown. This new change will make the Bases consistent with the Applicability statement. This change is reflected in the mark-up of the second paragraph on page B3/4 5-1b in Attachment 1. In addition, please disregard Attachments C and D in the original submittal. These had been clean copies of the affected pages with the requested changes incorporated. W3 will electronically transmit the clean revised pages to the NRC Staff upon request.

This letter includes the commitment to establish a CRMP. This commitment is noted on Attachment 2.

Should you have any questions or comments concerning this request, please contact Jerry Burford at (601) 368-5755.

Pursuant to 28 U.S.C.A. Section 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on May 18, 2000.

Very truly yours,



C.M. Dugger
Vice President, Operations
Waterford 3

CMD/FGB/rtk
Attachments: Attachment 1- LPSI AOT Increase Proposed Marked-up Specifications (Revised)
Attachment 2- Commitment Identification Form

cc: E.W. Merschoff (NRC Region IV)
N. Kalyanam (NRC-NRR)
J. Smith
N.S. Reynolds
NRC Resident Inspectors Office
Louisiana DEQ/Surveillance Division
American Nuclear Insurers

ATTACHMENT 1 to
W3F1-2000-0064

TSCR NPF-38-223
Low Pressure Safety Injection Allowed Outage Time Increase
PROPOSED MARKED-UP SPECIFICATIONS (Revised)

3/4.5.2 ECCS SUBSYSTEMS - MODES 1, 2, AND 3

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent emergency core cooling system (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE high-pressure safety injection ~~pump~~ train,

b. One OPERABLE low-pressure safety injection ~~pump~~ train, and

c. An independent OPERABLE flow path capable of taking suction from the refueling water storage pool on a safety injection actuation signal and automatically transferring suction to the safety injection system sump on a recirculation actuation signal.

APPLICABILITY: MODES 1, 2, and 3*#.

ACTION:

INSERT 1

~~a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.~~

d. b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

*With pressurizer pressure greater than or equal to 1750 psia.
#With RCS average temperature greater than or equal to 500°F.

INSERT 1

a. With one ECCS subsystem inoperable due to one low pressure safety injection train inoperable, restore the inoperable train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1750 psia and RCS average temperature to less than 500°F within the following 6 hours.

b. With one or more ECCS subsystems inoperable due to conditions other than (a) and 100% of ECCS flow equivalent to a single OPERABLE ECCS subsystem available, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1750 psia and RCS average temperature to less than 500°F within the following 6 hours.

c. With both LPSI trains inoperable due to less than 100% of ECCS flow equivalent to a single OPERABLE ECCS subsystem, restore at least one LPSI train to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1750 psia and RCS average temperature to less than 500°F within the following 6 hours.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the safety injection tanks is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double-ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

greater than or equal to

When in mode 3 and with RCS temperature ~~above~~ 500°F two OPERABLE ECCS subsystems are required to ensure sufficient emergency core cooling capability is available to prevent the core from becoming critical during an uncontrolled cooldown (i.e., a steam line break) from greater than 500°F.

or equal to

INSERT 2

INSERT 2

Each subsystem includes the piping, instruments, and controls to ensure the availability of an OPERABLE flowpath capable of taking suction from the RWSP on a SIAS and automatically transferring suction to the containment sump upon a recirculation actuation signal (RAS). The flowpath for each subsystem must maintain its designed independence to ensure that no single failure can disable both ECCS subsystems.

An ECCS subsystem is inoperable if it is not capable of delivering the design flow to the RCS. The individual components are inoperable if they are not capable of performing their automatic design function, or if supporting systems are not available.

The LCO requires the OPERABILITY of a number of independent trains. Due to the redundancy of trains and the diversity of trains, the inoperability of one component in a train does not render the ECCS incapable of performing its function. Neither does the inoperability of two different components, each in a different train, necessarily result in a loss of function for the ECCS. The intent of these ACTIONs is to maintain a combination of OPERABLE equipment such that 100% of the ECCS flow equivalent to a single OPERABLE subsystem remains available.

100% of the ECCS flow equivalent to a single OPERABLE ECCS subsystem exists when the equivalent of one HPSI train, one LPSI train, and a suction flow path as described in the LCO are OPERABLE. The OPERABLE components may be in opposite subsystems. The HPSI component of the 100% ECCS flow equivalent may be composed of any combination of OPERABLE HPSI components such that flow is available to all four RCS loops. The LPSI component of the 100% ECCS flow equivalent may be composed of any combination of OPERABLE LPSI components such that flow is available to any two RCS loops. This allows increased flexibility in plant operations when components in opposite subsystems are inoperable.

