Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

June 29, 1999

TVA-SQN-TS-98-05

10 CFR 50.90
10 CFR 50.54(a)(3)
10 CFR 50.55(f)(3)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

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

NUCLEAR REGULATORY COMMISSION (NRC) - BROWNS FERRY NUCLEAR (BFN), WATTS BAR NUCLEAR (WBN), AND SEQUOYAH NUCLEAR (SQN) PLANTS - ELIMINATION OF INDEPENDENT SAFETY ENGINEERING GROUP (ISEG) - NUCLEAR QUALITY ASSURANCE PLAN (NQAP)(TVA-NQA-PLN89-A) - SQN UNITS 1 AND 2 TECHNICAL SPECIFICATION (TS) NO. 98-05 - SUPPLEMENTAL INFORMATION

This letter requests that the NRC staff reconsider TVA's proposal dated March 2, 1999, based on the additional information provided herein. It addresses the issues provided by NRC's letter dated April 23, 1999, concerning independence, personnel qualifications, and the monthly corporate reporting requirements. In addition, it addresses ISEG's principal functions and how TVA's line organizations and processes will maintain these functions once ISEG is eliminated. Since this letter supplements TVA's March 2, 1999, submittal, a copy of that letter is provided in Enclosure 1. Enclosure 2 provides marked-up pages of the NQAP showing the proposed change discussed in this letter. Enclosure 3 provides a list of commitments made in this letter.

TVA's intent is to obtain approval to eliminate the ISEG groups. TVA's initial submittal described how TVA organizations and culture have matured to the point that they now exceed the original ISEG benefits. This letter clarifies how some of these changes apply directly to ISEG requirements. In addition, it shows how TVA's organizations, NRC rules and regulations, and the TVA NQAP will ensure that key benefits are retained.

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A meeting was held in Rockville, Maryland, on May 24, 1999, among NRC and TVA to discuss these issues, and the general approach for addressing independence, reporting requirements, and personnel qualifications was accepted.

The ISEG *principal functions* include examination of plant operating characteristics, NRC issuances, industry advisories, and other appropriate sources of plant design and operating experience information that may indicate areas for improving plant safety. These functions are now alternately performed by organizations other than ISEG. Operating characteristics are primarily examined by Engineering through the results of the "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," 10 CFR 50.65, and quarterly system health reports. The remaining items are examined by the Industry Affairs organization through the Nuclear Experience Review Program (NER). The NER Program complies with NUREG 0737, Task Action Plan I.C.5, "Procedures for Feedback of Operating Experience to Plant Staff." The organizations that perform these functions are described in the NQAP and will be retained as an integral part of TVA's organization.

Independence is achieved through independent technical reviews performed by the Engineering organization. The site Engineering organization is independent of the plant organization. TVA established onsite Engineering organizations in the mid-1980s to provide additional site technical support for design basis and system performance issues. This organizational change increased the availability of technical expertise located onsite. In contrast, NRC identified in NUREG 0737, Task Action Plan I.B.1.2, "Independenc Safety Engineering Group," that a primary benefit for ISEG was to establish some onsite technical expertise. The Engineering organizations are responsible for independent technical reviews. These reviews primarily include:

1. System performance monitoring as required by the Maintenance Rule, 10 CFR 50.65.
2. Technical operability evaluations.
3. Review of technical specification changes that affect the design basis.
4. Review of Final Safety Analysis Report changes that affect the design basis.

TVA will incorporate changes that reflect these Engineering responsibilities for independent technical review into the NQAP within 60 days after NRC approval of this requested change.

TVA also recognizes that the NRC will place increased emphasis on these engineering functions in the new baseline inspection programs as described in SECY 99-007 and SECY 99-007A.

Reporting Requirements are met through the reporting results of the Maintenance Rule (10 CFR 50.65), TVA's strong and effective Corrective Action Program (CAP), and the self-assessment process. Engineering currently reports the results of the Maintenance Rule through the system health/status reports. These reports provide a summary analysis of system performance that focuses management attention on systems not meeting goals by indicating adverse trends and problem areas. They ensure heightened management awareness of problem areas and focus resources on problem resolution. Each system engineer develops and submits a monthly report for assigned systems. This information is rolled-up into the quarterly system status report, in part, to comply with 10 CFR 50.65. These reports are published internally on TVA's computer network.

Reporting for TVA's CAP is accomplished through the management review committee. The CAP is described in the NQAP. In addition to the CAP, TVA routinely performs self-assessments. A self-assessment is a critical evaluation of specific programs or processes, both technical and administrative, and typically results in the identification of findings or areas for improvement. Self-assessments are performed and documented in accordance with management directives in order to ensure efficient and consistent implementation. Deficiencies identified during self-assessment activities are addressed through the CAP as applicable. The goal is to promptly identify and correct organization and/or program performance problems. TVA believes that its corrective action and self-assessment programs are programmatic strengths. TVA also recognizes that the NRC will place increased emphasis on the CAP and self-assessment capability in the new baseline inspection programs, as described in SECY 99-007 and SECY 99-007A.

Personnel Qualifications have significantly improved since ISEG's inception. From a historical perspective, NRC's "New Regulatory Framework" dated March 4, 1999, recognized that the focus on training that began in 1984 has had a positive impact on the overall safety of the industry. This perspective was presented by NRC management at the 1999 Regulatory Information Conference. The Training Rule (10 CFR 50.120) ensures that the focus on training and qualification will continue. In addition, the National Academy for Nuclear Training was formed in 1985 to focus and unify industry efforts to continue improvements in training and qualification programs. With the support of INPO, the National Academy for Nuclear Training members develop the accreditation objectives and

criteria; develop supporting guidance; assist member utilities in developing, implementing, and maintaining performance-based training programs; and evaluate the quality and effectiveness of utility training programs. TVA is a member of the National Academy for Nuclear Training. TVA's implementation of the accredited Engineering Support Personnel training program directly supports the review functions described above in compliance with 10 CFR 50.120.

In addition, the NQAP addresses responsibilities for the development and implementation of indoctrination, training, qualifications, and certification activities.

In summary, TVA has described how the engineering organization has changed and how key programs have evolved and matured. These changes have overtaken and surpassed the benefits originally envisioned when the ISEG group was first established. In addition, TVA's site culture has matured and actively promotes a safety-conscious work environment. TVA now believes that the requirements for separate ISEG groups restrict efficient personnel use and limit flexibility. To support the elimination of the ISEG requirement, TVA has described various groups and programs that alternatively provide the ISEG benefits. TVA has also described how NRC rules and the NQAP will ensure that these benefits are retained. And finally, TVA recognizes that NRC changes being made in the new baseline inspection program will provide increased focus for the programs that alternatively provide the ISEG benefits.

If you have any questions or comments, please contact R. M. Brown at (423) 751-7228.

