



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REGARDING CHANGES TO THE INITIAL TEST PROGRAM

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated February 26, 1988, Niagara Mohawk Power Corporation, the licensee, provided the NRC with marked up Final Safety Analysis Report (FSAR) pages to reflect changes made to the Nine Mile Point Unit-2 Initial Test Program. We have reviewed the changes and based on several teleconferences with the licensee, additional information provided on April 10, 1990, and July 24, 1990, and a copy of Test Procedure N2-POT-23-1, "Turbine Electro-Hydraulic Control (EHC) System - Electronic" received on January 24, 1991, we have determined that the changes are acceptable. These changes are discussed in the following paragraphs.

2.0 EVALUATION

1. Change to FSAR Section 14.2.11, Test Program Schedule

The licensee deleted the requirement for predicting the date for completing its 100-hour warranty run in FSAR Section 14.2.11. The licensee states that warranty completion dates are subject to change, calendar dates have no effect on the test, and there is no safety impact. The NRC staff finds this change acceptable.

2. Figure 14.2-5, "Test Condition Region Definition"

The revised FSAR Figure 14.2-5 title, "Test Condition Region Definition," revises test condition 1, replaces test condition 5 and deletes test condition 7. Figure 14.2-5 was revised to make it consistent with test changes previously made with no safety impact. The NRC staff finds this change acceptable.

3. Changes to the Loss of Feedwater Heating Startup Test

The Test Procedure paragraph in Table 14.223 was revised to conform to an earlier revision evaluated per licensee safety evaluation #87-021. The staff reviewed the licensee's safety evaluation #87-021, and concurred with this test change in a previous safety evaluation dated January 10, 1991.

4. Revisions to Tables 14.2-228 and 14.2-231 Which Deleted Certain Criteria

Changes made to Tables 14.2-228 and 14.2-231 deleted certain criteria relative to monitoring the discharge side of the safety relief valves. The criteria which were retained in Table 14.2-240 and subsequently revised, were found to be acceptable to the staff and were addressed in our earlier safety evaluation dated January 10, 1991.

5. Deletions of Requirement By Revised Table 14.2-226

Table 14.2-226 was revised to delete the requirement for opening individual turbine bypass valves to verify that special considerations are not required during bypass valve testing. The staff was concerned that the operation of the turbine bypass valves was not verified during preoperational or startup testing and requested additional information. On January 24, 1991, the licensee provided the staff with a copy of the preoperational test procedure N2-POT-23-1 "Turbine Electro-Hydraulic Control (EHC) System - Electronic," Section 4.2.5.6, which deals with the "Bypass Valve Opening Test." This test was performed for each bypass valve in October and November 1986, and verified an acceptable response for each valve. In addition, technical specifications require the main turbine bypass system be demonstrated operable at least once per 18 months. These changes were found to be acceptable to the staff.

6. Vibration Measurements Test Requirement Changed By Revised Tables 14.2-305, -241 and -236.

Tables 14.2-305, -241 and -236 were revised to reflect certain licensee test changes. Tables 14.2-241 and -305, which originally required vibration measurements for reactor recirculation piping and reactor vessel internals be made during a fast to slow reactor recirculation pump speed transfer, were revised to allow for vibration measurements during the recirculation system two pump trip test. Table 14.2-236, which provided for the two pump transfer test, was revised to add the trip test.

These tables (tests) were revised to require that vibration data for the drywell (reactor recirculation) piping and reactor vessel internals be taken during a complete trip of reactor recirculation pumps instead of during a fast-to-slow reactor recirculation pump speed transfer. The justification provided by the licensee was that "GE letters verify that a dual pump trip is a more restrictive action than a pump transfer." The licensee provided the staff with copies of the GE letters dated January 15 and 16, 1988, which address these vibration tests. The January 15, 1988, letter from W.E. Brown (GE) to G.E. Carlisle states that the two pump trip to natural circulation that was inadvertently performed in lieu of the pump transfer in Section 6.2 of Startup Test N2-SUT-33-3 provides a more limiting transient to evaluate recirculation piping vibration. The piping vibration criteria is in fact based upon recirculation pump trip transients. Therefore, the test performed is consistent with the intent of startup test specifications 23A4138 and 22A5405. No change to the test specifications or additional testing is required. In addition,

the January 16, 1988, letter from L.K. Liu, GE Technical Leader for Vibration Instrument Programs, to R. Robles, Jr./G.E. Carlisle states that the original intent of the Internals Vibration Test program as defined in GE Design Specification 22A6601 was to perform a two pump trip to natural circulation from 100% flow while on the 60% load line. As a result of similar BWR startup tests, it was decided that an acceptable substitute to this test would be a high to low speed pump transfer from the same conditions. Therefore, the fact that a two pump trip to natural circulation was inadvertently performed in lieu of the alternate method (i.e., two pump transfer) is considered acceptable.

Based on our review of this information, the staff concludes that the vibration data taken for reactor recirculation piping and reactor vessel internals during the two pump trip test is an acceptable alternate means for accumulating the vibration data.

7. Typographical Errors in Tables 14.2-206 and -304

Tables 14.2-206 and -304 were revised to correct two typographical errors. These changes were found to be acceptable to the staff.

3.0 CONCLUSION

Staff concludes that the licensee's Initial Test Program (ITP) described in the FSAR with revisions, as discussed above, followed the guidance provided by Regulatory Guide 1.68, Rev. 2, August 1978, "Initial Test Programs For Water-Cooled Nuclear Power Plants" and the staff has determined that the revisions to the ITP are acceptable.

Dated: February 19, 1991

Principal Contributor:

R. Ramirez