

January 31, 1992

Docket No. 50-338

Mr. W. L. Stewart
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Dear Mr. Stewart:

SUBJECT: NORTH ANNA UNIT 1 - REQUEST FOR AMENDMENT RE: MAXIMUM
REACTOR POWER LEVEL (TAC NO. M82674)

The Commission has requested the Office of the Federal Register to publish the enclosed "Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for Hearing." This notice relates to your application for amendment dated January 28, 1992, which would limit maximum reactor power to 95% of rated thermal power for the interim period of operation until steam generator replacement. In addition, the amendment would impose more restrictive equipment operability requirements for the emergency core cooling system.

Sincerely,

/s/

Leon B. Engle, Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Notice

cc w/enclosure:
See next page

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Mr. W. L. Stewart
Virginia Electric & Power Company

North Anna Power Station
Units 1 and 2

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UNITED STATES NUCLEAR REGULATORY COMMISSIONVIRGINIA ELECTRIC AND POWER COMPANYDOCKET NO. 50-338NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. NPF-4, issued to Virginia Electric and Power Company for operation of the North Anna Power Station, Unit No. 1 (NA-1) located in Louisa County, Virginia.

The proposed amendment would revise the NA-1 Facility Operating License NPF-4 by limiting the maximum reactor power to 95% of rated thermal power for an interim period of operation until steam generator (SG) replacement. The proposed change would also revise the Technical Specifications (TS) by imposing more restrictive equipment operability requirements for the emergency core cooling system (ECCS). These changes are necessary to accommodate the interim effects of increased SG tube plugging on the large break loss-of-coolant accident (LOCA) analysis.

NA-1 is currently involved in a mid-cycle SG inspection outage. An extensive eddy current inspection of the NA-1 SG tubes is being performed using very conservative analysis guidelines and plugging criteria. As such, a substantially increased number of tubes are expected to be plugged. The predictions of potential SG tube plugging during the current mid-cycle outage are such that the effects of increased reactor coolant system (RCS) loop

resistance on the large break LOCA analysis would not permit full rated power operation for the remainder of NA-1 Cycle 9. The existing large break LOCA analysis has obtained margin by taking credit for available Cycle 9 core characteristics and will not support 100% power operation with more than 30% SG tube plugging. The large break LOCA analysis supporting the proposed changes would extend the SG tube plugging limit value to 35%, but with a reduced power level of 95% of rated thermal power. At this reduced power level, all analyses would meet the requirements of 10 CFR 50.46 and Appendix K to 10 CFR Part 50. Because the large break LOCA presents the limiting considerations for core power and total core power peaking, it was necessary to reduce the maximum core power level from 2893 megawatts (thermal) to 2748 megawatts (thermal) and the maximum allowable hot channel peaking factor (F_q) to 2.11 at the core mid-plane. The change to the power level is proposed as a modification to the NA-1 license condition 2.D.(1), Maximum Power Level, by adding a footnote limiting maximum reactor power to 2748 megawatts (thermal) until SG replacement is accomplished.

In addition, an associated change to the TS is required to accommodate the effects of the revised assumptions for the large break LOCA analysis. The proposed change to the TS would impose more restrictive equipment operability requirements for the ECCS. This is accomplished by modifying action statement "a" of TS 3.5.2 to ensure that both low head safety injection pumps or one low head injection pump and two high head safety injection pumps remain operable during power operation. This change would effectively maintain consistency between the TS action statements and the revised assumptions for the large break LOCA analysis. A revised $K(Z)$ surveillance function and a reduced enthalpy rise hot channel factor were utilized to provide additional analysis margin. With these changes, the analysis supports power operation up to 95%

of rated thermal power for NA-1 for the remainder of Cycle 9. Changes to the peaking factor and $K(Z)$ surveillance function would be accomplished by way of the TS Core Operating Limits Report (COLR). The large break LOCA analysis assumed uniform SG tube plugging of 35% which supports operation with peak SG tube plugging levels up to 35%. With the exception of the parameters described above, which will be incorporated by way of the proposed license change and the forthcoming COLR, all analysis parameters were equivalent to, or conservative with respect to, those assumed in the existing analyses. All analysis parameters are expected to be conservative with respect to actual plant conditions for the remainder of the NA-1 Cycle 9.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. [The proposed change] does not involve a significant increase in the probability or consequences of an accident previously evaluated. The impact of the increased level of [SG] tube plugging (up to 35% peak) with a maximum reactor power of 95% on the large break LOCA

was analyzed. The analysis demonstrated that operation with increased [SG] tube plugging will not result in more severe consequences than those of the currently applicable analyses. The probability of occurrence of these accidents is not increased, because an increased level of [SG] tube plugging as an initial condition for the accident has no bearing on the probability of occurrence of these accidents.

2. [The proposed change] does not create the possibility of a new or different kind of accident from any accident previously evaluated. The implementation of the increased [SG] tube plugging large break LOCA analysis into the [NA-1] design basis will not create the possibility of an accident of a different type than was previously evaluated in the [Updated Final Safety Analysis Report (UFSAR)]. No changes to plant configuration or modes of operation are implemented by the revised accident analysis. Therefore, no new mechanisms for the initiation of accidents are created by the implementation of the analysis.
3. [The proposed change] does not involve a significant reduction in a margin of safety. The [NA-1] operating characteristics, and accident analyses which support [NA-1] operation, have been fully assessed. The results of the revised large break LOCA analysis [demonstrate] that the consequences of this accident are not increased as a result of the increased [SG] tube plugging up to 35% with a maximum reactor power of 95%. The results of the accident analysis remain below the limits established by the currently applicable [UFSAR] analyses. Therefore, there is no significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within thirty (30) days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555. The filing of requests for hearing and petitions for leave to intervene is discussed below.

By March 6, 1992, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the Alderman Library, Special Collections Department, University of Virginia, Charlottesville, Virginia 22903-2498. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board Panel, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board Panel will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is

aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example,

in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 325-6000 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to Herbert N. Berkow: petitioner's name and telephone number, date petition was mailed, plant name, and publication date and page number of this FEDERAL REGISTER notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Michael W. Maupin, Esq., Hunton and Williams, P.O. Box 1535, Richmond, Virginia 23212, attorney for the licensee.

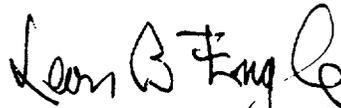
Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent

a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board Panel that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated January 28, 1992, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the Alderman Library, Special Collections Department, University of Virginia, Charlottesville, Virginia 22903-2498.

Dated at Rockville, Maryland, this 31st day of January, 1992.

FOR THE NUCLEAR REGULATORY COMMISSION



Leon B. Engle, Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation