

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
VIRGINIA ELECTRIC AND POWER COMPANY)
)
(North Anna Power Station, Units 1)
& 2))
)
)
)

Docket Nos. 50-338
and 50-339

EXEMPTION

I.

Virginia Electric and Power Company (the licensee) is the holder of Facility Operating License Nos. NPF-4 and NPF-7, which authorize operation of North Anna Power Station, Units 1 and 2 (the facility) at steady-state reactor power levels for each unit not in excess of 2905 megawatts thermal. The license provides, among other things, that it is subject to all rules, regulations and Orders of the Nuclear Regulatory Commission (the Commission or NRC) now or hereafter in effect. The facility includes two pressurized water reactors located at the licensee's site in Louisa County, Virginia.

II.

Section 50.54(q) of 10 CFR Part 50 requires a licensee authorized to operate a nuclear power reactor to follow and maintain in effect emergency plans which meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50. Section IV.F.2 of Appendix E requires that each licensee at each site shall annually exercise its emergency plan.

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The NRC may grant exemptions from the requirements of the regulations which, pursuant to 10 CFR 50.12(a), (1) are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and (2) present special circumstances. Section 50.12(a)(2)(ii) of 10 CFR Part 50 describes the special circumstances for an exemption where the application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. The underlying purpose of Appendix E, Section IV.F.2 is to demonstrate that the emergency plan is adequate and capable of being implemented, and that the state of emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

III.

By letter dated June 18, 1993, the licensee requested a one-time exemption from the requirements of 10 CFR 50.47 and Appendix E to conduct an annual exercise of the North Anna emergency plan in 1993. The licensee had planned to conduct an "off-year" exercise, that is, an exercise of the utility's emergency plan, with limited participation of the Commonwealth of Virginia and local organizations, on August 18, 1993. The previous emergency preparedness exercise at the North Anna Power Station, conducted on January 15, 1992, was a full-participation biennial exercise. The licensee requested that an exemption be granted because the requirement to perform an exercise of the North Anna emergency plan in 1993 was not necessary to achieve the underlying intent of the rule in that the emergency plan was adequately

exercised and demonstrated in 1993 in the licensee's response to the Unit 2 feedwater event that occurred on April 24, 1993. The licensee stated that the Commonwealth of Virginia is in concurrence with the exemption request; however, the State is retaining plans to demonstrate select six-year exercise objectives of the Federal Emergency Management Agency on the scheduled exercise date. The licensee, in a letter dated July 16, 1993, has committed to support the offsite agencies in the demonstration of these objectives. The schedule for future exercises at North Anna will not be affected by this one-time exemption.

To support their request, the licensee provided information on the feedwater event, the key elements of the North Anna Power Station emergency plan demonstrated during the event, and the critique of emergency response activities conducted by the licensee following the event.

On April 24, 1993, at 5:30 a.m., North Anna Unit 2 experienced severe flow oscillations and subsequent water hammer in the feedwater system while operating at 71 percent power. The unit was manually tripped by the operators with all equipment performing as expected. To provide additional technical staffing and to assist in personnel accountability, an Alert was declared at 6:02 a.m. Following stabilization and further assessment of the unit, the Alert was downgraded to an Unusual Event at 8:16 a.m., and the Unusual Event was terminated at 10:45 a.m.

Section 8.6.2 of the North Anna Power Station emergency plan states that utility-only exercises shall include:

- a) An emergency classification of at least an Alert.
- b) Use of communication systems.

- c) Activation of at least one offsite emergency response plan action (e.g., medical transport, fire assistance, offsite monitoring, law enforcement assistance).

In response to the feedwater flow oscillation event, the following key elements of the North Anna emergency plan were demonstrated:

- Classification of the event in accordance with Emergency Plan Implementing Procedures (EPIPs).
- Notification of State, local, and Federal emergency response organizations and personnel.
- Activation, staffing and operation of the emergency response facilities including the Control Room, Technical Support Center, Operational Support Center, and the Local Emergency Operations Facility.
- Communications between emergency facilities, principal response organizations and emergency personnel.
- Media and public information dissemination through the issuance of press releases.
- Emergency facilities and equipment to support the emergency response.