Sincerely,

Mark J. Burzynski

Mark J. Burzynski
Manager
Nuclear Licensing

Subscribed and sworn to before me
this 29th day of June, 1999

Barbara J. Bennett
Notary Public

My Commission Expires January 15, 2003

Enclosures
cc: See page 5

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EDMS, WR 4Q-C (Re: L44 990503 003)

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ENCLOSURE 1

TVA's letter to NRC dated March 2, 1999, "Nuclear Regulatory Commission (NRC) - Browns Ferry Nuclear (BFN), Watts Bar Nuclear (WBN), and Sequoyah Nuclear (SQN) Plants - Elimination Of Independent Safety Engineering Group (ISEG) - Nuclear Quality Assurance (NQA) Plan (TVA-NQA-PLN89-A) - SQN Units 1 and 2 Technical Specification (TS) No. 98-05"

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March 2, 1999

TVA-SQN-TS-98-05

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TVA proposes to eliminate the ISEG/Independent Technical Review (ITR) function from TVA's Nuclear organization. This change would include the removal of ITR requirements from the TVA NQA Plan and the ISEG requirements from the SQN Unit 1 and 2 licenses. ISEG reviews are considered synonymous with ITR reviews in TVA's Nuclear organization.

After the Three Mile Island (TMI) accident in 1979, the TMI-2 Lessons Learned Task Force suggested that plants would be safer if an independent group performed onsite safety reviews. Subsequently, NUREG-0737, I.B.1.2, required each new applicant for an operating license to establish an ISEG.

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The principal functions of the ISEG were to examine plant operation characteristics, NRC issuances, Licensing Information Service advisories, and other appropriate sources of plant design and operation experience information that may indicate areas for improving plant safety. Also, the ISEG was to perform independent review and audits of plant activities including maintenance, modifications, operational problems and analysis, and aid in the establishment of programmatic requirements for plant activities. Another function of the ISEG was to maintain surveillance of plant operations and maintenance activities to provide independent verification that these activities are performed correctly and that human errors are reduced as far as practicable.

What the ISEG was intended to provide is now an everyday aspect of TVA's operations. Alternate means are now available to examine design configuration and design bases, plant operations and maintenance work activities, system and equipment performance, plant events and industry experience, and recommend solutions.

Where TVA once relied on the ISEG to examine appropriate sources of plant design, the Engineering organization has been relocated to the sites. TVA's Design Bases Reconciliation Programs have positioned TVA ahead of recent industry problems associated with conflicting and inadequate design. TVA has kept pace with the latest developments in the industry regarding design bases and configuration management programs. The site Design Engineering organization is responsible for maintaining the design bases and design configuration. The Training Rule ensures that design and plant personnel are properly trained.

Where TVA once relied on ISEG to examine plant operational characteristics such as reactor trips, significant events, and adverse trends, the Corrective Action Program (CAP) now requires structured investigation and root cause analysis. System engineers are now available for everyday consultation. They provide technical assistance to the plant Operations and Maintenance staffs and are an integral part of the plant team. To identify plant reliability issues, system engineers prepare System Health Reports that include a summary analysis of system performance. The results of System Health Reports are published as Level I Trend Reports on the TVA Network. Through established Maintenance Rule criteria, system engineers collect equipment performance data and examine the data against

established performance goals. Through equipment performance trending and System Health Reports, management attention is then focused on equipment and systems that are not meeting established performance goals. The site Engineering organization is tasked with the development of technically correct and innovative solutions to plant problems. Coupled with a strong CAP element, these processes provide a structured means to examine and recommend appropriate corrective action for plant safety issues.

Where TVA once relied on ISEG personnel for special assessment skills, self assessments are now conducted by line organizations as a tool to monitor and recommend process improvements. These assessments are self-critical evaluations of specific processes, both technical and administrative, and typically result in the identification of findings or areas for improvement. The Nuclear Assurance (NA) functional area audits focus on selected systems, functions, or components and do a more thorough job of assessing program performance. Typical functional area audits review prior line self assessments, NA oversight, industry trends, corrective actions, the Institute of Nuclear Power Operations (INPO) performance criteria, NRC inspection modules, lessons learned from previous audits and assessments, and documentation requirements.

Where TVA once relied on ISEG to examine NRC issuances, Licensing Information Service Advisories, and Operating Experience (OE), the Nuclear Experience Review process has matured into a strong, programmatic element under INPO's guidance.

Where TVA once relied on ISEG expertise to examine and improve plant safety, multidisciplined groups now evaluate work schedules and equipment reliability. The Probabilistic Safety Analysis (PSA) for each operating plant and computer-based software are tools recently introduced to evaluate work activities and reduce online and outage work-related risk.

The ISEG's composition has become burdensome, as it restricts the capability to utilize resources to their maximum advantage and benefit. ISEGs run counter to the current operating safety culture that focuses on line accountability, management involvement, and self-critical self assessment. Therefore, it is now appropriate to refocus the ISEG resources on more beneficial activities.

TVA has established a work environment where people identify problems, where the entire team focuses on solutions, and where TVA is increasingly self-critical and sets high expectations for performance. Overall strengths include self-critical self assessments, the availability of design bases information, site Engineering oversight, and training for what is important to safety. High standards of performance are established and reinforced that challenge organizations to continually improve. These developments are integral to a strong management culture that emphasizes system performance, the right people, assessment of performance against goals, and actions to correct deviations. These developments collectively assist operating plants in resolving problems that improve plant safety.

Enclosure 1 contains the rationale as to why it is now appropriate to eliminate ISEG requirements. The discussion begins with a brief ISEG history, then moves on to discuss examples of fundamental improvements in TVA's operating environment, including industry initiatives, that have occurred since ISEG's inception in 1979.

Enclosure 2 provides a proposed change to TVA's NQA Plan to reflect the proposed change. This update is provided in accordance with 10 CFR 50.54(a)(3) and 10 CFR 50.55 (f)(3). The changes are shown on a marked-up copy of NQA Plan, Section 4.1.5.D. This change is considered a reduction in the commitment from the previous revision of the NQA Plan. These changes will be incorporated into the NQA Plan once approved by NRC, and no additional NQA Plan submittal will be necessary under 10 CFR 50.54(a)(3).

As the SQN license contains a condition for maintenance of an ISEG function, Enclosure 3 contains the proposed licensing amendment package (TS 98-05) that would delete ISEG from SQN Units 1 and 2 license conditions for licenses DPR-77 and 79. Enclosure 4 contains copies of the appropriate pages from SQN Units 1 and 2 licenses that have been marked-up to show the proposed changes. Enclosure 5 forwards the revised pages for SQN Units 1 and 2 licenses that incorporate the proposed changes. The amendment request is submitted, in accordance with the provisions of 10 CFR 50.4 and 50.90, for changes to the TS. TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

The SQN Plant Operations Review Committee and the SQN Nuclear Safety Review Board have reviewed this proposed change and determined that operation of SQN Units 1 and 2, in accordance with the proposed change, will not endanger the health and safety of the public. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter to the Tennessee State Department of Public Health.

TVA requests that the amended licenses be made effective within 45 days of NRC approval. If you have any questions or comments, please contact R. M. Brown at (423) 751-7228.

Sincerely,

Original signed by

Mark J. Burzynski
Manager
Nuclear Licensing

Subscribed and sworn to before me
on this 2nd day of March 1999

Armalee Petty
Notary Public

My Commission Expires March 21, 2001

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ENCLOSURE 1

Introduction

This enclosure summarizes some of the fundamental changes in TVA's operating environment including industry initiatives that have occurred since the Independent Safety Engineering Group's (ISEG) inception.[1] The purpose of the enclosure is to show that the ISEG requirement can be eliminated. First, it provides a brief background on ISEG. Then, it focuses on three key areas of improvement: (1) knowledgeable plant workforce; (2) risk management oversight; and (3) program, organization, and human performance.