3.5.2, ACTION (a) addresses the specific condition where the only affected ECCS subsystem is a single LPSI train. A LPSI train consists of a pump, and two injection flow paths, including motor-operated valves operated by a common AC power source. The availability of at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS subsystem is implicit in the definition of ACTION (a).

If LCO 3.5.2 requirements are not met due to the condition described in ACTION (a), then the inoperable LPSI train components must be returned to OPERABLE status within seven (7) days of discovery. This seven (7) day Allowed Outage Time is based on the findings of deterministic and probabilistic analysis CE NPSD-995, "CEOG Joint Applications Report for Low Pressure Safety Injection System AOT Extension". Seven (7) days is a reasonable amount of time to perform many corrective and preventative maintenance items on the affected LPSI train. CE NPSD-995 concluded that the overall risk impact of the seven (7) day Allowed Outage Time was either risk-beneficial or risk-neutral.

ACTION (b) addresses other scenarios where the availability of at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS subsystem exists but the full requirements of LCO 3.5.2 are not met. If conditions of ACTION (b) were to exist, then inoperable components must be restored within 72 hours of discovery. The 72 hour Allowed Outage Time is based on an NRC reliability study (NRC Memorandum to V. Stello, Jr., from R.L. Baer, "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975) and is a reasonable amount of time to effect many repairs.

ACTION (c) addresses the condition in which 100% ECCS flow is unavailable due to two inoperable LPSI trains and requires restoration of at least one LPSI train to OPERABLE status within one hour or the plant placed in HOT STANDBY in 6 hours and reduce pressurizer pressure to less than 1750 psia and RCS average temperature to less than 500°F within the following 6 hours.

In the event less than 100% of the ECCS flow equivalent to a single OPERABLE ECCS subsystem exists due to other conditions, LCO 3.0.3 is entered and the plant must be brought to a MODE (MODE 3 with pressurizer pressure less than 1750 psia and RCS average temperature less than 500°F) in which the LCO does not apply.

ECCS SUBSYSTEMS (Continued)

500°F and the RCS pressure below 1750 psia

With the RCS temperature below ~~350°F~~, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

The trisodium phosphate dodecahydrate (TSP) stored in dissolving baskets located in the containment basement is provided to minimize the possibility of corrosion cracking of certain metal components during operation of the ECCS following a LOCA. The TSP provides this protection by dissolving in the sump water and causing its final pH to be raised to greater than or equal to 7.0. The requirement to dissolve a representative sample of TSP in a sample of water borated to be representative of post-LOCA sump conditions provides assurance that the stored TSP will dissolve in borated water at the postulated post-LOCA temperatures. A boron concentration of 3011 ppm boron is postulated to be representative of the highest post-LOCA sump boron concentration. Post LOCA sump pH will remain between 7.0 and 8.1 for the maximum (3011 ppm) and minimum (1504 ppm) boron concentrations calculated using the maximum and minimum post-LOCA sump volumes and conservatively assumed maximum and minimum source boron concentrations.

With the exception of systems in operation, the ECCS pumps are normally in a standby, nonoperating mode. As such, flow path piping has the potential to develop voids and pockets of entrained gases. Maintaining the piping from the ECCS pumps to the RCS full of water ensures that the system will perform properly, injecting its full capacity into the RCS upon demand. This will prevent water hammer, pump cavitation, and pumping noncondensible gas (e.g., air, nitrogen, or hydrogen) into the reactor vessel following an SIAS or during SDC. The 31 day frequency takes into consideration the gradual nature of gas accumulation in the ECCS piping and the adequacy of the procedural controls governing system operation.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensure that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance Requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

The requirement to verify the minimum pump discharge pressure on recirculation flow ensures that the pump performance curve has not degraded below that used to show that the pump exceeds the design flow condition assumed in the safety analysis and is consistent with the requirements of ASME Section XI.

ATTACHMENT 2 to
W3F1-2000-0064

COMMITMENT IDENTIFICATION FORM

COMMITMENT IDENTIFICATION FORM

Attachment 2 to W3F1-2000-0064
Technical Specification Change Request NPF-38-223
Low Pressure Safety Injection Allowed Outage Time Increase
May 17, 2000

COMMITMENT(S)	ONE-TIME ACTION*	CONTINUING COMPLIANCE*	SCHEDULED COMPLETION DATE (IF REQUIRED)	ASSOCIATED CR OR ER
EOI will proceed to proceduralize the CRMP to support Risk-Informed Technical Specification Allowed Outage Time submittals and implementation of 10 CFR 50.65(a)(4), the Maintenance Rule.		X	Following Proposed TS change approval by the NRC	

*Check one only