

MAR 29 1984

Docket No. 50-397

MEMORANDUM FOR: Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

FROM: William V. Johnston, Assistant Director
Materials, Chemical & Environmental Technology
Division of Engineering

SUBJECT: SUPPLEMENTAL SAFETY EVALUATION FOR WNP-2

Plant Name: WNP-2
Suppliers: General Electric, Washington Public Power Supply System
Licensing Stage: OL
Docket No.: 50-397
Responsible Branch and Project Manager: LB #2, R. Auluck
CMEB Reviewer: F. Witt
Description of Task: Operating License Review
Status: SSER Complete

The Chemical Engineering branch had reviewed the post-accident sampling system and found that it met all the criteria of Item II.B.3 of NUREG-0737, and, therefore, found it acceptable. This evaluation included a license condition requiring that "Prior to exceeding five (5) percent of rated thermal power, the licensee shall install, test, and have operational the post-accident sampling system."

We understand the licensee made modifications to the system we had found acceptable. However, by letter dated March 28, 1984, the licensee committed to restore the reactor coolant dissolved gas grab sample capability by May 1, 1984. The completion date of May 1, 1984, is about one month after the plant is expected to exceed 5% power. The present license must be modified. The enclosed evaluation is in support of the new license condition which would permit installation and operation of the reactor coolant dissolved gas grab sample prior to May 1, 1984.

William V. Johnston, Assistant Director
Materials, Chemical & Environmental
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Division of Engineering

Enclosure: As stated

Contact: F. Witt
x28360

cc: See next page

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Safety Evaluation
by the Office of Nuclear Reactor Regulation
Related to Operation of
WPPSS Nuclear Project Unit 2
Washington Public Power Supply System
Docket No. 50-397

9.3.2.4 TMI Action Item II.B.3-Post-Accident Sampling Capability

Introduction

In NUREG-0892 and its Supplement No. 4, we found the post-accident sampling system (PASS) acceptable and included a license condition requiring that "Prior to exceeding five (5) percent of rated thermal power, the licensee shall install, test, and have operational the post-accident sampling system." By letter dated March 28, 1984, the licensee provided additional information.

Evaluation

Installation, operation testing and operator training on the PASS will be completed prior to exceeding 5% power in compliance with the license condition. In March 1984, the licensee made a vendor recommended modification to the post-accident sampling system to improve its reliability and maintainability. This modification, which was not reviewed by the staff, removed the capability to obtain a reactor coolant dissolved gas grab sample. It is the staff position that a reactor coolant dissolved gas grab sample capability is necessary to meet the radionuclide measurement criterion of Item II.B.3 of NUREG-0737 and the oxygen measurement guidelines of Regulatory Guide 1.97, Rev. 3. By letter dated March 28, 1984, the licensee committed to restore the reactor coolant dissolved gas grab sample capability. This installation, including training and modified procedures, will be completed prior to May 1, 1984.

During the month between plant operation above 5% power and May 1, 1984, when the reactor coolant dissolved gas grab sample capability (hydrogen, oxygen and gaseous radionuclides) will become operational, approximately 5 Effective Full Power Days is expected to have accumulated. The reactor power during that time is expected to be below 25%.

There are three major factors which contribute to a reduction in risk for operation below 25% power as compared to continuous full power operation. First, there is additional time available for the operators to correct the loss of important safety systems needed to mitigate relatively high risk events, or to take alternate courses of action. Second, the fission product inventory during this time is significantly less than during full power operation. Third, there is a reduction in required capacity for mitigating systems at low power. Based on these, we have reasonable assurance that the risk of core damage, which requires the post-accident sampling capability to measure reactor coolant dissolved gas radionuclides, is low. During the time until the reactor coolant dissolved gas capability is restored, containment atmosphere gaseous radionuclides could be used to infer reactor coolant dissolved gas radionuclide concentrations.

Conclusion

Based on the above evaluation, we concluded that having the reactor coolant dissolved gas grab sampling capability operational by May 1, 1984, is acceptable.

License Condition

NUREG-0737, II.B.3-Post-Accident Sampling Capability

Prior to May 1, 1984, the licensee shall install, test and have operational the reactor coolant dissolved gas grab sampling capability.

Input to SALP Process

A. Functional Area: Chemical Technology

1. Management Involvement and Control in Assuring Quality

The licensee made an unreviewed modification to the post-accident sampling system which deleted a capability that was reviewed and accepted by the staff to meet the criteria of Item II.B.3 of NUREG-0737.

Rating: Category 2

2. Approach to Resolution Technical Issues from a Safety Standpoint

The licensee initially did not understand the issues involved until upper level management got involved when informed that the issue could be a problem in granting approval for full power operation.

Rating: Category 2

3. Responsiveness to NRC Initiatives

When upper level management understood what the staff needed for resolution of the issue, the licensee directed his personnel to come up with the resolution. The resolution was technically sound and timely.

Rating: Category 1