Background

In May 1979, NRC formed a task force to identify and evaluate safety concerns originating from an accident at Three Mile Island (TMI) Unit 2. In the final report (NUREG-0585), the TMI-2 Lessons Learned Task Force suggested several changes in the basic safety policy for nuclear power plants. Some of these suggestions lead to the conclusion that plants would be safer if a licensee staff performed onsite safety reviews. The group was labeled ISEG, and NUREG-0737 required such a group for new operating license applicants after the TMI accident in 1979. The functions envisioned for ISEG were outlined in NUREG-0737 and were further defined in SECY 80-242. Units were licensed at Sequoyah (SQN) and Watts Bar Nuclear Plants (WBN) after the issuance of NUREG-0737, and ISEG was listed as a license condition for SQN Units 1 and 2. Although Browns Ferry Nuclear Plant (BFN) was not a post-TMI plant, NRC made TVA's intentions to establish ISEG as a part of the BFN Regulatory Performance Improvement Plan a licensing commitment by Confirmatory Order EA 84-54. Subsequently, TVA met all the requirements of EA 84-54, and the Confirmatory Order was closed by NRC's letter dated June 12, 1991. This resulted in ISEGs at TVA's operating plants augmented by TVA-Corporate Engineering.

Fundamental changes regarding how TVA does business have now superseded the original benefit thought to be provided by the ISEG organization. The following sections of this enclosure illustrate how TVA's operating environment, including industry initiatives, have evolved since 1979.

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1 TVA's operating environment emphasizes continuous improvement. The descriptive statements made in this enclosure regarding the means by which the TVA Nuclear Program has evolved in a manner better suited to today's safe operating environment are provided for general information and should in no way be considered as separate regulatory commitments.

1.0 Knowledgeable Plant Workforce

Since ISEG requirements were first created, TVA has matured to the point where the design base requirements for system design and performance are well known. At the time that ISEG was established, Engineering was a centralized corporate function. Strong onsite Design and System Engineering expertise are now available at TVA's plants to readily monitor performance and resolve performance problems. Key information is now available to the engineering workforce. TVA's design basis reconciliation programs have positioned TVA ahead of many of the current industry (design bases) problems. System Engineering is now available for everyday consultation and is an integral part of the plant team. The performance of systems and the effectiveness of maintenance is routinely monitored against key industry performance criteria. Results of performance monitoring are routinely reported to management. System Status Reports focus management attention on systems not meeting goals. Operating Experience (OE) gets key industry information to the right people.

1.1 Design Basis Reconciliation

TVA's reconstitution of design bases efforts occurred after ISEG requirements were first created. TVA shut down all its nuclear units in 1985 to address a number of issues including design and configuration control. The design basis reconstitution efforts were an integral part of the SQN and BFN restarts, as well as the initial start-up of WBN. SQN Units 1 and 2 were restarted in 1988. BFN Units 2 and 3 restarted over the next decade. WBN Unit 1 obtained its full-power operating license in early 1996.

TVA's design basis reconciliation has positioned TVA ahead of the industry problems associated with conflicting and inadequate design bases at some facilities. The Design Baseline Verification Project (DBVP) addressed systems, or portions thereof, that performed safety-related functions, including the safety functions necessary to mitigate postulated design basis accidents, that are discussed in the BFN and SQN Updated Final Safety Analysis Report (UFSAR) and the WBN FSAR. DBVP was developed to serve as an integrated means by which to establish the design bases and confirm conformance to the design bases. This program reviewed the adequacy of the design of the systems required to mitigate a design basis event, established an enhanced design control process, confirmed implementation of licensing basis commitments, and established

a baseline set of essential calculations. It established high standards for TVA's design change processes. Completion of DVBPs ensured that key design requirements are now understood, defined in design criteria documents, and that the installed systems will operate as required to mitigate accidents and safely shut down the plant. The resulting design basis information was made readily retrievable and accessible to key personnel (i.e., Design Engineering, System Engineering, Operations, Maintenance, etc.).

1.2 Design Control Process

TVA has kept pace with the latest developments in the industry and NRC regarding design bases and configuration management programs. TVA's Configuration Management Program is an integrated process designed to ensure that plant structures, systems, and components conform to approved design requirements, including design basis, and that the plant's physical and functional characteristics are accurately reflected in design basis and other plant documents. Plant configuration is controlled throughout the life of the plant by the identification and documentation of design requirements and through procedures which ensure that the design is kept current. TVA's Chief Engineer is responsible for the development of a design control program and is responsible for implementation of programs that maintain design control at TVA's licensed units and Corporate Engineering.

1.3 Design Engineering

The Design Engineering organization has been relocated to the sites since ISEG requirements were first created. Design Engineering provides technical leadership for the TVA plants through development and maintenance of the plant design bases, implementation and maintenance of Configuration Management Programs, and development of technically correct, innovative and cost-effective solutions to plant problems. The Site Engineering organization is primarily responsible for maintaining the design bases and the Configuration Control Program at each TVA plant. Engineering goals have been established to ensure:

- Conservative decision-making and a high sensitivity for reactor safety activities are maintained.
- Improved safety, reliability, and cost through effective system and component performance monitoring.

- Both permanent and temporary changes to the plant design or operation do not adversely affect plant safety, system design requirements or equipment.
- Engineering support for Operations, Maintenance, and outage activities and plant design basis requirements are met.
- Engineering support for outage planning and execution to improve outage safety, duration, and cost.
- Proactive, innovative, and cost-effective solutions to plant problems.
- Professional engineering standards are maintained.
- Job-related knowledge and skills are improved.

TVA's Engineering Support Training Program requires that personnel performing engineering functions be qualified and appropriately trained on applicable established processes consistent with assigned tasks. The program also requires that Engineering management establish and monitor the requirements that provide a systematic approach to training and conform to the Institute of Nuclear Power Operations (INPO) accredited Engineering Support Program.

1.4 System Engineering

The System Engineering function has been established since ISEG requirements were first created. System Engineering is now available for everyday consultation and is an integral part of the plant team. System Engineering provides technical leadership for TVA plants through optimization of system performance and reliability, quality management of assigned engineering programs, proactive identification and resolution of plant issues, and technical assistance to the Operations and Maintenance organizations. The system engineer serves as the owner of the assigned system(s), component(s) or program(s), acting as the station's focal point to increase reliability and performance, and reduce costs. Primary responsibilities include:

- Routinely collecting, trending, and analyzing performance data to proactively predict and correct degrading system and component performance.
- Periodic system and component walkdowns both to maintain a current awareness of system and component conditions and performance, and to obtain data for performance monitoring.
- Collecting, monitoring, and evaluating system and component performance data against established performance goals and performance indicators to implement the Maintenance Rule (10 CFR 50.65).

- Performing effective apparent and root cause analyses as part of Technical Operability Evaluations, Problem Evaluation Reports (PERs), Nuclear Experience Reviews (NERs), Equipment Failure Trending, etc., to correctly identify the specific cause(s) of problems and develop corrective actions that will correct the problem and prevent recurrence.
- Providing Engineering expertise when required to support emergent or sensitive plant issues, troubleshooting or assistance requests from Operations or Maintenance.
- Evaluating NER reports in accordance with the NER Program and recommending changes in Maintenance, System Design or Operations, as a result for items identified through the NER process.
- Performing and/or reviewing safety assessments and/or safety evaluations, as required, for adequacy and effect on each assigned system.
- Preparing the System Status (Health) Reports to aid in prioritizing plant maintenance and modification activities by ensuring effective communication of system and component conditions, performance, and trends.

