

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION
HAROLD R. DENTON, DIRECTOR

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| In the Matter of |) | |
| |) | |
| Virginia Electric Power Company |) | Docket Nos. 50-280 |
| (Surry Power Station, Units 1 and 2 |) | and 50-281 |

DIRECTOR'S DECISION UNDER 10 CFR §2.206

By letter dated February 20, 1979, the Environmental Policy Institute (Institute) requested that the Nuclear Regulatory Commission prepare an environmental impact statement on the Virginia Electric Power Company's (VEPCO) proposed steam generator repair program at the Surry Power Station and hold a Show Cause hearing on this proposed program. This letter was filed pursuant to 10 CFR §2.206 of the Commission's regulations.

The asserted bases for the request by the Institute are (1) that the notice of proposed issuance of the amendments to the operating licenses for the Surry Nuclear Power Station to allow the steam generator replacement was published only one day prior to actual issuance of the amendments, (2) that the Commission did not adequately address the matter of occupational exposure, (3) that no steam generator replacement activities should be approved until the pending transient worker regulations are promulgated,

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and (4) that the Commission should review the Commission's treatment of steam generator repair and replacement at pressurized water reactors.

In accordance with 10 CFR §50.59 of the Commission's regulations, a licensee seeking to make a change in the technical specifications or a change in the facility involving an unreviewed safety question must submit an application for an amendment to the license. On August 17, 1977, VEPCO submitted a request for NRC review and approval required in order to repair the steam generators at the Surry Power Station, Units 1 and 2. It was determined in accordance with 10 CFR §50.59 that such a program would involve an unreviewed safety question and, therefore, would require an amendment of VEPCO's Facility Operating License Nos. DPR-32 and DPR-37 for the Surry plant. In accordance with 10 CFR §2.105, a Notice of the Proposed Issuance of Amendments to the licenses at issue was published in the Federal Register on October 27, 1977 (42 FR 56652). The Notice was also available for public inspection in the Commission's Public Document Room and at the local public document room at the Swem Library, College of William and Mary, Williamsburg, Virginia. This Notice provided an opportunity for interested persons to request a hearing by November 28, 1977. No requests for a hearing were received in response to that Federal Register notice.* The Institute's

*The Atomic Safety and Licensing Board constituted to review requests for a hearing under the October 27, 1977 Federal Register Notice provided the Commonwealth of Virginia the opportunity to file a request for a hearing up to 10 days after issuance of the Staff's Safety Evaluation Report which was issued on December 15, 1978. On December 20, 1978, the Commonwealth stated it would not request a hearing.

request does not purport to be filed pursuant to the October 27, 1977 notice of opportunity to request a hearing.

The Institute's February 20, 1979 letter requested review of the procedures by which Amendments 46 and 47 to the Surry licenses were issued. It was incorrectly stated that only one day's notice was given for the proposed issuance of the amendments. As previously stated, notice of the proposed issuance of these amendments was made on October 27, 1977, (42 FR 56652), well over a year before the amendments were issued. The January 19, 1979 notice of issuance to which the Institute refers (44 FR 4057) was for an ECCS analysis at a steam generator tube plugging limit of 28% and did not apply to the steam generator repair program.

The Institute requested a review of the negative declaration made in the Environmental Impact Appraisal (EIA) for the steam generator repair program and requested the completion of a full environmental impact statement. The bases for the request were (1) that the EIA rejected analysis of the radiologic impact made by Battelle Northwest Laboratory published as NUREG/CR-0199, "Radiological Assessment of Steam Generator Removal and Replacement", (2) that the Commission compared the occupational exposure for the repair to exposures encountered with repair and maintenance of defective steam generators rather than with normal maintenance exposures and (3) that the Commission must analyze the environmental impact based upon actual release and pathway analysis and not by comparison to normal operation.

The EIA issued by the Commission recognized the radiological analysis published in NUREG/CR-0199. The EIA discusses the exposure ranges in NUREG/CR-0199 and states that the lower end of the generic estimate "... is the appropriate estimate for comparing with VEPCO's estimate ...". The position taken in the EIA considered the NUREG document qualification that "High exposure rates were chosen to assure a conservative analysis. In some cases, this approach may result in overestimates of the actual exposure ...". As stated in the EIA, the difference between the VEPCO and the NUREG estimates were reconciled by recognizing VEPCO has used the Surry plant specific measured data applicable to its own repair effort and further reduces the doses by use of temporary shielding which was suggested but not credited in the generic NUREG. The Commission's use of the VEPCO estimate is based on a review of the Surry steam generator repair program and a comparison with the NUREG report. Based on this review it was concluded that the VEPCO dose estimate should be more representative of the actual dose incurred.

