

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

6N 38A Lookout Place

September 26, 1986

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Project Director
PWR Project Directorate No. 4
Division of Pressurized Water Reactors (PWR)
Licensing A
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

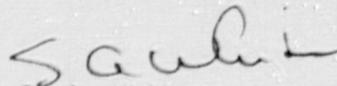
In the Matter of)	Docket Nos. 50-259
Tennessee Valley Authority)	50-260
		50-296
		50-327
		50-328
		50-390
		50-391

Your August 27, 1986 letter to me requested TVA's views on various items identified by the ACRS in their August 12, 1986 letter from David A. Ward to Chairman Lando W. Zech, Jr. Enclosed are TVA's views on those selected items.

If you have any questions concerning these issues, please get in touch with D. L. Lambert at (615) 751-2733.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



S. A. White
Manager of Nuclear Power

Enclosure

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CONCERN 1

ACRS Concern #1

We were unable to identify the existence of an adequately structured development program at TVA to assure that managers are prepared to handle the special problems associated with nuclear power plants and to provide for successful and systematic career development. TVA's Corporate Nuclear Performance Plan does not describe or express an intent to develop such a plan. TVA has taken some steps recently toward providing management development on an ad hoc basis and has for some time had training courses which could be used. We generally agree that the measures taken by TVA with a temporary management team can satisfy their immediate needs while the contract managers are employed at TVA. However, we believe that a forward-looking, longer range, structured management development program needs to be established if TVA is to meet its future needs. The NRC Staff appears to share our concerns.

TVA Response:

I am in agreement with the statement "that a forward-looking, longer range, structured management development program needs to be established if TVA is to meet its future needs." Such a program is under development for the Office of Nuclear Power (ONP). A project leader has been assigned and has been researching the best management development programs within the nuclear utility industry and other identified successful corporations. We need not only a good program, but one tailored to the unique situation at TVA. We also have directed the use of an outside specialist in management development to assist in the design of a management development program. Our current practices, in various stages of development and implementation, include replacement planning, individual development plans, skills assessment, management/supervisory training, manpower forecasting specifically for critical skill positions, a management selection review board, and an automated data base which can be utilized to compare an individual's qualifications against selection requirements.

Our schedule is as follows:

Completion of research . . . September 30, 1986
Completion of program design
and implementation March 31, 1987

CONCERN 2

ACRS Concern #2: In the present organization, the Manager of Nuclear Power has 25 individuals reporting directly to him. This is clearly a large span of control and, if taken at face value, would be a serious deficiency in the organizational plan in the long term.

From our discussions with the TVA staff, it became apparent that there are shadow responsibilities among these organizational units. Some of the managers will actually report on most matters to the Manager of Nuclear Power through certain other managers. However, these lines of responsibility are not displayed in the organizational plan. We cannot tell whether they are clear to the managers involved. This arrangement may well be useful in the initial restructuring of the organization but will, in our opinion, need to be clarified if it is not changed in the process of transferring TVA's operations from the contract managers to permanent TVA employees. We recommend this matter to the Commission for their attention.

TVA Response:

There is no magic maximum span of control. It is highly dependent on the capabilities and experience of the managers involved, as well as the particular situation that exists. The current organizational structure is the one needed under present conditions. The existing structure provides me with multiple sources of information. The diversity of direct reporting ensures that issues are resolved with full consideration and input from all elements of the organization. This is particularly important in my organization in which fundamental changes in the established way of doing business are being evaluated and made on a continuing basis. This structure provides me with the opportunity for continuous evaluation and for immediate feedback on the performance of my key managers.

The functioning of the existing organization will continue to be examined. If we approach the point where the span of control presents disadvantages which outweigh the elements stated above, there are adjustments which can be made to the structure, for the long term.