1.5 System Status (Health) Reports

System Status Reports were established after the ISEG requirements were first created. System Engineering provides the System Status Reports to management. The reports provide a summary analysis of system performance that focuses management attention on systems not meeting goals by indicating adverse trends and problem areas. This ensures heightened management awareness of these problem areas and ensures that resources are focused on problem resolution. Each system engineer develops and submits a quarterly System Status Report for assigned systems.

1.6 Maintenance Monitoring

"Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," 10 CFR 50.65, was issued on July 10, 1991, and implementation was required by July 10, 1996. TVA's program for monitoring maintenance complies with 10 CFR 50.65 and employs Nuclear Management and Resource Council (NUMARC) 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Monitoring the health of functions and systems using a series of plant level and function-specific indicators is required. System engineers implement the Maintenance Rule requirements by collecting, monitoring, and evaluating system and component performance data against established performance goals and performance indicators.

Specific corrective actions are identified for systems and equipment not meeting performance goals. The Maintenance Rule monitoring has been integrated into the System Status Reports to ensure management attention is properly focused on performance problems.

1.7 OE Review Program

The OE Review Program was a post-TMI initiative that has since matured into a strong programmatic element under INPO's guidance. The OE process provides industry information to key people. In-house and industry information is evaluated, distributed to appropriate personnel, and applied to implement actions that improve plant safety and reliability. TVA's program evaluates experience reports received from NRC, INPO, other utilities, nuclear vendors and equipment suppliers, and architect/engineers. The applicability of the experience information is assessed, and organizations that could be affected are identified. As applicable, reports are distributed for information or assigned as action items for evaluation to the appropriate organizations. OE screens the following documents at a minimum:

- 10 CFR 21 Reports generated by organizations external to TVA
- NRC Information Notices
- General Electric Service Information Letters, Rapid Information Communication Service Information Letters, Potential Reportable Conditions, and Technical Information Letters
- Westinghouse Technical Bulletins and Nuclear Safety Advisory Letters
- INPO Significant OE Reports
- INPO Significant Event Reports
- INPO Significant By Others
- INPO Recurring Significant Event Notifications
- INPO Significant Event Notifications
- INPO Operation and Maintenance Reminders

Other documents that may be a part of the OE Review Program, but are not necessarily required to be screened, include:

- OE Reports
- NRC Inspection Reports
- Notices of Violation
- Other Nuclear Network Items
- Other Vendor Information

In addition, INPO Significant Event Evaluation and Information Network (SEE-IN) Program interacts with TVA's OE Program. The objective of the SEE-IN Program is to improve nuclear plant safety and reliability by allowing each plant to learn from the entire community of plants. Experience has shown that severe events usually have had precursory problems or events that occurred at the same plant or at other plants. When left uncorrected, these precursors repeat themselves, and in unanticipated circumstances, these precursors can lead to an event of major safety significance. The goal of the SEE-IN Program is to identify such precursors and report them to all plants so that corrective actions can be taken before the precursors lead to an event of major significance. Many sources of plant OE are used, although the majority of OE information is supplied to INPO in the form of written event reports.

As a result of the OE Review Program interactions, TVA and the industry have seen an improvement in plant performance and a reduction in plant transients and events over the last decade.

1.8 Training Rule

The Training Rule was issued as 10 CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel," after ISEG requirements were fist created. It requires licensees to establish, implement, and maintain a training program derived from a systematic approach.

The National Academy for Nuclear Training was formed in 1985 to focus and unify industry efforts to continue improvements in training and qualification programs to promote professionalism of nuclear plant personnel. The academy operates under the auspices of INPO and is comprised of three components: (1) nuclear utility training activities, (2) the National Nuclear Accrediting Board, and (3) INPO's training-related activities. With the support of National Academy members (utilities including TVA), INPO develops the accreditation objectives and criteria; develops supporting guidance; assists member utilities in developing, implementing, and maintaining performance-based training programs; and evaluates the quality and effectiveness of utility training programs.

1.9 Summary - Knowledgeable Plant Workforce

Since the formation of ISEG requirements, fundamental changes have occurred that now ensure that the broad work force is properly focused on plant safety issues. These changes have resulted in the following improvements:

- Up-to-date design basis information.
- Dedicated Engineering resources onsite, knowledgeable in system design requirements and system performance.
- Strong system and equipment performance monitoring programs integrated into management controls.
- Effective OE Review Program.
- Effective Training Program for employees.

These changes ensure that key plant safety functions are understood and maintained, that performance problems and potential industry issues are promptly identified and corrected, and the most effective management controls are in place to monitor problems.

2.0 Risk Management Oversight

Since ISEG requirements were first created, TVA's risk oversight of plant work activities has matured. Where TVA once relied on ISEG expertise to review the outage schedule for nuclear safety concerns, we now have multidisciplined groups to evaluate the schedule for outage and online work activities. Tools that are used to evaluate risk include a probabilistic safety analysis (PSA) for each operating plant unit and computer-based software that enhance risk oversight.

2.1 Outage Risk

Shutdown safety is an integral part of the outage process. Outage activities and schedules are assessed using risk assessment techniques to ensure that shutdown safety issues are addressed and all reasonable actions are taken to minimize shutdown risk. The shutdown risk assessment is conducted by a team with broad extensive experience in the operation of the applicable unit with detailed knowledge of the applicable plant and knowledge of shutdown safety issues affecting the nuclear industry as outlined in NUMARC 91-06. The team reviews the unit outage plan and detailed schedule to ensure that shutdown safety issues are addressed and reasonable actions have been taken to minimize shutdown risk. Defense-in-depth (DID) is monitored during outages and is emphasized during outage planning and work control. It is a key element of management safety controls.

To manage risk and maintain key safety functions, an Outage Management organization has been established to direct, control, and implement activities that must be performed during planned and forced outages. Integrated outage plans that include site pre-outage activities are developed for refueling outages and planned maintenance outages. Performance

objectives and indicators are used to monitor the progress toward meeting pre-outage milestones and other outage goals. These indicators are used to monitor progress towards meeting outage objectives, including schedule, safety, and exposure performance. A risk assessment methodology is developed and used to evaluate maintenance and outage activities in order to maximize plant safety, minimize plant risk, and maintain key safety functions. This methodology includes information from the site PSA.

Outage Risk Assessment Management (ORAM) is a computer program which performs risk assessment and is sponsored by the Electric Power Research Institute (EPRI). This software takes the status of key plant equipment and then produces an output of the relative level of safety or DID of key shutdown areas. The models, that are built to support this software include fault trees, which use a building block technology to identify specific components utilized to build a system utilized in maintaining a key safety function. The fault trees are then input into a safety system function assessment tree to determine the number of systems or components that are required to get a predetermined output. Color indication is assigned as follows:

- Green - adequate DID.
- Yellow - for slight reduction in DID, but still adequate.
- Orange - for significant reduction in DID, and a contingency plan must be in place prior to entry into this plant condition.
- Red - for an inadequate level of DID, an action must be taken to get out of this condition for a given plant state or condition.

