

TENNESSEE VALLEY AUTHORITY NRC REGION II
CHATTANOOGA, TENNESSEE 37401 ATLANTA, GEORGIA
400 Chestnut Street Tower II

June 17, 1981

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Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 1 - NRC-OIE REGION II INSPECTION REPORT -
50-327/81-07 - RESPONSE TO VIOLATIONS

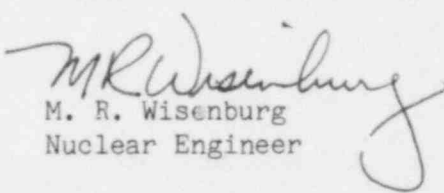
The subject inspection report dated May 22, 1981, cited TVA with one
Severity Level IV and two Severity Level V violations in accordance with
10 CFR 2.201. Enclosure 1 is our response to those violations. Enclosure
2 provides further information concerning TVA's efforts to upgrade employee
performance.

If you have any questions, please get in touch with D. L. Lambert at
FTS 857-2581.

To the best of my knowledge, I declare the statements contained herein are
complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


M. R. Wisenburg
Nuclear Engineer

Enclosures

cc: Mr. Victor Stello, Director (Enclosures)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE 1
SEQUOYAH NUCLEAR PLANT
RESPONSE TO VIOLATIONS

Violation 50-327/81-07-01

Technical Specification 6.4.1 requires that a retraining and replacement training program be established and implemented for the unit staff, including non-licensed personnel, which meets or exceeds the requirements and recommendations of Section 5.5 of ANSI N18.1-1971.

Contrary to the above, as of February 19, 1981, adequate training was not provided to Auxiliary Unit Operators (AUO's) prior to AUO's being permitted to perform independently on watch without first demonstrating proficiency for the watchstation. On February 11, 1981, with the reactor at cold shutdown inadequate on-the-job training for an on-watch AUO contributed to inadvertent actuation of containment spray from the RHR system.

This is a Severity Level IV Violation (Supplement I.D.3.).

Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

Reasons for the Violation

No formal administrative program had been established to ensure that each Assistant Unit Operator (AUO) received break-in training on a given shift position before his being assigned that position on the shift schedule. In addition, no method of certification had been established to verify the knowledge level of an individual AUO before his being assigned a given shift position.

Corrective Steps Which Have Been Taken and Results Achieved

An immediate review of all AUO's was conducted in order to establish a roster of individual AUO's qualified on each shift position. This review included the following considerations.

- (1) Previous shift position assignments for each AUO.
- (2) An evaluation of each AUO by the responsible Shift Engineer.
- (3) Each AUO provided a listing of those shift positions on which they believed they were qualified to man the shift.

The resulting roster was provided to the Operations Supervisor's office to use in the preparation of the shift schedules and to the Shift Engineer's office to use in filling AUO shift vacancies.

Corrective Steps Which Will Be Taken To Avoid Further Violations

A formal AVO break-in training program has been implemented. This program requires that an individual AVO receives a minimum break-in training period and passes an oral certification exam on a shift position before being assigned that position on the shift schedule. The Shift Engineer provides certification that an AVO has satisfactorily passed a break-in exam before the Operations Supervisor's office is allowed to schedule that AVO in a given shift position.

Date When Full Compliance Will Be Achieved

We are now in full compliance.

Violation 50-327/81-07-02

Technical Specification 6.8.1.a requires that procedures be established and implemented in accordance with the recommendations of Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978. Item 3.C of Appendix A identified plant procedures to be established and implemented for changing the status of the Residual Heat Removal (RHR) System. This procedure requires RHR containment spray valve 72-40 to be normally closed except during post accident conditions.

Contrary to the above, on February 11, 1981, the appropriate procedures were not implemented/utilized as required. As a result, during realignment of the RHR system RHR spray valve 72-40 was misaligned in the open position by the on-watch Auxiliary Unit Operator, which in turn resulted in the inadvertent actuation of containment spray, causing approximately 105,000 gallons of water to be sprayed into containment.

This is a Severity Level V Violation (Supplement I.E.)

Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

Reasons for the Violation

The Assistant Unit Operator (AUO) received verbal directions from the Unit Operator on the realignment of the residual heat removal system valves. The directions were issued early in the shift and were not executed until approximately four hours later. The AUO did check with the Unit Operator before commencing the realignment, but the Unit Operator's instructions were given in an informal manner and were not understood by the AUO. The AUO attempted to reverify the Unit Operator's instructions but was hampered in this effort because the plant telephone in the immediate work area was out of service.

The violation occurred because of inadequate instructions issued by the Unit Operator and the AUO's reliance on his recollection of the verbal instructions instead of consulting the system operating procedure or writing the instructions down for reference.

Corrective Steps Which Have Been Taken and Results Achieved

Plant administrative instructions were revised to stress the importance of and the responsibilities for formal and accurate communications as well as the use of plant procedures and instructions. The Assistant Plant Superintendent and the Operations Supervisor met with each shift operating crew to critique the spray incident. The topics covered in the critiques included both communications and use of plant instructions as well as other aspects of the incident. A formal training program on effective oral communications was developed at the Power Operations Training Center. This program was administered to all licensed employees with the exception of four individuals. A makeup program has been scheduled for those operators and is expected to be completed by July 14, 1981.

Twelve (12) additional hand-held radios were procured for use by the shift operations employees in coordinating shift activities. In addition, the entire inplant phone system has been checked and increased emphasis placed on maintaining the system operable.

Corrective Steps Which Will Be Taken To Avoid Further Violations

A schedule is being developed to administer the oral communications course to all nonlicensed operations employees at Sequoyah. A Division of Nuclear Power procedure is being drafted that will establish guidelines for this training at all of TVA's nuclear plants.

Followup surveys have been performed by the plant Quality Assurance and Compliance Staffs on the effectiveness of additional measures taken to improve the formal atmosphere in the control room with emphasis on effective and formal communications. This will be a continuing effort.

Date When Full Compliance Will Be Achieved

We are now in full compliance.

Violation 50-327/81-07-03

Technical Specification 6.8.1.a requires that procedures be established and implemented in accordance with the recommendations of Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978. Item 1.B of Appendix A identifies procedures to be established and implemented that specify personnel authorities and responsibilities for the safe operation and shutdown of the plant.

Contrary to the above, as of February 11, 1981, administrative procedures did not clearly delineate authorities and responsibilities for all operations personnel, specifically AUO's, involved in safety-related activities.

This is a Severity Level V Violation (Supplement I.E.).

Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

Reasons for the Violation

Inadequate and poorly emphasized plant administrative procedures were the primary cause of the violation.

Corrective Steps Which Have Been Taken and Results Achieved

Plant administrative procedures were revised to describe the authorities and responsibilities of each of the operating shift positions as well as the communication policies to be followed by employees involved in safety-related activities.

Corrective Steps Which Will Be Taken To Avoid Further Violations

The revised administrative procedures have been discussed with each operating shift crew. The operating shift organization has been more formally structured and steps taken to strengthen the organization in order to provide more in-plant supervision.

Date When Full Compliance Will Be Achieved

We are now in full compliance.

ENCLOSURE 2

Your May 22, 1981 letter requested that TVA identify the short- and long-term actions, taken and planned, to upgrade personnel performance. In addition to the information provided in the specific violation responses, the following information is provided.

Shortly following the RHR incident, a thorough investigation was performed that included the following.

1. Critique of the incident and a collection of written or oral statements by the principals involved in the incident immediately after the accident.
2. Assignment of a Task Director to perform an independent evaluation of the incident and provide recommendations to the Plant Superintendent and the Assistant Director of Nuclear Power (Operations) on lessons learned.
3. The Plant Superintendent and the Assistant Plant Superintendent met with all shift engineers to further identify those areas in which increased direction and controls were considered necessary in order to improve the shift engineer's control over shift activities.
4. Approximately 23 Assistant Unit Operators were interviewed in order to receive a cross section of the general views of this specific classification in such areas as competence to man shift positions, general work attitudes, relationships with other shift classifications, and their understanding of the duties and responsibilities of the AUO classification.
5. The Assistant Plant Superintendents from Sequoyah and Watts Bar and a representative from the NUC PR Assistant Director's (Operations) office met with approximately four SE's, four ASE's and eight Unit Operators to discuss methods of shift organization and controls to improve shift performance.
6. The Superintendent and Operations Supervisor from Browns Ferry and the Superintendent from Watts Bar were consulted and their inputs included in our evaluation.