CONCERN 3

ACRS Concern #3: It is not clear where the focal point for nuclear safety resides within the TVA corporate management structure. The word "Safety" appears in several parts of the organization but the functional assignments seems fragmented with no clear assignment of responsibility. Although we agree that safety is everybody's business, we believe that a more focused approach is needed. It is not clear who has the responsibility for being the corporate nuclear "safety conscience" within the TVA higher management structure.

The former Nuclear Safety Review Staff appeared to have this mission at the TVA board level but did not perform it effectively. As a result, the organizational arrangement was discredited and the function has been absorbed by the Manager of Nuclear Power as a management review function. We believe that TVA should reestablish credibility with regard to safety cognizance. The safety oversight process should be focused at a top management level. Such a measure may not be warranted for all licensees. TVA is, however, an unusual case and calls for unusual measures.

It is, in addition, not clear where the "safety conscience" of each site organization resides. The engineering groups seem to remain oriented toward design. The Independent Safety Evaluation Group (ISEG), while ostensibly filling the function of safety conscience, appears only to provide safety-oriented services. The group which is to play a key role in safety-related decisions and evaluations needs to be identified.

TVA Response: Within TVA's nuclear corporate structure the organization charged with being the focal point for safety and the "safety conscience" is the Nuclear Safety Review Board (NSRB). The boards submit written reports directly to Mr. White and to the Board of Directors and this is focused at a top management level. The boards at Sequoyah and Browns Ferry Nuclear Plants are functional, while the boards for Watts Bar and Bellefonte Nuclear Plants will be established commensurate with licensing of those plants. The boards will be chaired by a senior-level TVA manager, well versed in matters of nuclear safety, who has no competing responsibilities. Each board will utilize highly qualified, standing senior members and advisers to ensure that the boards maintain both their breadth of vision and their independence from competing priorities. In addition to fulfilling technical specification requirements to review significant safety and licensing issues, the boards are being given a broad charter to provide the Manager of Nuclear Power with advice and counsel on matters which may affect the safety of TVA nuclear installations. Therefore these boards are the "safety conscience" of each site.

We also believe strongly that safety is everybody's business. Within TVA, safety is a line responsibility, and the line managers from Mr. White to the site directors to the plant managers understand and recognize that they are responsible and accountable for the safe operation of their facilities. It is our intent to get this basic philosophy down to the individual worker/operator. To assist them in the execution of this responsibility, a variety of formal and qualified resources are available.

The Director of Nuclear Safety and Licensing is responsible for all licensing questions and for confirming that all safety questions recognized in regulations are acknowledged in design, construction, and operation. The principal function of the ISECs at each plant is to examine plant operating characteristics, NRC issuances, Licensing Information Service advisories, and other appropriate sources of plant design and operating experience information that may indicate areas for improving plant safety.

The Manager of Nuclear Power also has at his disposal the Nuclear Manager's Review Group, which can undertake such studies, including those relating to safety, that he feels would help him fulfill his responsibilities.

The quality assurance organization, in providing for and monitoring compliance with quality requirements, also fulfills a crucial safety role.

These groups do not provide safety; they are a means by which the line management can effect and give visible accountability for the safe operation of TVA facilities. The NSRBs will include in their reviews an ongoing evaluation as to the effectiveness of these structures in supporting line management's ability to provide an appropriate level of safety.

CONCERN 5

ACRS Concern #5: TVA does not use modern personnel selection techniques like those used in other segments of the nuclear utility industry and many successful corporations. We recommend that TVA review the use of personnel selection methods and utilize the most effective aptitude testing available to them for personnel selection, transfer, and promotion.

TVA Response: As suggested by the ACRS, we are currently reviewing with other segments of the nuclear utility industry and other identified successful corporations (e.g., IBM, Xerox, DuPont) their personnel selection techniques, including testing.

We presently use the General Aptitude Test Battery (GATB) to prescreen applicants for craft apprenticeships, instrument and control technician trainees (I&C), and nuclear operator students (NSGPO). The American College Test (ACT) was added to the selection criteria in the fall of 1985 for I&C technician trainee candidates and nuclear student operator candidates.