2.2 Online Risk

The intent of TVA's online risk program is to avoid unrecognized risk situations during maintenance work and to properly manage higher risk situations by identifying their implications. An assessment of scheduled activities is performed before implementation of work windows. The assessment includes the following:

- The schedule is evaluated against the risk bases outlined in the specific site PSA.
- Maximizing safety when performing online work.
- Recurrent entry into a specific Limiting Condition for Operation (LCO) for multiple activities is avoided. Activities that require entering the same LCO are combined to limit the number of times an LCO must be established,

thus maximizing the equipment's availability. Engineering performs evaluation of structures, systems, and components (SSCs) monitored for unavailability to ensure unavailability is minimized and is evaluated against PSA assumptions for individual SSCs.

- Emergent work is evaluated against the assessed scope.

Engineering has developed risk matrices utilizing site PSA(s) that are used daily to determine optimum work windows for specific work activities. Sentinel software can also be used to determine optimum work windows. It is a computer-based tool to help plan and implement work windows. However, it does not take the place of Operations' DID review. Sentinel software utilizes the results of the site PSA(s). Sentinel software works similar to ORAM. Other safety considerations, such as Technical Specifications, are
also used to determine which system, components, and functional equipment group combinations may be worked online.

TVA's approach to risk assessment before performing maintenance is consistent with NRC's proposed changes to the Maintenance Rule, 10 CFR 50.65.

2.3 Summary - Risk Management Oversight

Since the formation of ISEG requirements, fundamental changes have occurred that provide the tools and insights to minimize risk of core damage during plant operation and shutdown conditions. These changes have resulted in the following improvements:

- Development of plant-specific PSAs.
- Engineering risk matrices that utilize the site PSA(s).
- An Outage Management organization to take all reasonable actions to minimize risk. This team ensures proper scheduling of work activities, that performance objectives are met, and plant safety functions are maintained.
- ORAM and Sentinel computer software tools that utilize the site PSAs. They ensure proper scheduling of work activities to minimize the risk of core damage.
- Performance objectives to monitor key areas such as work activities, safety, and exposure performance.

These changes allow personnel scheduling work activities to be risk-informed through monitoring unavailability of risk-significant systems. These changes collectively ensure that the risk of core damage is minimized through proper planning and control of work activities.

3.0 Program, Organization, and Human Performance

Since ISEG requirements were first created, self assessments are now used by line management to monitor and improve human performance. TVA's corrective action process is now used as a key tool by management and is considered a strength. Site-specific and integrated trend analysis reports are performed routinely. Functional area audits do a better job of assessing program performance, and training accreditation has become institutionalized through industry initiatives. In addition, the Evaluation and Analysis Group now provides senior assessment leadership and technical expertise to the quality assessment programs.

3.1 Self Assessment

INPO 97-002, "Performance Objectives and Criteria for Operating Nuclear Electric Generating Stations," has been used as an index for management goal setting and internally developed business plan performance targets. Self assessments are conducted by line organizations as a tool to monitor and improve overall performance. The self assessment process is recognized as a strength. These self assessments are self-critical evaluations of specific programs or processes, both technical and administrative, and typically result in the identification of findings or areas for improvement. Line self assessments are performed and documented in accordance with management directives in order to ensure efficient and consistent implementation. The goal is to promptly identify and correct organization and/or program performance problems.

3.2 Corrective Action Program (CAP)

TVA has improved its CAP since ISEG requirements were created. The corrective action process is now considered a strength. Problem reporting, root-cause analysis, and corrective actions are essential elements of the process. Problem identification is strongly encouraged and reinforced at all levels in the organization.

TVA has established a Management Review Committee (MRC) at each operating site. MRCs' membership is comprised of senior managers at a level equal to, or higher than, that expected at Plant Operations Review Committee (PORC) meetings. MRCs review significant and some nonsignificant PERs upon issuance. MRCs have proven to be an effective tool in maintaining the quality, integrity, and visibility of the CAP.

TVA's CAP has no minimum threshold. All problems are accepted and reviewed. Minor problems are considered as leading indicators for more serious problems.

Self assessments of major functional areas, self assessments of the CAP, and internal audits continue to conclude that the program is effectively implemented. Results of TVA's Trending Program support this conclusion.

3.3 Trending

Quarterly trend analysis committee reports have occurred since ISEG requirements were first created. Input to these reports includes PERs, self assessments, Nuclear Assurance (NA) audits and assessment results, and external assessment results. The data is compiled, analyzed, and formatted in accordance with INPO 97-002 criteria. After results are compiled by responsible organizations, the draft report is presented to the site trend analysis committee that is composed of representatives from the major organizations onsite. The final results are then presented to the Trend Review Board, which is composed of site senior management.

The quarterly site trend reports are consolidated into a "Level I Trend Report" that is published in accordance with INPO 97-002 criteria. Each site publishes a detailed summary of their self assessment. This roll-up report contains the executive summaries and a system windows summary for each site. It includes the system status report and system windows for each unit and the associated summaries. This roll-up summary, along with each sites detailed reports, provides comprehensive documentation of the trend analysis self assessments.

3.4 Functional Area Audits

The NA functional area audits have been implemented since ISEG requirements were first created. Functional area audits do a more thorough job of assessing program performance. A typical audit focuses on selected systems, functions or components to be evaluated. Typical functional area audits review prior line self assessments, NA oversight, industry trends, corrective actions, INPO performance criteria, NRC inspection modules, lessons learned from previous audits and assessments, and documentation requirements. Other areas of focus might be prior NRC inspections, PSA, system health, plant operating and outage conditions, and industry events. The functional area auditors use performance objectives and criteria to review areas such as operations, plant status control, maintenance, work management, equipment performance and material condition,

engineering, plant configuration control, radiological protection, chemistry, training, self-evaluation, organizational effectiveness, document control, and nonradiological environmental monitoring. The focus on performance is the key to a strong management culture of feedback.

3.5 Performance Goals

TVA senior management meets annually to set strategic business performance goals. Goals are established that challenge the organizations to continually improve. Performance indicators are readily available to management and employees through periodic Trending Reports posted on the TVA Network, newsletters, and bulletin board postings. INPO performance goals are used in determining plant performance goals. INPO conducts periodic evaluations to promote excellence in the operation, maintenance, and support of operating plants. These are performance-oriented evaluations and are based on INPO 97-002. Elements reviewed include:

- Safety Culture
- Self Evaluation and Corrective Action (learning organization)
- OE
- Human Performance
- Training
- Work Management
- Plant Status and Configuration Control
- Equipment Performance and Material Condition

TVA utilizes INPO performance objectives and criteria to be self-critical.

3.6 Excellence in Performance Program

TVA has developed, and is in the process of implementing, the Excellence in Performance Program. The program is designed to achieve and maintain operational excellence through the reduction of human errors. The program reduces human performance errors through routine employee self-evaluations, supervisor observation and coaching, and process improvements. The program provides standardized work processes and performance expectations to employees and supervisors who are responsible for implementing these processes. In short, the program is based on the premise that "people will do the right thing if they know what is expected of them."

3.7 NA Evaluation and Analysis Group

The Evaluations and Analysis Group adds senior assessment leadership and technical expertise to the Quality Assessment Program. This corporate group manages the assessment programs associated with assessing Operations, Engineering/Technical Support, Modifications, Maintenance, Security, Chemistry, Emergency Preparedness, and Radiological Control Programs. In addition, this group manages assessment programs affiliated with assurance that TVA and contractor activities meet or exceed industry and regulatory standards.

