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 RECIP. NAME: MARTIN, J.B. RECIPIENT AFFILIATION: Region 5 (Post 820201)

SUBJECT: Requests waiver of compliance from portion of LCO of TS 3.7.3, "RCIC" to extend spring 1993 maint & refueling outage until 930517 or beginning of 1993 refueling outage when RCIC operability no longer required, whichever occurs first.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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March 26, 1993
G02-93-072

Docket No. 50-397

Mr. J. B. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane
Walnut Creek, CA 94596-5368

Dear Mr. Martin:

Subject: WNP-2, OPERATING LICENSE NPF-21
REQUEST FOR WAIVER OF COMPLIANCE FOR TECHNICAL
SPECIFICATION 3.7.3, REACTOR CORE ISOLATION
(COOLING SYSTEM)

The Supply System is requesting a waiver of compliance from a portion of the LIMITING CONDITION FOR OPERATION (LCO) of Technical Specification 3.7.3 REACTOR CORE ISOLATION COOLING SYSTEM (RCIC). The portion for which the waiver is requested is that which requires the system to be OPERABLE with an OPERABLE flow path capable of automatically taking suction from the suppression pool and transferring water to the reactor pressure vessel. As discussed below, with the RCIC System initially aligned to the Condensate Storage Tank and without the automatic transfer capability, the RCIC System is capable of providing adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel.

The waiver is requested to extend until the the spring 1993 maintenance and refueling outage. The outage is currently scheduled to begin May 3, 1993. To accommodate a potential change in this schedule it is requested that the waiver extend until May 17, 1993 or the beginning of the 1993 refueling outage when RCIC operability is no longer required; whichever occurs first.

For the reasons discussed below, the plant entered the LCO associated with RCIC Technical Specification 3.7.3 on March 19, 1993 at 2:30 pm, PST. This LCO has a 14 day Allowable Outage Time (AOT). As the condition leading to the need to enter this action statement can not be corrected within the 14 day AOT, absent a wavier of compliance from Technical Specification 3.7.3, the plant will be required to shutdown on April 2, 1993 at 2:30 pm, PST.

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**REQUEST FOR WAIVER OF COMPLIANCE
FOR TECHNICAL SPECIFICATION
3.7.3 REACTOR CORE ISOLATION COOLING SYSTEM**

Description of Condition

On March 19, 1993, the RCIC system was declared inoperable when RCIC-V-31 was de-energized and tagged closed. This action removed the capability of RCIC to automatically shift suction to the suppression pool. The reason for tagging closed RCIC-V-31 was to remove the potential for release of suppression pool water to the Reactor Building. This potential release path resulted in the failure to comply with commitments made to General Design Criterion (GDC) 56 for the associated penetration. Failure to satisfy GDC 56 resulted in the Primary Containment being inoperable. The scenario that could lead to this liquid release is as follows:

- The plant is at power with RCIC pump suction in its normal alignment to the Condensate Storage Tank.
- An event occurs (e.g., a small break LOCA) for which RCIC is initiated.
- During the event, the RCIC pump suction transfers from the Condensate Storage Tank to the suppression pool.
- After this transfer, the required most limiting single failure is postulated to be the loss of Division 1 DC power to the RCIC system.
- The DC power failure leads to the loss of RCIC system control with RCIC-V-31 and RCIC-V-46 remaining open.
- With RCIC-V-31 and RCIC-V-46 open, suppression pool water will drain through RCIC-V-31, the RCIC injection pump, RCIC-V-46, RCIC-PCV-15, the lube oil cooler and barometric condenser to the vacuum tank. The static head of water that will exist at the vacuum tank due to the elevation difference between the suppression pool water level and the vacuum tank will be sufficient to lift the vacuum tank relief valve at its setpoint of 6 psig.
- The water passing through the relief valve will flow at about 5.5 gpm through the Equipment Drain (Radioactive) System (EDR) to an Equipment Drain Sump which is isolated during accident conditions.
- Gaseous releases from the suppression pool water will be treated by the Standby Gas Treatment system before release to the environment.

