



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 162

FACILITY OPERATING LICENSE NO. NPF-4

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

NORTH ANNA POWER STATION, UNIT NO. 1

DOCKET NO. 50-338

1.0 INTRODUCTION

By letter dated January 20, 1992, the Virginia Electric and Power Company (the licensee) requested a change in the form of a license condition to Operating License NPF-4 for the North Anna Power Station, Unit No. 1 (NA-1). The proposed license condition would allow a one-time extension of specific surveillance requirements for the ninth cycle of NA-1 to allow surveillance testing to coincide with the NA-1 steam generator replacement project (SGRP) currently scheduled to commence in January 1993. In addition, the licensee requested that license conditions 2.D.(3)s and 2.D.(3)t be deleted.

2.0 DISCUSSION

The ninth cycle for NA-1 was originally scheduled to have ended in September 1992 and the surveillance testing required by the Technical Specifications (TS) would have been performed then. Subsequently, the licensee elected to shorten the current operating cycle to 13 months with the outage rescheduled for April 1992. However, because NA-1 entered an unplanned outage from December 23, 1991 to March 6, 1992 for steam generator (SG) tube inspections, the refueling outage for the ninth cycle was rescheduled to begin in January 1993 commensurate with the start of the NA-1 SGRP. This schedular change considers the expected duration of the current outage and will permit optimum fuel burnup before the next refueling outage and SGRP. However, the schedular change will result in certain TS surveillance intervals (including TS 4.0.2 allowable extensions) expiring prior to the beginning of the 1993 outage.

TS 4.0.2 is an administrative control which ensures that surveillance tests are performed periodically and defines a reasonable extension period for such testing. The basis of this specification describes the surveillance requirements as "sufficiently restrictive to ensure that the reliability

associated with the surveillance activity is not significantly degraded beyond that obtained from the normal specified interval." The requested extension of the surveillance test intervals, due to the unplanned SG tube inspection and rescheduling of the ninth cycle refueling outage, would result in a slight reduction in the margin of safety provided by TS 4.0.2. However, because the maximum allowable extension for any surveillance requirement would only be 1 1/2 months in excess of the 18-month surveillance and allowable extension, the licensee has concluded that the reliability defined by the normal surveillance intervals would not be significantly reduced by the proposed extension. The licensee's bases for this finding are provided below:

- Current monitoring of instrumentation and ongoing TS surveillance tests provide assurance that the equipment involved in the extended surveillance tests will remain in an operable condition until their inspection at the next refueling outage.
- Periodic surveillance tests have been performed since the last refueling outage to monitor system and component performance and to detect any significant degradation. Surveillance testing will continue to be performed during the requested extension interval, which provides added assurance that the reliability of equipment associated with the extended surveillance will not be significantly degraded by this one-time extension.
- The electronic components in the reactor protection system (RPS) and engineered safety features actuation system (ESFAS) have shown a very high degree of reliability. Failures associated with instruments in these systems have occurred suddenly and have not been found during calibrations.
- All environmental qualification (EQ) transmitters that have an 18-month calibration requirement to maintain EQ qualifications were calibrated during the December 23, 1991 to March 6, 1992 SG tube inspection.
- Safety injection (SI) blackout testing of both emergency buses, SI functional, containment depressurization actuation (CDA) functional, as well as various other safety system testing was performed during the SG inspection outage.
- Section XI of the ASME Code defines a refueling interval as 18 months, but no more than 24 months. Based upon this definition, all NA-1 ISI testing required to be done at refueling intervals does not have to be performed until NA-1 is shut down for the SGRP.

The affected surveillance test intervals associated with the NA-1 SGRP and/or refueling outage are specified below:

4.1.3.2.1b

4.3.1.1.1, Items 1,3,4,5,6,7,8,9,10,11,12,13,14,15,16 and 17

4.3.1.1.2, Items 1,3,4,5,6,7,8,9,10,11,14,15,16 and 17

4.3.1.1.3, Items 1,3,4,5,6,7,8,9,10,11,12,13,14,15,16 and 17

4.3.2.1.1, Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

4.3.2.1.2, Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

4.3.2.1.3, Items 1.c, 1.d, 1.e, 1.f, 2.c, 3.b.3, 4.c, 4.d, 5.a, 6.c and 6.d

4.3.3.1, Items 1.b.i, 1.b.ii, 2.c.ii, 2.c.iii and 2.c.iv

4.3.3.3.1, Items 1.a, 1.b, 2.a, 2.b, 2.c, 3.a, 4.a, 4.b, 4.c and 4.d

4.3.3.5, Items 1, 2, 3, 4, 5, 6, 7 and 8

4.3.3.6, Items 1, 2, 3, 4, 5, 6, 7, 11, 12, 14, 15, 16, 17 and 18

4.3.3.9.c,

4.4.3.2.1.b,

4.4.9.3.1.b,

4.5.2, Items d.1 and g.2,

4.5.3.1,

4.6.3.1.2.d,

4.7.1.1,

4.7.9.1.a,

4.7.10, Item c,

4.8.1.1.2.d.1,

4.8.1.1.3.c.,

4.8.1.1.3e,

4.8.2.3.2.c, Items 1, 2, 3 and 4,

4.8.2.3.2d, and

6.8.4.a (ii).

### 3.0 EVALUATION

Current monitoring of instrumentation and ongoing TS surveillance tests provide assurance that the equipment involved in the extended surveillance tests will remain in an operable condition until their inspection at the next refueling outage/SGRP. In addition, periodic surveillance tests have been performed since the NA-1 eighth cycle outage to monitor system and component performance and to detect any significant degradation. Finally, surveillance testing will continue to be performed during the requested extension interval which provides added assurance that the reliability of equipment associated with the extended surveillance will not be significantly degraded by this one-time extension.

The impact of the unscheduled SG tube inspection from December 23, 1991 to March 6, 1992 and the additional time required for an optimum fuel burn-up before the next refueling outage/SGRP have resulted in the need to reschedule the NA-1 refueling outage outside the surveillance interval (including "grace" period) permitted by the NA-1 TS. Periodic surveillance requirements were not intended to adversely affect safe plant operations simply because a specified interval did not coincide with plant operating schedules. Normally, variations in those schedules, e.g., a nominal 18-month refueling cycle versus an 18-month surveillance test interval, can already be accommodated through the existing NA-1 TS. However, circumstances may arise in which existing relief is inadequate, but good cause can still be shown by the licensee why additional relief should be granted.

Such is the case here. In this instance, the licensee has provided sufficient evidence that the change in plant refueling outage schedules was not undertaken for a reason or in a manner adverse to safety, that reasonable assurance exists that equipment associated with the extended surveillance interval will not be significantly degraded by the extension, and that good cause exists for granting the extension. Therefore, the staff finds the one-time extension for the surveillance tests as specified above to be acceptable.

Finally, the licensee requested deletion of license conditions 2.D.(3)s and 2.D.(3)t. These license conditions allowed extensions of the surveillance intervals for the seventh and eighth cycles. These fuel cycles have been completed and these license conditions are no longer valid. The staff considers this an administrative change and, therefore, finds the proposed deletion of these license conditions acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 ENVIRONMENTAL CONSIDERATION

This amendment changes 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 amendment involves 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding (57 FR 18179). Accordingly, this amendment meets 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 this amendment.

#### 6.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: June 1, 1992

AMENDMENT NO. 162 : TO FACILITY OPERATING LICENSE NO. NPF-4-NORTH ANNA UNIT 1

~~Docket File~~

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