



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 156 AND 138 TO
FACILITY OPERATING LICENSE NOS. NPF-4 AND NPF-7
VIRGINIA ELECTRIC AND POWER COMPANY
OLD DOMINION ELECTRIC COOPERATIVE
NORTH ANNA POWER STATION, UNITS NO. 1 AND NO. 2
DOCKET NOS. 50-338 AND 50-339

1.0 INTRODUCTION

By letter dated April 16, 1991, the Virginia Electric and Power Company (the licensee) proposed changes to the Technical Specifications (TS) for the North Anna Power Station, Units No. 1 and No. 2 (NA-1&2). The proposed changes would clarify the emergency power supplies which must be operable in mode 5 (cold shutdown) and mode 6 (refueling). Also, the proposed changes would add to the applicability section of the TS the case of moving irradiated fuel assemblies or any loads over irradiated fuel assemblies with the reactor defueled. Finally, the proposed changes would remove the requirement to establish containment integrity if a bus is lost while shut down. A discussion of the proposed changes and the staff's evaluation is provided below.

2.0 DISCUSSION

2.1 TS 3.8.1.2, Electrical Power Systems: Shutdown-LCO

The applicability section of the NA-1&2 TS 3.8.1.2 would be expanded by adding movement of irradiated fuel assemblies or any loads over irradiated fuel assemblies with no fuel assemblies in the reactor. This change would ensure that power is available to systems necessary to recover from a fuel handling accident. Therefore, the licensee would be better equipped to cope with a fuel handling accident. Also, Action "a" of TS 3.8.1.2 would be changed to stop movement of irradiated fuel assemblies or loads over irradiated fuel assemblies if the TS can not be met. This proposed change is consistent with the Standard Technical Specifications (STS) wording with the exception of the requirement to depressurize and vent the reactor coolant system (RCS). The NA-1&2 TS 3.4.9.3 LCO provides this action if the power-operated relief valves (PORVs) become inoperable. Therefore, this action in TS 3.8.1.2 would be redundant and is not necessary. In addition, this change is consistent with TS approved by the NRC for other facilities.

2.2 TSs 3.4.8.2.2 and 3.4.8.2.4: Electrical Power Systems/A.C. and D.C. Distribution-Shutdown LCO

TSs 3.4.8.2.2 and 3.4.8.2.4 were combined and rewritten to designate the equipment and busses for two complete trains (H and J) of the A.C. and D.C. sources. The current NA-1&2 TS allow busses from different trains (H and J) to be used for required busses and equipment. This proposed change would specifically designate the NA-1&2 TS 3.8.2.2 LCO as requiring, as a minimum, one complete train (J or H) of the A.C. and D.C. busses to be operative. This change is more conservative than the current NA-1&2 TS and will reduce the probability and consequences of accidents in modes 5 and 6. Stating the number and type of components required is consistent with the wording of the NA-1&2 TS LCOs 3.8.2.1 and 3.8.2.3. The proposed changes would also require that the vital busses be powered from the inverters connected to the D.C. busses. This operability requirement for the inverters is consistent with the STS. The proposed changes would also allow using the swing chargers when a normal charger is out of service. The spares (swing chargers) are fully qualified Class 1E chargers. In addition, the applicability section of the proposed TS would be changed to include the movement of irradiated fuel assemblies or loads over irradiated fuel assemblies with no fuel assemblies in the reactor vessel.

The current action section for the NA-1&2 TS 3.4.8.2.2 and 3.4.8.2.4 requires that containment integrity be established within 8 hours if a required bus is lost. The proposed change would delete this requirement and is in conformance with the Westinghouse STS, Revision 4. The licensee would retain the requirements for containment closure during irradiated fuel movement (TS 3/4.9.4) when residual heat removal is lost in mode 6 (TSs 3/4.9.8.1 and 3/4.9.8.2) and when the containment purge and exhaust system is lost in mode 6 (TS 3/4.9.9). However, work in the fuel building may be in progress and the potential for a release to the environment is not precluded. Therefore, if the A.C. and D.C. distribution LCO cannot be met, then any operations involving core alterations, positive reactivity changes, movement of irradiated fuel assemblies, and movement of loads over irradiated fuel assemblies would be stopped. Finally, combining the current NA-1&2 TSs 3.4.8.2.2 and 3.4.8.2.4 into a revised TS 3.4.8.2.2 would eliminate the current NA-1&2 TS 3.4.8.2.4.

3.0 EVALUATION

The proposed changes would clarify the NA-1&2 TS and provide consistency with the STS. In addition, the changes would clarify the emergency power supplies which must be available in modes 5 and 6 and add to the TS LCOs the case of moving irradiated fuel assemblies or loads over irradiated fuel assemblies with the reactor defueled. These changes are more conservative than the current NA-1&2 TS and would better allow the licensee to cope with a fuel handling accident and therefore reduce the probability and consequences of an accident in modes 5 and 6. Also, the proposed change to delete the current requirement to establish containment integrity if an electrical bus is lost is consistent with the STS. Finally, required containment integrity in modes 5 and 6 is retained in the current NA-1&2 TS. Based on all of the above, the staff finds the proposed changes to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendments. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the 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 occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (56 FR 22481). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 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.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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