

TENNESSEE VALLEY AUTHORITY

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APR 17 1989

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket Nos. 50-327
50-328

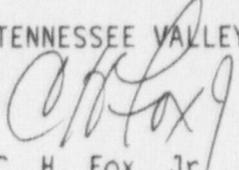
SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2 - NRC INSPECTION REPORT
NOS. 50-327/89-05 AND 50-328/89-05 - REPLY TO NOTICE OF VIOLATION

Enclosed is TVA's response to L. J. Watson's letter to O. D. Kingsley, Jr.,
dated March 16, 1989, which transmitted violation 50-327, 328/89-05-04.

If you have any questions concerning this submittal, please telephone
M. A. Cooper at (615) 843-6549.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


C. H. Fox, Jr., Vice President and
Nuclear Technical Director

Enclosure

cc (Enclosure):

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ENCLOSURE

RESPONSE TO NRC INSPECTION REPORT
NOS. 50-327/89-05 AND 50-328/89-05
L. J. WATSON'S LETTER TO O. D. KINGSLEY, JR.,
DATED MARCH 16, 1989

Violation 50-327, 328/89-05-04

"10 CFR 20.201(b) requires each licensee to make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present.

Technical Specification 6.12.1 requires in lieu of the 'control device' or 'alarm signal' required by Paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1,000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Special Radiation Work Permit. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously integrates the radiation dose rates in the area.
- b. A radiation monitoring device which continuously integrates the dose rate in the areas and alarms when a preset integrated dose is received.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device.

Contrary to the above, the licensee failed to perform radiation surveys necessary to evaluate the extent of radiation hazards present and entered the high radiation areas violating Technical Specification 6.12.1 requirements in that; on February 2, 1989, two auxiliary unit operators entered a pipe chase on Unit 2, elevation 690, on a standing general radiation work permit, where radiation levels of 3,500 mrem/hr contact on piping and 750 mrem/hr general area gamma dose rates existed. The AUO's did not have an integrating dose rate device, or an integrating dose rate device that alarms when a preset integrated dose is received, or an individual qualified in radiation protection, equipped with a dose rate device to provide positive control or perform radiation surveys.

This is a Severity Level IV violation (Supplement IV)."

Admission or Denial of the Alleged Violation

TVA denies that the event constituted or resulted from a violation of 10 CFR 20.201(b) or technical specification 6.12.1.

Reason for the Denial

The applicable section of the Code of Federal Regulations regarding surveys, 10 CFR 20.201, states:

- "(a) As used in the regulations in this part, 'survey' means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present.
- (b) Each licensee shall make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in this part, and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present." (emphasis added)

TVA believes that, under the circumstances, adequate measures were undertaken to evaluate the extent of radiation hazards that could have reasonably been anticipated given the area in question and the work that was to be performed.

TVA performs at least weekly surveys of the elevation 690 pipe chase area. Prior to the unanticipated exposure on February 2, 1989, surveys performed just days before on January 19, 26, and 31, 1989, indicated radiation readings well within the required limits for posting the area as a "radiation area" rather than a "high radiation area."

The activity being undertaken on February 2, 1989, by the two auxiliary unit operators (AUOs), sampling the refueling water storage tank (RWST), occurs on a weekly basis. In no prior instance has there been an incident involving an unanticipated exposure while performing this task. Moreover, three other AUOs who were in the elevation 690 pipe chase earlier that day were exposed to dose rates of just 6 millirem per hour (mrem/hr), well within the 100 mrem/hr limit for "radiation areas." These three AUOs were in the pipe chase at various times from 0100 to 0700 during an initial attempt to sample the RWST, while the cation bed demineralizer had been placed in service. Clearly then, just hours before the two AUOs entered the elevation 690 pipe chase at 1125 and encountered higher than normal radiation levels, the pipe chase area was well within the "radiation area" limits.

TVA evaluated and took adequate precautions to ensure the proper posting of the pipe chase area in question. For example, for those occasions when resin transfer activities are undertaken, the pipe chases are locked and posted as "high radiation areas." As noted above, however, TVA has never before encountered high radiation levels in the course of conducting RWST sampling activities. Given past work history involving the elevation 690 pipe chase, TVA believes it acted in a prudent manner to evaluate the extent of radiation hazards.

The cause of the higher than normal radiation level was the sudden failure of the cation bed demineralizer resin outlet valve 1-62-919. The valve was not being manipulated during the RWST sampling activity, and TVA had no indication of any prior leakage. TVA does not believe that the evaluation of radiation hazards referred to in 10 CFR 20.201 was intended to require licensees to postulate and take action to protect against every conceivable circumstance that may occur. This would render the evaluation process a virtually useless practice and ignore the clear language of the regulation, which specifically requires surveys that are "reasonable under the circumstances."

For the reasons described above, TVA believes that its evaluation process adequately evaluated the radiation hazards incident to the work being performed and that its survey process was reasonable under the circumstances. Accordingly, TVA does not believe that a violation of technical specification 6.12.1 or 10 CFR 20.201 exists.