The Evaluation and Analysis Group is responsible to:

- Manage development, maintenance, and improvements of site/corporate quality methodologies to evaluate quality programs and technical programs based on observations and trending.

- Provide senior assessment leadership and technical expertise for the TVA Nuclear Assessment Program with appropriate support for the more complex and more comprehensive assessments.

- Analyze technical and quality problems from many sources to develop recommendations for senior management action. This includes oversight and independent analysis of trending results. Results are provided to senior management.

- Advise senior management relative to alternative solutions to technical and quality problems to improve the effectiveness and efficiency of implementation techniques.

- Advise and interface with senior site and corporate management on matters pertaining to the assessment program to aid in the identification and resolution of items that could result in enforcement actions, reduction in power generation, or endangering the health and safety of the general public.

3.8 Summary - Program, Organization, and Human Performance

Since ISEG requirements were first created, TVA's safety culture has become performance-oriented and self-critical. TVA utilizes INPO performance objectives and criteria to set internal goals. Goals are established that challenge the organizations to continually improve. Problem identification is strongly encouraged and reinforced at all levels in the organization with improved root cause techniques leading to effective solutions. Self assessments are instrumental in

resolving programmatic and organizational problems and human performance issues. Functional area audits are also useful in assessing program performance. Performance feedback is made readily available to management and employees through periodic Trending Reports posted on the TVA network. Also, TVA has developed, and is in the process of implementing, the Excellence in Performance Program that is designed to achieve and maintain operational excellence through the reduction of human errors. In addition, the NA Evaluation and Analysis Group adds senior assessment leadership and technical expertise to the Quality Assessment Program. These developments have collectively created a safety culture that is both performance-oriented and self-critical.

4. Summary and Conclusion

TVA has made what ISEG would provide an everyday aspect of our operations. This includes:

- The addition of a knowledgeable plant workforce for design and safety issues, onsite design and system engineers, and the Training Rule.

- Information is available to make key decisions, DBVP, a Design Control Program that keeps design current, System Status Reports, effective implementation of the Maintenance Rule, the OE Program, and a strong CAP.

- Improvements have been established that manage risk reduction and provide insights into implications of performance, System Status Reports, and computer-based tools such as Sentinel and ORAM.

- TVA has strengthened its senior assessment leadership and technical expertise through the creation of the Evaluation and Analysis Group.

- TVA has established a strong, self-critical culture with motivation to act on information insights, self assessments, Trending Program, and system and plant performance goals.

TVA has established a work environment where people identify problems, where the entire team focuses on solutions, and where TVA is increasingly self-critical and sets high expectations for performance. These developments are integral to a strong management culture that emphasizes system performance, the right people, program goals, assessment of performance against goals, and actions to correct deviations. These developments collectively assist the plant in resolving day-to-day operation

problems and improve overall quality and safety of the plant. The ISEG's composition has become burdensome, as it restricts the capability to utilize resources to their maximum advantage and benefit. ISEGs also run counter to the current operating safety culture that focuses on line accountability, management

involvement, and self-critical self assessment. Improvements in TVA's work environment since 1979 have superseded the ISEG oversight benefits making it appropriate to eliminate the function and refocus resources on more beneficial activities.

ENCLOSURE 2

NUCLEAR QUALITY ASSURANCE PLAN
TVA-NQA-PLN89-A
Page 14 of 109

Marked Changes with ISEG/ITR Requirements Omitted

4.1.5.A (continued)

Fire Protection and Nuclear Security are also responsibilities of the Senior Vice President, NO. Nuclear Security includes protection of safeguard information, reporting of safeguard events, and development and maintenance of the Site Physical Security/Contingency Plans.

B. Implementing programs at licensed units, ensuring that the QA requirements of this Plan are appropriately established in licensed units Site procedures.

C. The plant technical review process and PORC.

D. Nuclear Licensing Manager (Corporate)

The Nuclear Licensing Manager is responsible to:

1. Manage the Nuclear Experience Review Program ~~and independent technical review function~~.

2. Maintain an interface between TVA and NRC for licensing activities.

~~3. The Site Manager, Licensing and Industry Affairs, is responsible for independent technical review. These responsibilities shall encompass:~~

~~a. Plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources that may indicate areas for improving plant safety;~~

~~b. Plant operations, modifications, maintenance, and surveillance to verify independently that these activities are performed safely and correctly and that human errors are reduced as much as practical;~~

~~c. Internal and external operational experience information that may indicate areas for improving plant safety;~~

~~d. Making detailed recommendations to the Site Vice President for revising procedures, equipment modifications, or other means of improving nuclear safety and plant suitability; and~~

~~e. Preparing and maintaining records of independent technical review activities.~~

~~Technical review personnel shall have a bachelor's degree in engineering or equivalent and two to four years experience in their field, including one or two years nuclear experience.~~

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 and 2
DOCKET NOS. 327 and 328

PROPOSED LICENSE AMENDMENT TS-98-05
DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

I. DESCRIPTION OF THE PROPOSED CHANGE

TVA proposes to amend the SQN Unit 1 and Unit 2 Facility Operating Licenses by omitting the ISEG requirements from the license conditions for each unit as follows:

1. Modify SQN Unit 1, DPR-77, Section 2.C., by deleting the following wording in license condition (22)A:

   "<u>Safety Engineering Group (Section 22.2.I.B.1.2)</u>

   Prior to exceeding five percent power, TVA is required to have an onsite Safety Engineering Group. NRC will verify the adequacy of the Safety Engineering Group and its independence."

2. Modify SQN Unit 2, DPR-79, Section 2.C., by deleting the following wording in license condition (16)b:

   "<u>Independent Safety Engineering Group (Section 22.2.I.B.1.2)</u>

   TVA shall have an onsite Independent Safety Engineering Group."

II. REASON FOR THE PROPOSED CHANGE

Since ISEG requirements were established in 1979, TVA's operating organization has matured and a number of improvements have been institutionalized in a variety of ways. Fundamental changes as to how TVA does business have now superseded the original benefit thought to be provided by the ISEG

organization. The ISEG's composition has become burdensome, as it restricts the capability to utilize resources to their maximum advantage and benefit. ISEGs run counter to the current operating safety culture of line accountability, management involvement, and self-critical self assessment reviews in a way that offers little flexibility in the performance of the required independent reviews. These developments have collectively superseded the original expectations for ISEG.

III. SAFETY ANALYSIS

The ISEG function is one of "oversight" only. The proposed amendment does not directly make changes to any system, structure or component (SSC). The change would not negatively impact the ability of a SSC to perform its safety function or negatively impact the ability of licensee personnel to ensure the SSC is capable of performing its intended safety function.

After the Three Mile Island (TMI) accident in 1979, the TMI-2 Lessons Learned Task Force suggested that plants would be safer if an independent group performed onsite safety reviews. Subsequently, NUREG-0737, I.B.1.2, required each new applicant for an operating license to establish an ISEG.

The principal function of the ISEG is to examine plant operation characteristics, NRC issuances, Licensing Information Service advisories, and other appropriate sources of plant design and operation experience information that may indicate areas for improving plant safety. Also, the ISEG is to perform independent reviews and audits of plant activities including maintenance, modifications, operational problems and analysis, and aid in the establishment for programmatic requirements for plant activities. Another function of the ISEG is to maintain surveillance of plant operations and maintenance activities to provide independent verification that these activities are performed correctly and that human errors are reduced as far as practicable.