This condition was recognized as a result of an ongoing Supply System program to review component safety classifications. The condition was recognized only recently and the immediate action described above was taken. Because of the recent discovery of this condition and the short allowed outage time before plant shutdown is required, insufficient time was available to determine and implement a permanent corrective action that eliminates this condition. As a result, it was not possible for the Supply System to anticipate this event and submit this request in a more timely manner.

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Plant Status and Compensatory Actions

On March 19, 1993 this event was reported to the NRC under §50.72(b)(1)(ii)(A).

At 2:30 pm, PST on March 19 power was removed from RCIC-V-31 by tagging open its breaker. With the valve in its normal closed position, this action eliminated the need to consider the above discussed potential liquid release path. To eliminate the remaining concern of a hot short failure repositioning the RCIC-V-31 valve under any conditions it would have been necessary to disconnect the power cables at the motor operator located in the Reactor Building. With the primary attention given to overall plant safety, the decision was made that the most prudent action would be to open the breaker. With the breaker located in a mild environment, access to the breaker is available for any design basis accident condition. Where as access to reconnect the motor would not have been available post accident and for non-accident conditions for which access would be achievable, the time to reconnect cables to the motor would be several hours. While these actions did not entirely remove the potential for a hot short failure repositioning the RCIC-V-31 valve, the action of opening its breaker significantly reduced this risk. This was accomplished by eliminating the hot short potential for all related circuits except the relatively short power cable run from the breaker to RCIC-V-31 motor operator.

Safety Significance

Technical Specification 3/4.7.3, FSAR sections 5.4.6 and 7.4 and the NRC Safety Evaluation Report, sections 5.4 and 7.4, require that the RCIC be capable of taking suction from the suppression pool and transferring water to the reactor vessel. The SER sections specifically require that RCIC have an automatic transfer from its preferred water source, the Condensate Storage Tank, to the suppression pool due to the fact that the Condensate Storage Tank is not designed to withstand the plant design basis seismic event. The basic requirements for the RCIC system design resides with the application of General Design Criteria 2, 4 and 19 resulting in RCIC assignment to the "safe shutdown system" category.

The function of the RCIC system is to provide the ability to achieve and maintain the plant in a hot shutdown condition when it is isolated from the main condenser. If the RCIC system is aligned continually to the Condensate Storage Tank with the automatic transfer to the suppression pool defeated and assuming no tank failure occurs from a seismic event, the RCIC can supply the reactor with water makeup for approximately four hours. This is ample time to stabilize the plant in a hot shutdown condition. If the Condensate Storage Tank were to fail, the RCIC pump suction can be manually transferred to the suppression pool at operator discretion. If that transfer is not prudent, a condition would exist similar to that which has been licensed for Appendix R fire event response. Specifically, the Plant is designed for, and can proceed

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**REQUEST FOR WAIVER OF COMPLIANCE
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directly from power operation to cold shutdown with the use of the seismically qualified Safety Relief Valves to depressurize the vessel and the RHR System aligned in the Shutdown or Alternate Shutdown Cooling Mode taking suction from the suppression pool. This can be accomplished from both the Main Control Room and the Remote Shutdown locations.

The compensatory action of opening the RCIC-V-31 motor operator breaker will preclude the automatic transfer of RCIC suction to the suppression pool. The suppression pool suction valve, RCIC-V-31, will remain closed ensuring primary containment integrity is preserved. The Supply System believes that the inadvertent opening of this valve due to a hot short during a tray or enclosure fire that would selectively cross connect the power supply to the RCIC-V-31 motor operator with another voltage source in just the required manner to open the valve and thereby establish this containment bypass path is not considered credible. To fully eliminate the threat of a hot short would require disconnecting the power supply at the RCIC-V-31 motor operator. Weighing the safety significance of retaining the capability to manually transfer RCIC suction to the suppression pool against the possibility of a random hot short creating this bypass path, the Supply System has concluded that retaining the first option takes precedence.

