



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 26 TO FACILITY OPERATING LICENSE NO. NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNIT NO. 2

DOCKET NO. 50-339

Introduction:

By letters dated May 26, June 4, and June 14, 1982, the Virginia Electric and Power Company (VEPCO) submitted license amendment requests to Facility Operating License NPF-7 for the North Anna Power Station, Unit No. 2 (NA-2). The license amendment requests would revise the implementation dates for certain NUREG-0737 Action Items as presently specified in License Conditions 2.C.(21)(d), 2.C.(21)(e) and 2.C.(21)(i), subparts iii, iv, and v, thereto. These License Conditions pertain to NUREG-0737 Action Items II.B.2 (Plant Shielding), II.B.3 (Post Accident Sampling) and II.F.1 (Accident Monitoring Instrumentation), respectively. VEPCO's bases for revising the implementation dates is provided below as well as our evaluation and conclusions.

Discussion:

NUREG-0737, II.B.2, Plant Shielding

License Condition 2.C.(21)(d) presently states "VEPCO shall complete modifications to assure adequate access to vital areas and protection of safety equipment following an accident resulting in a degraded core no later than the implementation schedule of NUREG-0737."

All requirements of License Condition 2.C.(21)(d) will have been met when the installation of remotely operated valves and associated piping in the Atmosphere Cleanup System is complete. The delay in completing these modifications past January 1, 1982 was caused by equipment delivery problems primarily involving procurement of the necessary remote valves. Accordingly, NUREG-0737 allowed an automatic extension of the implementation date to the first outage of sufficient duration to perform the modifications but no later than July 1, 1982.

NA-2 completed its first refueling outage on June 2, 1982, and NA-1 commenced its third refueling outage on May 25, 1982. The NA-1 refueling outage has become an extended outage due to unforeseen problems and will not be complete until the Fall of 1982. Since portions of the Atmosphere Cleanup System are shared, completion of NA-1 modifications is required in order for NA-2

Certified By

Patricia J. Moore

systems to be fully operable. VEPCO's intent is to complete the modifications by the end of the NA-1 refueling outage which now exceeds the July 1, 1982 implementation date.

Based on the above, and the fact that unforeseen problems continue to impact the completion of the NA-1 outage, VEPCO has requested that the NA-2 License Condition 2.C.(21)(d) be revised to state "VEPCO shall complete modifications to assure adequate access to vital areas and protection of safety equipment following an accident resulting in a degraded core no later than January 1, 1983."

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

NA-2 License Condition 2.C.(21)(e) presently states "VEPCO shall complete corrective actions needed to provide the capability to promptly obtain and perform radioisotopic and chemical analysis of reactor coolant and containment atmosphere samples under degraded core conditions without excessive exposure at the first outage of sufficient duration but no later than July 1, 1982.

The Reactor Coolant Sampling (RCS) System is installed and is undergoing final startup testing. The RCS System will be operational by September 1, 1982. Interim sampling procedures as required by the short-term TMI requirements will be in effect until the RCS system is operational.

The Containment Atmosphere Sampling (CAS) System has all sampling and analysis equipment installed. However, the installation of sample supply line heat tracing components and insulation has been delayed because of equipment delivery delays. Equipment delivery is now estimated for Fall 1982. Therefore, the CAS System will not be operational until such time that the equipment is delivered and installed.

Interim sampling procedures required by short-term TMI requirements will remain in effect until the CAS System is operational.

Therefore, based on the above, VEPCO has requested that NA-2 License Condition 2.C.(21)(e) be revised to state that the Post-Accident Sampling System be complete by January 1, 1983.

NUREG-0737, II.F.1, Accident Monitoring Instrumentation

Currently, License Condition 2.C.(21)(i)(iii) states, "Containment atmosphere hydrogen concentration from 0 to 10 volume percent shall be installed at the first outage of sufficient duration but no later than July 1, 1982, and the hydrogen sampling system to be used in the interim shall remain in effect until July 1, 1982."

The new Containment Hydrogen Monitors are installed and tested but are not connected to the sample supply and return lines since these lines are still under construction.