In 1980, we administered a series of Differential Aptitude Tests (DATs) to all nonlicensed and Reactor Licensed (RL) Operations personnel to establish a baseline for which success in the nuclear student operator program could be predicted. Since 1980, when the baseline was established, this series of tests (DAT & GATB) has served as the basis for prescreening of individuals for the Nuclear Student Operator Training Program.

In 1986, we began a pilot program utilizing the California Psychological Inventory (CPI) and selected DAT tests for the selection of employee concern representatives. This is the first instance in which a battery of psychological and aptitude tests has been used by TVA Nuclear Power for management selections.

We are continuing the use of psychological and aptitude testing on a selected basis as well as other standard personnel selection techniques for filling management positions.

CONCERN 7

ACRS Concern #7: In our discussions with TVA and the NRC Staff, we attempted to gain some perspective on problems associated with the restart of the TVA plants. The items delaying the restart of Sequoyah appear to be resolvable in the near future. Little was presented during these discussions concerning the additional work required to prepare Browns Ferry for restart or for licensing of Watts Bar. A concerted effort should be applied by the TVA and NRC organizations to complete the necessary documentation and review of safety questions for Sequoyah and return those units to power at the earliest date that nuclear safety can be assured. Restoring power operations at Sequoyah should significantly improve the morale of the entire TVA nuclear organization and restore confidence in present management. We believe that high morale of nuclear plant operating personnel is another of the most important ingredients for plant safety.

TVA Response: We agree with ACRS's view that high morale of nuclear operating plant personnel is a key ingredient for plant safety. We are applying a major effort to complete the necessary documentation and review of safety questions for Sequoyah and return those units to power at the earliest date that safety can be assured. We also agree that returning the Sequoyah units to power will significantly improve the morale of the entire nuclear organization and restore confidence in management. The Sequoyah effort will include the assessment of generic issues from Watts Bar and Browns Ferry Nuclear Plants. The present schedule date for startup of Sequoyah is March 1987, but TVA will not hesitate to delay that date if safety issues are not resolved or new issues arise.

Other strides in returning TVA plants to operation have been the submittal of the Browns Ferry Nuclear Performance Plan, Volume 3, on August 28, 1986, and revision 2 of the Revised Corporate Nuclear Performance Plan, Volume 1, on July 31, 1986. Additionally, TVA is in the process of preparing a Nuclear Performance Plan for Watts Bar Nuclear Plant which will parallel previous efforts.

WARD'S COMMENT

Comment by ACRS Member David A. Ward

Some of the problems experienced in the operation of TVA's nuclear plants have been attributed to the past dominance within TVA of the "architect-engineer" perspective over the "operations" perspective. The reorganizational approach and many of the temporary managers appear to be influenced by this same "architect-engineer" tradition. I have some concern about whether the "operations" point of view will be given an adequate voice in the new organization.

TVA Response: TVA's nuclear management problems have typically not resulted from the dominance of one element of the organization over another. Rather, they have been more closely related to the failure of top management to clearly define the responsibility and accountability of both the organizational elements and the managers in the nuclear program.

The roles and responsibilities of every element of the TVA nuclear power organization have been carefully examined. These are being documented in the position descriptions of the managers and in the policy statements to be issued by the Manager of Nuclear Power.

In regard to Mr. Ward's specific comment, it should be noted that the individual site directors report directly to the Manager of Nuclear Power. This places the individual directly responsible for the safe and efficient conduct of all site activities, including operations and engineering, at the same organizational level as the division directors.

TVA's Division of Nuclear Engineering has significant and direct responsibilities for the conduct of engineering-related activities. These activities are, however, provided as a service to the facilities and as such must be responsive to the operator of the facility. There is a balance between maintaining the integrity of the engineering process and providing the operator with the authority to control his facility. Nuclear safety is not served when the balance is "dominated" by either perspective.