What the ISEG was intended to provide is now an everyday aspect of TVA's operations. Improvements in TVA's operating environment, industry initiatives, and some rulemaking since 1979 have superseded the ISEG functions. Collectively, they provide TVA's

rationale as to why it is appropriate to eliminate ISEG. In summary, they include the following:

- The Design Engineering organization has been relocated to the sites. This organization provides technical leadership for TVA plants. Site Design Engineering functions include the development and maintenance of the plant design bases, implementation and maintenance of configuration management programs, and development of technically correct, innovative, and cost-effective solutions to plant problems.

- Site System Engineering is now available for everyday consultation and is an integral part of the plant team. They readily monitor performance and resolve performance problems. They provide technical leadership through optimization of system performance and reliability, quality management for assigned engineering programs, and proactive identification and resolution of plant issues. Additionally, they provide technical assistance to the plant Operations and Maintenance organizations.

- TVA's Design Bases Reconciliation Programs have positioned TVA ahead of recent industry problems associated with conflicting and inadequate design bases at some facilities. TVA has kept pace with the latest developments in the industry and NRC regarding design bases and configuration management programs.

- System Status Reports provide a summary analysis of system performance that focuses management attention on systems not meeting goals by indicating adverse trends and problem areas.

- TVA's program for monitoring maintenance complies with 10 CFR 50.65 and employs Nuclear Management and Resource Council (NUMARC) 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear power Plants."

- TVA's Operating Experience Review Program has matured into a strong programmatic element under the Institute of Nuclear Power Operations guidance.

- The Training Rule was issued as 10 CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel," after ISEG requirements were first created. It requires licensees to establish, implement, and maintain a training program derived from a systematic approach.

- TVA has established probabilistic safety analysis for each operating unit, incorporated risk assessments into work activities, and has obtained computer-based software tools that enhance risk oversight. Risk assessments are performed for shutdown, outage, and online work activities.

- Self assessments are conducted by line organizations as a tool to monitor and improve overall performance. These assessments are self-critical evaluations of specific programs or processes, both technical and administrative, and typically result in the identification of findings or areas for improvement.

- Quarterly site Trend Reports are published with input from Problem Evaluation Reports, Self Assessment Reports, Nuclear Assurance (NA) Audit Reports and assessment results, and external assessment results. These reports are consolidated into a single "Level I Trend Report."

- NA functional area audits focus on selected systems, functions or components and do a more thorough job of assessing program performance. Typical functional area audits view prior line self assessments, NA oversight, industry trends, corrective actions, INPO performance criteria, NRC inspection modules, lessons learned from previous audits and assessments, and documentation requirements.

- TVA's senior management meets annually to set strategic business performance goals. Performance indicators are readily available to management and employees through periodic Trending Reports posted on the TVA Network, Newsletters, and bulletin board postings.

- TVA has developed, and is in the process of implementing, the Excellence in Performance Program. This program reduces human performance

errors through routine employee self evaluations, supervisor observation and coaching, and process improvements.

- The NA Evaluations and Analysis Group adds senior assessment leadership and technical expertise to the Quality Assessment Program. This corporate-based group manages the assessment programs associated with assessing Operations, Engineering/Technical Support, Modifications, Maintenance, Security, Chemistry, Emergency Preparedness, and Radiological Control Programs. Most of the review functions performed by this group are identical to the review functions outlined for the ISEG.

TVA has established a work environment where people identify problems, where the entire team focuses on solutions, and where TVA is increasingly self-critical and sets high expectations for performance. These developments are integral to a strong management culture that emphasizes system performance, the right people, program goals, assessment of performance against goals, and actions to correct deviations. These developments collectively assist TVA operating plants in resolving day-to-day operation problems and improve overall quality and safety. The ISEG's composition has become burdensome, as it restricts the capability to utilize resources to their maximum advantage and benefit. ISEGs also run counter to the current operating safety culture that focuses on line accountability, management involvement, and self-critical self assessment. Therefore, it is appropriate to eliminate the ISEG and refocus these resources on more beneficial activities.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of SQN Units 1 and 2, in accordance with the proposed change to the operating licenses, does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

A. **The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.**

The possibility of occurrence or the consequences for an accident or malfunction of equipment is not increased. The ISEG function is one of "oversight" only.

B. **The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

A possibility for an accident or malfunction of a different type than any evaluated previously in SQN's Final Safety Analysis Report is not created by the proposed elimination of the ISEG; nor is the possibility for an accident or malfunction of a different type. The ISEG function is one of "oversight" only.

C. **The proposed amendment does not involve a significant reduction in a margin of safety.**

The proposed amendment will not involve a significant reduction in the margin of safety. The ISEG function is one of "oversight" only.

V. ENVIRONMENTAL IMPACT CONSIDERATION

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

ENCLOSURE 4
TENNESSEE VALLEY AUTHORITY
SEQUOYAH PLANT (SQN)
UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-98-05
MARKED PAGES

I. AFFECTED PAGE LIST

Unit 1, DPR-77, page 8

Unit 2, DPR-79, page 6

II. MARKED PAGES

See attached.

9905110325
6 pg.

(19) Mechanical Snubbers

This condition is deleted.

R219

(20) Low Temperature Overpressure Protection (Section 5.2.2)

At the first outage of sufficient duration but no later than startup following the second refueling outage, TVA shall install an overpressure mitigation system which meets NRC requirements.

R27

(21) Control Rod Guide Thimble (Section 4.2)

Prior to startup after first refueling, TVA shall submit the details of the inspection program for ccontrol rod guide thimble tube wall wear for NRC approval.

(22) TMI Action Plan Full Power Conditions

Each of the following conditions shall be completed to the satisfaction of the NRC by the times indicated:

A. Safety Engineering Group (Section 22.2.I.B.1.2)

TVA Condition is deleted.

~~Prior to exceeding five percent power, TVA is required to have an onsite Safety Engineering Group. NRC will verify the adequacy of the Safety Engineering Group and its independence.~~

B. Short-Term Accident Analysis and Procedure Revision (Section 22.2.I.C.1)

Within thirty effective full-power days, TVA shall revise Emergency Operating Procedures and brief the operators on the revision.

C. Control Room Design (Section 22.2.I.D.1)

TVA shall consider the benefits of installing data recording and logging equipment in the control room to correct the deficiencies associated with the trending of important parameters on strip chart recorders used in the control room as part of the Detailed Control Room Design Review. Implementation shall be carried out in accordance with SECY 82-111B.

R27

DPR-77

August 28, 1998
Amendment 23, 235

(13) Fire Protection

TVA shall implement and maintain in effect all provisions of the approved fire protection program referenced in Sequoyah Nuclear Plant's Final Safety Analysis Report and as approved in NRC Safety Evaluation Reports contained in NUREG-0011, Supplements 1, 2, and 5, NUREG-1232, Volume 2, NRC letters dated May 29, and October 6, 1986, and the Safety Evaluation issued on August 12, 1997, for License Amendment No. 218, subject to the following provision: R218

> TVA may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(14) Compliance With Regulatory Guide 1.97

TVA shall implement modifications necessary to comply with Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," dated December 1980 by startup from the Unit 2 Cycle 4 refueling outage. R45

(15) Corrosion of Carbon Steel Piping

TVA shall carry out a surveillance program on corrosion of carbon steel piping in accordance with TVA document SQRD-50-328/81-10 dated August 25, 1981, and procedures for implementation are to be submitted for NRC concurrence by October 15, 1981.