This initial investigation subsequently resulted in the following actions.

In order to clarify the duties and responsibilities of the shift employees including the Shift Engineer, the structure of the operating shift has been revised and issued. The general responsibilities and authorities of each position are described in the job description provided to the individuals when they are appointed to the position. Administrative Instruction AI-2 has been revised to describe the responsibilities and authorities of each operating station.

AI-2 and AI-30 clearly state that the shift engineer is in direct charge of plant operations and he, or his representative, must give permission for any activity that may affect plant equipment. We have met with all the shift engineers and have stressed to them that they are responsible for all operations on their shift and that they have authority to terminate any activity that they believe threatens plant safety or exceeds their span of control. We have emphasized this in training meetings with each shift and with all other sections in the plant who perform work that affects plant safety or the configuration of the plant.

In order to improve communications between shift employees and between shift employees and management, we have provided clearer lines of communication between operating positions within a shift as well as between operating shifts and other sections by revising the shift structure, clarifying the communication paths, establishing work location routines, improving the maintenance of telephones, and investigating additional or different radio communications. This was all completed by May 1, 1981.

We have expanded our instructions on the use of written and oral instructions and conducted training of the shift crews. This was done before restart of the unit. A training program on oral communications has been developed by the Instructor Training and Staff Development Unit and will be administered to all licensed operators at Sequoyah Nuclear Plant. This course will be administered to all nonlicensed employees on the operations staff. A procedure is being drafted to establish guidelines for this training at all TVA nuclear plants.

We have improved the environment in the main control room by closer supervision and compliance with established policies regarding conduct, access, and housekeeping.

The Assistant Superintendent and Operations Supervisor met with each shift crew before restart to emphasize the conduct required by AI-2. These discussions stressed clear communications, control room atmosphere, authorities and responsibilities of operating employees, and status control of safety-related systems. Discussions were also held with all key supervisors emphasizing the requirements to keep the SE informed of work in progress and his responsibility to keep control of activities affecting safety.

An in-plant on-the-job training and certification system of nonlicensed operating employees has been established under the instruction of a qualified individual. This is used in cases where our evaluation of nonlicensed operators now at the plant shows that an individual is not qualified to man a particular work station in the plant due to lack of operating experience or on-the-job training or break-in time. Following the period of training, an oral examination shall be given to establish that the training has been adequate to qualify the trainee to competently and safely man the work station. The examination will be administered by a qualified operator other than the operator serving as instructor. If the results of the examination are unsatisfactory, the trainee will be put back into training for whatever additional period of time is required to qualify him for the position through subsequent oral examination or he will be restricted from assuming responsibility for the particular work location.

This examination will be documented and attested to by both examiner and examinee. The shift engineer will be provided with a qualification status list consisting of operator names and job positions for which they are qualified. He will fill work positions and make job assignments in accordance with this list. The qualification status list will be updated periodically by the Supervisor, Operations Section, and provided to the shift engineer.

All future nonlicensed operating employees will, upon assignment to Sequoyah, receive on-the-job break-in training and examinations before assuming responsibility for any job position. A Sequoyah Standard Practice describing this break-in has been issued and implemented.

In order to ensure that only qualified employees are assigned to perform functions that can affect the safety of operations, we have evaluated our nonlicensed operating employees, specifically the assistant unit operators and fourth-period student operators, to determine each individual's qualifications and competence in regard to performing operating functions that can affect the safety of operations.

This evaluation was accomplished as follows.

1. Reviewed previous shift manning schedules and operating logs to determine the actual operating experience of each individual operator at each plant operating station.
2. Each shift engineer (SRO) was consulted for an opinion of individual qualifications to support the effectiveness of operating experience determined in item 1 above.
3. Each operator was consulted for a self-evaluation of qualifications to support or refute the conclusions of items 1 and 2 above.

The result of this evaluation is a qualification status list which reflects the spectrum of nonlicensed operating employees' operating experience at Sequoyah. This list will be used to fill vacant shift positions.

All of the above actions and plans are being reviewed for applicability to other TVA nuclear facilities. They have been discussed at a Plant Superintendents' meeting to ensure that all plants are aware of these programs and proper consideration is being given to implementing these at other TVA nuclear plant facilities.