This compensatory action is deemed to have no impact on RCIC ability to perform its Emergency Operating Procedure (EOP) related functions. The EOPs dictate that RCIC suction should be preferentially aligned to the Condensate Storage Tank. Transfer to the suppression pool is retained as an option in the event the Condensate Storage Tank is unavailable. This EOP strategy is unaffected by the above actions. Also, RCIC use as an alternate boron injection path is unaffected.

Justification of the Duration of the Waiver

A potential corrective action to restore the capability of RCIC to automatically transfer to the suppression pool involves a hardware change which, on an expedited basis, will require until mid-April to complete the design and early May to complete the installation. As the modifications would require removing RCIC from service, it is believed that if this option is selected it should not be accomplished until the coming outage. Consideration is also being given to requesting a permanent change to the Technical Specifications on an emergency basis using the approach proposed in this waiver request. This option would be to remove from Technical Specification 3.7.3 the requirement for automatic RCIC alignment to the suppression pool. The requested duration of the waiver is also consistent with the time that would be required to prepare and process that Technical Specification change request.

This requested duration is believed to be acceptable based upon the estimated low probability of less than 10^{-7} events/year of the scenario occurring.

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**REQUEST FOR WAIVER OF COMPLIANCE
FOR TECHNICAL SPECIFICATION
3.7.3 REACTOR CORE ISOLATION COOLING SYSTEM**

