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State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
380 Scotch Road
CN 411
Trenton, N.J. 08625
(609) 530-4000

Jorge H. Berkowitz, Ph.D.
Director

Gerald P. Nicholls, Ph.D., Assistant Director
Radiation Protection

June 15, 1988

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

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Technical Specification Change Request No. 164

On March 31, 1988 GPU Nuclear Corporation (GPUN) submitted a Technical Specification Change Request to the NRC. This change if approved would delete safety limit 2.1.E. This safety limit requires at least two recirculation loops isolation valves to be fully open except when the reactor head is off and reactor vessel water level is established above the main steam nozzles. Additionally, this change if approved would modify the following:

a. One, rather then the presently required two recirculation loops would be required to remain in service while the unit is in hot shutdown conditions.

b. Failure to comply with item a (above) would result in entrance into a limiting condition for operations rather then a safety limit violation as would presently occur.

c. If during power operations less then four recirculation loops can be maintained in service then shutdown or refuel conditions must be reached within 12 hours. Presently, the requirement is that the unit be placed in cold shutdown conditions within 24 hours.

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The Bureau of Nuclear Engineering (BNE) staff has reviewed this change request in the context of previous plant operating experiences and specifically:

1. On May 2, 1979 a total loss of feedwater occurred at Oyster Creek. During the initial several minutes of this transient all five of the recirculation pump discharge valves were closed. It was not until a valid low-low-low reactor level signal was recognized, was the isolation of the reactor core diagnosed and a recirculation loop returned to an unisolated condition.

2. On September 11, 1987 the recirculation system at Oyster Creek, was configured in such a condition that two recirculation loops were not in direct communication with the reactor. This condition remained in effect for approximately two minutes and constituted a violation of a Technical Specification safety limit.

As a result of the review conducted on the above two transients and Technical Specification change number 164 by the BNE, there is a concern that the requirements of NUREG 0737, item II.K.3.19 might not be complied with. This item requires that for all non-jet pump Boiling Water Reactors, an interlock be installed, preventing an inadvertent closure of all recirculation loop isolation valves. The consequence of a loss of communication between the recirculation loop (S) and the reactor downcomer region, would be a potential for inaccurate reactor water level indication and control function (S).

On September 19,1985 GPUN requested partial relief from the NUREG 0737, item II.K.3.19 requirements citing a potential to overly complicate the valve operating logic circuit and the requirement for additional operator training, as major obstacles in complying with this regulatory order. GPUN stated that an alarm which would alert the operator to the fact that less than two recirculation loops are in communication with the reactor would prove sufficient. The bureau staff presented our concerns to the NRC at that time. Nevertheless the NRC granted relief on April 16, 1986.

To address the above concerns, the BNE recommends that the NRC consider one of the following two alternatives:

1. Implement the Technical Specification change requested by GPUN; however, installation of the interlock previously deleted in 1986 would be required before the change would go into effect. This would still allow for the isolation of all recirculation loops, however, additional operator actions would be necessary to isolate the final two loops. This would reduce the potential for human error resulting in a loss of communication between the recirculation loops and the reactor downcomer.

2. Maintain the requirement that one recirculation loop be maintained in communication with the reactor as a safety limit. Incorporate an additional Technical Specification limiting condition for operations action statement, requiring that if less than two recirculation loops are in communication with the reactor a second loop be restored within four hours.

Although the BNE strongly recommends the implementation of alternative Number 1, it felt that either would allow the licensee a degree of flexibility while maintaining an adequate level of Reactor Safety.

If you have any questions, please contact Suren Singh at (609) 530-4022.

Sincerely,

David M. Scott

David M. Scott, Chief
Bureau of Nuclear Engineering

c. Alexander W. Dromerick, Project Manager, NRR
Michael Laggart, Licensing Manager, GPUN
Suren Singh, Nuclear Engineer, BNE