The comparison of occupational exposures to be encountered during the repair with exposures encountered with repair and maintenance of defective steam generators is appropriate in this report. The steam generators at Surry have shown significant tube degradation, the repair of which has resulted in high occupational exposures. Continued use of these steam generators would result in continued high exposures.

The man-rem savings resulting from the repair can be determined by comparing expected repair and maintenance doses from continued use of the degraded steam generators with expected repair and maintenance doses from operation with new steam generators. It is expected that the man-rem saved from new generator maintenance compared to continued maintenance on the old steam generators would offset the doses incurred during repair in just a few years. It is this dose comparison which serves to justify the expected occupational exposure resulting from repair.

The EIA contains an estimate of releases (Table 4.2) for the repair both by VEPCO and the NRR (NUREG/CR-0199). These are compared with Surry operating experience and the values predicted in the staff's Final Environmental Statement (FES). As can be seen the expected releases from the repair are much less than those predicted in the FES. Therefore the environmental impacts resulting from the steam generator repair program are bounded by the FES impacts. A copy of the Negative Declaration and the Environmental Impact Appraisal is attached to and made a part of this decision (Appendix A).

Prior to issuing the amendment to allow the repairs to be made to the steam generators, the Office of Nuclear Reactor Regulation prepared the Staff Safety Evaluation Report (SER) which is attached to and made a part of this decision (Appendix B). That evaluation, which expressly addressed the matter of radiation exposure to workers, concluded that there is reasonable assurance that the health and safety of the public

(including the workers) will not be endangered by the proposed steam generator repair program and that the changes would be conducted in compliance with the Commission's regulations.

It was requested that no steam generator replacement activities be approved until the pending transient workers exposure regulations are promulgated. The Commission has already approved the repair program for Surry (Amendments 46 and 47) and does not consider it appropriate to restrict the Surry work until the proposed transient worker regulations are promulgated because the work has already been approved and the proposed rule would have little effect on radiation protection. Presently licensees are not required in all cases to obtain historical radiation exposure information for the current calendar quarter. In theory, if a transient worker received occupational radiation exposures from several licensees during the current calendar quarter and did not inform the licensees, he could encounter doses in excess of the 10 CFR Part 20 standards. The proposed rule would require licensees to obtain this information from the transient worker. Based on 1976 employee termination data only 1 out of 32,377 individuals exceeded 3 rems per quarter because of multiple jobs. Consequently the risk from not requiring this information is not significant enough to require special implementation of the proposed rule for the Surry steam generator work. In addition, Surry does request all employees, including transient workers, to report historical

occupational radiation exposures. It is expected that the rule will be promulgated prior to the Turkey Point and Palisades work.

Finally, complete review of the Commission's treatment of steam generator repair and replacement activities at pressurized water reactors was requested. The Commission is currently reviewing steam generator tube integrity under our Task Action Plans for Generic Activities. These tasks will include occupational exposures.

Based on the foregoing discussion and the provisions of 10 CFR §2.206, I have determined that there exists no adequate basis for holding a Show Cause hearing on the steam generator repair program and that an environmental impact statement need not be prepared. The request of the Environmental Policy Institute is hereby denied.

A copy of this determination will be placed in the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C. 20555 and the Local Public Document Room for the Surry Nuclear Power Station located at the Swem Library, College of William and Mary, Williamsburg, Virginia 23185. A copy of this document will also be filed with the Secretary of the Commission for its review in accordance with 10 CFR §2.206(c) of the Commission's regulations.

In accordance with 10 CFR §2.206(c) of the Commission's Rules of Practice, this decision will constitute the final action of the

Commission 20 days after the date of issuance, unless the Commission on its own motion institutes the review of this decision within that time.

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Appendix A -
Notice of Issuance of Amendments
to Facility Operating Licenses,
Negative Declaration and Environmental
Impact Appraisal dated January 20,
1979

Appendix B -
Staff Safety Evaluation Report
dated December 15, 1978