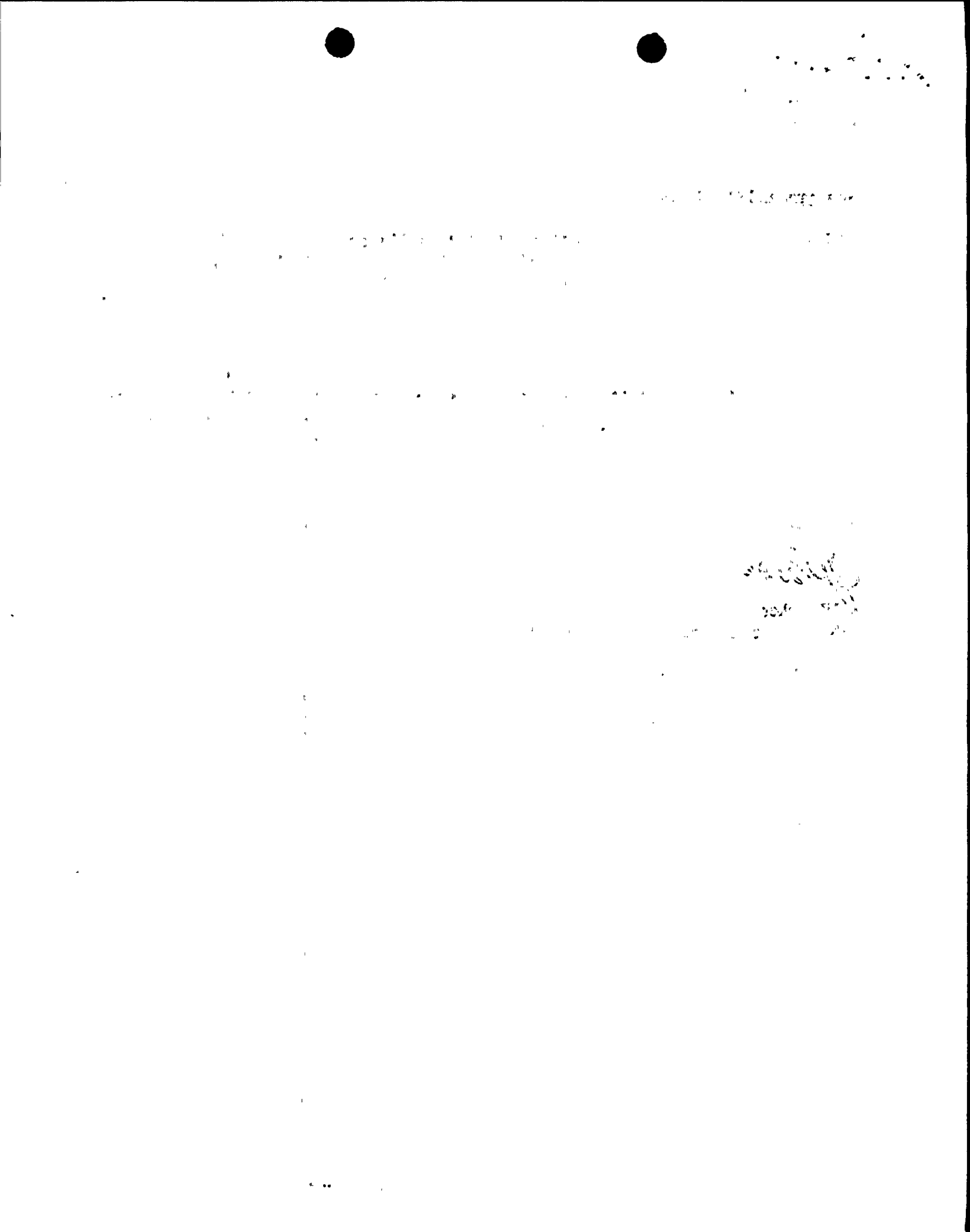
No Significant Hazards Consideration

The Supply System concludes that removal of the requirement for an OPERABLE flow path capable of automatically taking suction from the suppression pool and transferring water to the reactor pressure vessel does not involve a significant hazards consideration for the following reasons:

- It would not increase the probability of an accident as the RCIC system is credited in mitigating only the ATWS and Remote Shutdown Events. It will also not involve a significant increase in the consequences of an accident as the Condensate Storage Tank, which provides an approximate four hour inventory of water, is sufficient for RCIC design event mitigation. For any other conditions where RCIC operation may be useful, should this inventory be depleted or unavailable for any reason, manual transfer of the RCIC suction may be accomplished because the breaker necessary to activate RCIC-V-31 will be accessible. Repositioning of the RCIC-V-31 and RCIC-V-46 valves due to a hot short failure in the power cabling to these valves with the identified scenario is not considered credible and therefore not considered a viable mechanism for creating a containment bypass leakage path.
- It will not create the possibility of a new or different kind of accident. With RCIC as an accident mitigating feature the proposed change can not cause an accident. The actions taken are to prevent an unintended liquid release path. There are no conditions within the current WNP-2 licensing basis under which RCIC suction from the suppression pool is required for event mitigation. The option to return the manual transfer function preserves this source of water for situations which may go beyond plant licensing basis.
- It will not create a significant decrease in a margin of safety. With the ability to manually transfer the RCIC suction water source to the suppression pool, the quantity of water available for RCIC operation is not decreased.

Environmental Considerations

As discussed above, the Supply System concludes that this change does not involve a significant hazards consideration, nor is there a potential for a significant change in the types or significant increase in the amount of any effluents that may be released offsite, nor does the change involve a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and therefore, per 10 CFR 51.22(b), an environmental assessment of this change is not required.



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Summary and Conclusions

WNP-2 is currently in a 14 day LCO for RCIC Operability due to a concern for leakage of suppression pool water to the Reactor Building during certain postulated accident conditions. A waiver of compliance is requested for that portion of the subject Technical Specification which requires the system to be OPERABLE with an OPERABLE flow path capable of automatically taking suction from the suppression pool and transferring water to the reactor pressure vessel. This request has been approved by the WNP-2 Plant Operations Committee. It is requested that this waiver extend from 2:30 pm PST April 2, 1993 until May 17, 1993, or the beginning of the spring 1993 refueling outage when RCIC operability is no longer required; whichever occurs first. Absent approval of the waiver, WNP-2 will be required to commence plant shutdown no later than 2:30 pm PST, April 2, 1993. All other Technical Specification requirements will remain in effect.

Sincerely,



L. W. Baker

WNP-2 Plant Manager (Mail Drop 927M)

cc: Document Control Desk
NS Reynolds - Winston & Strawn
JW Clifford - NRC

DL Williams - BPA/399
NRC Site Inspector - 901A

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