(16) NUREG-0737 Conditions (Section 22.2)

Each of the following conditions shall also be performed to the satisfaction of the NRC: R2

a. Shift Technical Advisor (Section 22.2, I.A.1.1)

TVA shall provide a fully-trained on-shift technical advisor to the shift operations supervisor. R169

b. Independent Safety Engineering Group (Section 22.2, I.B.1.2) This Condition is deleted.

~~TVA shall have an onsite independent Safety Engineering Group.~~

Agust 12, 1997
Amendment Nos. 45, 169, 218

DPR-79

ENCLOSURE 5
TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-98-05
REVISED PAGES

I. AFFECTED PAGE LIST

Unit 1, DPR-77, page 8

Unit 2, DPR-79, page 6

II. REVISED PAGES

See attached.

(19) Mechanical Snubbers

This condition is deleted. | R239

(20) Low Temperature Overpressure Protection (Section 5.2.2)

At the first outage of sufficient duration, but no later than startup following the second refueling outage, TVA shall install an overpressure mitigation system which meets NRC requirements. | R27

(21) Control Rod Guide Thimble (Section 4.2)

Prior to startup after first refueling, TVA shall submit the details of the inspection program for control rod guide thimble tube wall wear for NRC approval.

(22) TMI Action Plan Full-Power Conditions

Each of the following conditions shall be completed to the satisfaction of the NRC by the times indicated:

A. Safety Engineering Group (Section 22.2. 1.B.1.2)

This condition is deleted. |

B. Short-Term Accident Analysis and Procedure Revision (Section 22.2. I.C.1)

Within thirty effective full-power days, TVA shall revise Emergency Operating Procedures and brief the operators on the revision.

C. Control Room Design (Section 22.2. I.D.1)

TVA shall consider the benefits of installing data recording and logging equipment in the control room to correct the deficiencies associated with the trending of important parameters on strip chart recorders used in the control room as part of the Detailed Control Room Design Review. Implementation shall be carried out in accordance with SECY 82-111B. | R27

Amendment 23, 235

(13) Fire Protection

TVA shall implement and maintain in effect all provisions of the approved fire protection program referenced in Sequoyah Nuclear Plant's Final Safety Analysis Report and as approved in NRC Safety Evaluation Reports contained in NUREG-0011, Supplements 1, 2, and 5, NUREG-1232, Volume 2, NRC letters dated May 29 and October 6, 1986, and the Safety Evaluation issued on August 12, 1997, for License Amendment No. 218, subject to the following provision: R218

> TVA may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(14) Compliance With Regulatory Guide 1.97

TVA shall implement modifications necessary to comply with Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to assess Plant Conditions During and Following an Accident," dated December 1980 by startup from the Unit 2 Cycle 4 refueling outage. R45

(15) Corrosion of Carbon Steel Piping

TVA shall carry out a surveillance program on corrosion of carbon steel piping in accordance with TVA document SQRD-50-328/81-10 dated August 25, 1981, and procedures for implementation are to be submitted for NRC concurrence by October 15, 1981.

(16) NUREG-0737 Conditions (Section 22.2)

Each of the following conditions shall also be performed to the satisfaction of the NRC:

a. Shift Technical Advisor (Section 22.2, I.A.1.1) R2

TVA shall provide a fully-trained on-shift technical advisor to the shift operations supervisor. R169

b. Independent Safety Engineering Group (Section 22.2, I.B.1.2)

This condition is deleted.

Amendment Nos. 45, 169, 218

ENCLOSURE 2

Copy of NQAP, pages 13 and 14 with insert

4.1.3.B.5.b (continued)

(3) Proposed tests or experiments that involve an unreviewed safety question as defined in 10 CFR 50.59;

(4) Proposed changes to Technical Specifications or the Operating License relating to nuclear safety prior to implementation, except in those cases where the change is identical to a previously reviewed proposed change;

(5) Violations of codes, regulations, orders, license requirements, and internal procedures or instructions having nuclear safety significance;

(6) Reportable events (10 CFR 50.73);

(7) Plant staff performance;

(8) Recognized indications of unanticipated deficiencies in any aspect of design or operation of structures, system, or components that could affect nuclear safety;

(9) Significant accidental, unplanned, or uncontrolled radioactive releases, including corrective action to prevent recurrence;

(10) Significant operating abnormalities or deviations from normal and expected performance of equipment that affect nuclear safety; and

(11) Implementation of the corrective action program.

c. Minutes of each NSRB meeting and reports of other reviews shall be forwarded to the Chief Nuclear Officer and Executive Vice President, TVA Nuclear, within 30 days following completion of the meeting or review.

C. Nuclear Licensing Manager (Corporate) | A1

The Nuclear Licensing Manager is responsible to:

1. Manage the Nuclear Experience Review Program ~~and independent technical review function~~.

2. Maintain an interface between TVA and NRC for licensing activities.

~~3. The Site Manager, Licensing and Industry Affairs, is responsible for independent technical review. These responsibilities shall encompass:~~

~~a. Plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources that may indicate areas for improving plant safety;~~

~~b. Plant operations, modifications, maintenance, and surveillance to verify independently that these activities are performed safely and correctly and that human errors are reduced as much as practical;~~

~~c. Internal and external operational experience information that may indicate areas for improving plant safety;~~

~~d. Making detailed recommendations to the Site Vice President for revising procedures, equipment modifications, or other means of improving nuclear safety and plant reliability; and~~

~~e. Preparing and maintaining records of independent technical review activities.~~

~~Technical review personnel shall have a bachelor's degree in engineering or equivalent and two to four years experience in their field, including one or two years nuclear experience.~~

→ INSERT A1

4.1.4 Nuclear Support

In addition to the responsibilities described in subsection 4.1.2, the Vice President, Nuclear Support is responsible for maintaining a position qualification documentation and validation program through Nuclear Human Resources. The Vice President, Nuclear Support is also responsible for Nuclear Security which includes protection of safeguard information, reporting of safeguard events, and development and maintenance of the Site Physical Security/Contingency Plans. A1

4.1.5 Nuclear Operations (NO)

A. In addition to the responsibilities described in subsection 4.1.2, the Senior Vice President, NO, is responsible for managing the organization shown in Appendix H and ensuring that the QA requirements established by this Plan are either included or referenced (as appropriate) in related NO-sponsored program areas identified in the body of this Plan. Fire Protection is also a responsibility of the Senior Vice President, NO.

B. Implementing programs at licensed units, ensuring that the QA requirements of this Plan are appropriately established in licensed units Site procedures.

C. The plant technical review process and PORC.

Insert

(4.1.3)

D. Engineering

The Engineering organizations are responsible for independent technical reviews. These reviews primarily include:

1. System performance monitoring as required by the Maintenance Rule, 10 CFR 50.65.
2. Technical operability evaluations.
3. Review of technical specification changes that affect the design basis.
4. Review of Final Safety Analysis Report changes that affect the design basis.

ENCLOSURE 3

List of Commitments

1. TVA will incorporate changes that reflect these Engineering responsibilities for independent technical review into the Nuclear Quality Assurance Plan within 60 days after NRC approval of this requested change.