Licensee response activities included the development of initial and follow-up messages (13 total) to offsite organizations, continuous communication with the NRC, station accountability, event assessment in the Control Room and Technical Support Center, and interfacing with State emergency operations personnel at the Local Emergency Operations Facility. Although the event did not require dose assessment, all dose assessment

capabilities were fully activated and offsite monitoring teams were staged for dispatch.

The licensee conducted a comprehensive self-assessment of their response to the feedwater event, documented in an Emergency Plan Activation Report, dated June 18, 1993. VEPCO's critique identified several areas for improvement and outlined the specific corrective actions to enhance licensee performance in those areas.

In addition to the response to the feedwater event, other licensee activities related to the demonstration of emergency preparedness in 1993 included (1) a practice exercise conducted on July 14, 1993, fulfilling the requirements for a Post-Accident Sampling Drill, Environmental Monitoring Drill, Radiological Monitoring Drill, Communications Drill, and Emergency Callout Drill, (2) a combined functional drill conducted on June 16, 1993, which fulfilled the requirements for a Fire Drill and tested revised damage control procedures, and (3) two separate drills conducted on February 24 and April 13, 1993, to practice and demonstrate environmental and radiological monitoring and station response activities to a medical emergency.

The most recent NRC Systematic Assessment of Licensee Performance (SALP) report for North Anna, issued on June 18, 1993, for the period November 3, 1991 to April 3, 1993, indicated that the licensee has continued to maintain a strong emergency preparedness program with effective offsite support. The licensee has consistently maintained a Category 1 rating in the functional area of emergency preparedness.

IV.

Based upon a review of the licensee's request for an exemption from the requirement to conduct an exercise of the North Anna emergency plan in 1993, the NRC staff finds that the underlying purpose of the regulation has been achieved through the licensee's response to the Unit 2 feedwater event which occurred on April 24, 1993. The licensee fully activated and staffed all of its emergency response facilities and performed all necessary response actions under actual conditions. Both onsite and offsite emergency response organizations were involved in the event. The response to the feedwater event tested the adequacy of the emergency plan implementing procedures, tested emergency equipment and communications networks, and provided a unique opportunity to ensure that emergency response personnel were familiar with their duties. NRC Inspection Report Nos. 50-338/93-14 and 50-339/93-14 concluded that the "licensee responded to the event in a conservative manner, in an emergency response perspective, by declaring an Alert classification. Emergency response facilities were activated and staffed in a timely manner. Notifications to the NRC and State and local agencies were made in a timely manner." The licensee has identified corrective actions to improve the level of emergency preparedness at North Anna through a post-event critique.

The staff concludes that the licensee satisfactorily demonstrated the adequacy of the North Anna emergency plan and its capability of implementing the plan in the response to the Unit 2 feedwater event on April 24, 1993. Thus, an exercise in 1993 is not necessary to achieve the underlying purpose of the rule. The requested exemption from the requirement in 10 CFR Part 50, Appendix E, Section IV.F, to perform an exercise of the North Anna emergency

plan in 1993, will not adversely affect the overall state of emergency preparedness at the North Anna site because the emergency plan was adequately exercised and demonstrated during the licensee's response to the April 24, 1993 feedwater event.

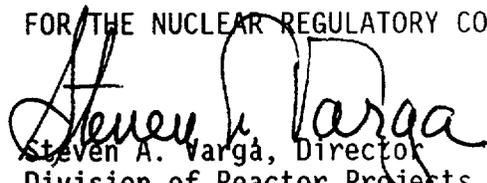
For these reasons, the Commission has determined that, pursuant to 10 CFR 50.12, the exemption requested by the licensee's letter dated June 18, 1993, as discussed above, is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security and that special circumstances are present as set forth in 10 CFR 50.12(a)(2)(ii).

Pursuant to 10 CFR 51.32, the Commission has determined that granting of this exemption will have no significant impact on the environment (58 FR 40840). A copy of the licensee's request for exemption and supporting documentation is available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, DC and at the Alderman Library, Special Collections Department, University of Virginia, Charlottesville, Virginia 22903-2498. Copies may be obtained upon written request to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Reactor Projects I/II.

This exemption is effective upon issuance.

Dated in Rockville, Maryland this 10th day of August 1993.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation