

NOTICE OF VIOLATION

Virginia Electric and Power Company
North Anna Units 1 & 2

Docket Nos. 50-338 and 50-339
License Nos. NPF-4 and NPF-7
EA 86-11

During a Nuclear Regulatory Commission (NRC) inspection conducted on October 28 through November 1, 1985, violations of NRC requirements were identified. The violations involved a failure to adequately implement your quality assurance program for construction related modifications to your service water intake structure. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1985), the particular violations are set forth below:

10 CFR Part 50, Appendix B, Criterion V, requires that activities affecting quality shall be prescribed by documented procedures or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, and drawings.

10 CFR Part 50, Appendix B, Criterion XVII, requires that sufficient records shall be maintained to furnish evidence of activities affecting quality.

Contrary to the above, during the period of June 17 through November 1, 1985, modification to the service water intake structure which is listed on the North Anna Q-List was not always accomplished in accordance with instructions or procedures and sufficient records were not always maintained as evidenced by the following examples:

1. Specification NAS 2029, Placement of Concrete and Reinforcing Steel, required concrete test cylinders to be controlled in accordance with ASTM C31, Making Curing Concrete Test Specimens in the Field. This ASTM requires cylinders which are initially cured in the field to be maintained at a temperature of 60° to 80°F for the first 24 hours and indicates that a temperature record of the test specimens may be established by means of maximum-minimum thermometers. Following the initial 24-hour curing period, the test cylinders are then required to be stored in a moist condition in the laboratory at 73.4°F ± 3°F until the moment of test.

However, no temperature records were maintained to verify that the test cylinders were initially cured in the field at 60°F to 80°F for the first 24 hours. In addition, records from October 28 through November 1, 1985, that were kept for the time following the 24 hour curing period showed that the test cylinders were not stored at 73.4°F ± 3°F.

2. Specification NAS 3003, Excavation Fill and Backfill, Service Water Buried Piping Installation, paragraph 3.5.2, required select fill moisture to be controlled to ±3 percent of the optimum moisture as determined by ASTM D 698, Moisture Density Relations of Soils Using 5.5 lb Rammer and 12 Inch Drop.

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However, examination of records for select fill placed on August 27, 1985, September 18, 1985, September 19, 1985, and September 25, 1985, showed that moisture was not controlled at ± 3 percent of the optimum moisture as determined by ASTM D 698 requirements.

3. Specification NAS 2014, Supply of Materials Batching, Mixing, and Delivery of Ready Mix Concrete, specified that tests for slump, air content, and concrete temperature shall be made for each truck delivered; that the amounts of fine and coarse aggregate and water shall be shown on the batch tickets; that aggregate gradation tests shall be performed daily; and that the maximum amount of air entraining agent for the current design mix is 5.4 ounces per cubic yard of concrete or 44 ounces for an 8 cubic yard load.

However, from June to November 1985, Specification NAS 2014 was not followed in that tests for slump, air content, and concrete temperature were not consistently made for each truck of concrete delivered in that: the amount of fine and coarse aggregate were not shown on batch ticket invoice numbers 31876 to 31879 and 31885 dated June 17, 1985; the amounts of water and fine and coarse aggregate were not shown on batch ticket invoice numbers 32021 to 32023 dated July 31, 1985; samples for daily gradation tests were being taken, but testing was about one month behind schedule; and the maximum allowable amount of air entraining agent shown on the batch tickets was 48 ounces for an 8 cubic yard load instead of the 44 ounces specified by the design mix.

4. Procedure QC 10.1, Civil Inspection, was used to control the inspection and documentation of work-related civil activities.

However, Procedure QC 10.1 was not appropriate for the circumstances in that it did not reference the current specifications being used to control concrete and compaction of soils in the modifications to the service water intake structure.

Collectively, the above violations have been categorized in the aggregate as a Severity Level III problem (Supplement I).

Pursuant to the provisions of 10 CFR 2.201, Virginia Electric and Power Company is hereby required to submit to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II, within 30 days of the date of this Notice a written statement or explanation including for each violation: (1) admission or denial of the violation, (2) the reasons for the violation if admitted, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps which will be taken to avoid further violations, and (5) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time.

Dated at Atlanta, Georgia
this 21 day of February 1986