



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 100 TO FACILITY OPERATING LICENSE NO. DPR-32  
AND AMENDMENT NO. 99 TO FACILITY OPERATING LICENSE NO. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-280 AND 50-281

INTRODUCTION AND BACKGROUND

In November 1980, the staff issued NUREG-0737, "Clarification of TMI Action Plan Requirements", which included all TMI Action Plan items approved by the Commission for implementation at nuclear power reactors. NUREG-0737 identifies those items for which Technical Specifications were scheduled for implementation after December 31, 1981. The staff provided guidance on the scope of Technical Specifications for all of these items in Generic Letter 83-37. Generic Letter 83-37 was issued to all Pressurized Water Reactor (PWR) licensees on November 1, 1983. In this Generic Letter, the staff requested licensees to:

1. review their facility's Technical Specifications to determine if they were consistent with the guidance provided in the Generic Letter, and
2. submit an application for a license amendment where deviations or absence of Technical Specifications were found.

By letters dated March 31 and June 16, 1983, and February 9, 14, 21, 1984, Virginia Electric and Power Company (the licensee) responded to requests for Surry Units 1 and 2. This evaluation covers the following TMI Action Plan items:

1. Reactor Coolant System Vents (II.B.1)
2. Post-Accident Sampling (II.B.3)
3. Noble Gas Effluent Monitors (II.F.1.1)
4. Sampling and Analysis of Plant Effluents (II.F.1.2)
5. Containment High-Range Radiation Monitor (II.F.1.3)
6. Containment Pressure Monitor (II.F.1.4)
7. Containment Water Level Monitor (II.F.1.5)
8. Containment Hydrogen Monitor (II.F.1.6)
9. Instrumentation for Detection of Inadequate Core Cooling (II.F.2)
10. Control Room Habitability Requirements (III.D.3.4)

## EVALUATION

### 1. Reactor Coolant System Vents (II.B.1)

Our guidance for RCS vents identified the need for at least one operable vent path at the reactor vessel head and the pressurizer steam space, for Westinghouse reactors. Generic Letter 83-37 also provided limiting conditions for operation and the surveillance requirements for the RCS vents. The licensee has proposed TSs that are consistent with our guidance. We find the proposed TSs to be acceptable.

### 2. Post-Accident Sampling (II.B.3)

The guidance provided by Generic Letter 83-37 requested that an administrative program should be established, implemented and maintained to ensure that the licensee has the capability to obtain and analyze reactor coolant and containment atmosphere samples under accident conditions. The Post-Accident Sampling System is not required to be operable at all times. Administrative procedures are to be established for returning inoperable instruments to operable status as soon as practicable.

The licensee has provided a proposed revision to the TS which is consistent with the guidelines provided in our Generic Letter 83-37. We conclude that the licensee has an acceptable TS for the Post-Accident Sampling System.

### 3. Noble Gas Effluent Monitors (II.F.1.1)

The licensee has supplemented the existing normal range monitors to provide noble gas monitoring in accordance with Item II.F.1.1. Proposed TSs were submitted that are consistent with the guidelines provided in our Generic Letter 83-37. We conclude that the TSs for Item II.F.1.1 are acceptable.

### 4. Sampling and Analysis of Plant Effluents (II.F.1.2)

The guidance provided by Generic Letter 83-37 requested that an administrative program should be established, implemented and maintained to ensure the capability to collect and analyze or measure representative samples of radioactive iodines and particulates in plant gaseous effluents during and following an accident. The licensee has proposed TSs that are consistent with our guidance. We conclude that the TSs for sampling and analysis of plant effluents are acceptable.

5. Containment High-Range Radiation Monitor (II.F.1.3)

The licensee has installed two in-containment monitors in each Surry Unit that is consistent with the guidance of TMI Action Plan Item II.F.1.3. Generic Letter 83-37 provided guidance for limiting conditions of operation and surveillance requirements for these monitors. The licensee proposed TSs that are consistent with the guidance provided in our Generic Letter 83-37. We conclude that the proposed TSs for Item II.F.1.3 are acceptable.

6. Containment Pressure Monitor (II.F.1.4)

Each Surry Unit has been provided with two supplementary channels for monitoring containment pressure following an accident. The licensee has proposed TSs that are consistent with the guidelines contained in Generic Letter 83-37. We conclude that the proposed TSs for containment pressure monitor are acceptable.

7. Containment Water Level Monitor (II.F.1.5)

Narrow range and wide range containment water level monitors provide the capability required by TMI Action Plan Item II.F.1.5. The TSs for both units contain limiting conditions of operation and surveillance requirements that are consistent with the guidance contained in Generic Letter 83-37. We conclude that the proposed TSs for containment water level monitors are acceptable.

8. Containment Hydrogen Monitor (II.F.1.6)

The licensee installed containment hydrogen monitors that provide the capability required by TMI Action Plan Item II.F.1.6. The proposed Surry Units 1 and 2 Technical Specifications contain appropriate limiting conditions of operation and surveillance for these monitors. We conclude that the proposed TSs are acceptable as they are consistent with the guidance contained in Generic Letter 83-37.

9. Instrumentation for Detection of Inadequate Core Cooling (II.F.2)

Generic Letter 83-37 provided the guidance on TSs for the subcooling margin monitors, a reactor coolant inventory tracking system and core exit thermocouples. We have reviewed the proposed TSs for the reactor coolant inventory tracking system (denoted as Surry Power Station Reactor Vessel Level Instrumentation System by VEPCO) and conclude that the proposed TSs are acceptable as they meet the intent of our guidance contained in Generic Letter 83-37. Technical Specifications for the subcooling margin monitors already exist. The Technical Specifications for the core exit thermocouples will be the subject of further action.

#### 10. Control Room Habitability (III.D.3.4)

The guidance of NUREG-0737 requires assurance on the part of the licensee that control room operators will be adequately protected against the effects of an accidental release of toxic and/or radioactive gases from sources either onsite or offsite. Generic Letter 83-37 provided guidance on the toxic gas detection system, and a control room emergency air filtration system.

Based upon the results of a licensee sponsored study, a redundant chlorine detection system was added to the control room ventilation system. A redundant bottled dry air tank was also added. The licensee has proposed TSs for the chlorine detection system. We have reviewed the proposed TSs for chlorine detection system and conclude that the proposed TSs are acceptable as they meet the intent of our guidance contained in Generic Letter 83-37. Technical Specifications for the Control Room ventilation system were issued on January 17, 1984. The licensee's February 14, 1984, letter stated that a review was being made to simplify the format, but a telephone conversation on September 7, 1984 revealed that no Technical Specification submittal is planned. We conclude that the existing Control Room Technical Specifications are sufficient.

#### Environmental Consideration

These amendments involve a change in the installation or use of the facilities components located within the restricted areas as defined in 10 CFR 20. The staff has determined that these amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupation radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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