The sample and return lines for the Containment Hydrogen Monitors are shared with the Containment Atmosphere Sample System. Material delivery problems and installation of the sample supply line Category I heat tracing system has impacted operation of the new Containment Hydrogen Monitors.

In the interim, the existing hydrogen analyzers installed in the plant will remain operational until the new Hydrogen Monitoring System is operable.

Therefore, based on the above, VEPCO has requested that License Condition 2.C.(21)(i)(iii) be revised to require the containment atmosphere hydrogen concentration from 0 to 10 volume percent shall be installed no later than January 1, 1983, and the hydrogen sampling system to be used in the interim shall remain in effect until January 1, 1983.

Currently, NA-2 License Condition 2.C.(21)(i)(iv) states, "Containment radiation up to 10 R/hr. at the first outage of sufficient duration but no later than July 1, 1982".

The Containment High Range Radiation Monitoring System has been installed and tested by July 1, 1982. This system will not be considered operable as of July 1, 1982 since the final in-situ calibration will not have been performed. The vendor of this system (Victoreen) does not have equipment, procedures, or sources acceptable to perform this calibration. Victoreen is expediting the development and procurement of a calibration system.

VEPCO has not received a commitment from Victoreen as to when calibration services will be available. VEPCO's commitment is to perform the in-situ calibration during the first scheduled outage after availability of a calibration system. VEPCO anticipates this availability during Cycle 2 operation and, therefore, requests that the NA-2 License Condition 2.C.(21)(i)(iv) be revised to state, "Containment radiation up to 10⁷R/hr. no later than the second refueling outage."

Currently, NA-2 License Condition 2.C.(21)(i)(v) states, "Noble gas effluent from each potential release point from normal concentrations to 10⁵ µCi/cc (X-133) shall be implemented at the first outage of sufficient duration but no later than July 1, 1982. VEPCO shall also provide capability for continuous sampling and for onsite analysis of the radioiodine and particulate effluent samples at the first outage of sufficient duration but no later than July 1, 1982."

The Main Steam Effluent Monitoring System is installed and operational. Also, the Process and Vent Effluent Monitoring System is installed. Not yet completed is the heat tracing system, startup testing for the Process and Vent Effluent System and in-situ calibrations and startup testing of the Steam Driven Auxiliary Feedwater Exhaust Effluent Monitor System.

The impact on completing startup testing and in-situ calibration has occurred due to the necessity to heat trace the vent stack sample lines in order to meet accuracy requirements. Delays in the delivery and installation of the vent stack sample line heat tracing system will delay the operability of all effluent monitoring systems until January 1, 1983.

In the interim, the Increased Range Radiation Monitors, installed in response to the short term TMI requirements, will be used until the effluent monitors are operational.

Therefore, based on the above, VEPCO has requested that the implementation date for the NA-2 License Condition 2.C.(21)(i)(v) be revised to January 1, 1983.

Evaluation:

VEPCO has identified equipment delivery delays; the unavailability of vendor material, procedures and sources required for completing in-situ system calibration; and the impact of material delays on implementation planned to be completed within the time envelope of scheduled refueling outages. Also, unforeseen problems have impacted scheduled outages which has further impacted implementation required for meeting systems operability.

We have reviewed VEPCO's license amendment requests for the NA-2 License Conditions 2.C.(21)(d), 2.C.(21)(e) and 2.C.(21)(i), subparts iii, iv, and V, thereto, and have determined that VEPCO's license amendment requests are an effective integrated approach to satisfy the specific NUREG-0737 Action Items II.B.2, II.B.3 and II.F.1. In addition, VEPCO, where appropriate, has interim measures in effect and there is existing control grade equipment in place for some of the required modifications.

Since post-TMI requirements are being imposed to improve the level of safety of nuclear power plants, the delay in schedule of implementation of certain items, as identified above, does not detract from the level of safety existing at NA-2. We find the licensee has shown good faith and made a diligent effort to satisfy the license conditions and the delays as requested by VEPCO are acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: August 10, 1982

Principal Contributor: L. B. Engle