

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

6N 38A Lookout Place

MAR 02 1988

Mr. Stewart D. Ebnetter, Director  
Office of Special Projects  
U.S. Nuclear Regulatory Commission  
MS 7D24  
Washington, D.C. 20555

Dear Mr. Ebnetter:

This responds to your letter dated February 3, 1988, regarding a report by American Nuclear Insurers (ANI) dated December 24, 1987, which discusses the results of an ANI special nuclear liability insurance inspection of the Sequoyah Nuclear Plant (SQN). In your letter, you requested that TVA evaluate the ANI report concerns on an item-by-item basis. You also requested that we provide the April 1987 ANI report and TVA's corrective actions.

In my February 5, 1988 letter to Ronald Sanacore, ANI, I responded to each of ANI's significant comments, as well as formal recommendations, and provided corrective actions and schedules for implementation (enclosure 1). That letter also provided revised responses to information (identified as unsatisfactory by ANI) that was previously submitted by TVA in response to an earlier ANI inspection and their April 1987 report (enclosure 2). In accordance with your request, TVA's response to the April 1987 report is also enclosed (enclosure 3).

I believe my February 5 letter adequately addresses the concerns expressed in your February 3 letter. However, because of the emphasis placed in your letter on the deficiencies noted by the ANI staff in the functioning of the Plant Operations Review Committee (PORC), I believe that I need to restate that I view PORC as an important link in the safe operation of any nuclear power plant. As we explained in my February 5 letter to Mr. Sanacore, the functioning of PORC was in a transitional phase at the time of ANI's inspection, and we knew that this area needed improvement. We have taken actions in line with ANI's recommendation to improve this program. For example, an increased emphasis is being placed on PORC presentations, the training/accountability of PORC members, and the discouraging of last-minute review items by PORC. Because additional work is needed to bring PORC up to my standards, these efforts to improve PORC will continue. Nonetheless, it is also important to note that ANI considered the decisions made by PORC in the meeting attended by ANI to be appropriate.

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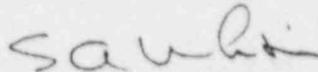
Mr. Stewart D. Ebnetter

ANI has provided TVA by letter dated February 11, 1988, results of a February 3-5, 1988 nuclear liability inspection at SQN in which ANI reviewed safety review oversight responsibility and further discussed with site and corporate management the results of the December 1987 inspections. ANI in that letter stated that it had noted improvements in the functioning of PORC and that it was satisfied with the thoroughness of SQN's operational readiness review. This letter is provided (enclosure 4) for your information.

On March 1, 1988, ANI responded to the corrective actions identified in my February 5, 1988 letter and concluded that our responses were prompt and addressed the areas identified by the ANI recommendations. In particular, ANI states that there is adequate overlap between nuclear safety review programs to ensure that nuclear safety issues are addressed and that our corrective actions regarding PORC are satisfactory. This letter is provided as enclosure 5.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



S. A. White  
Manager of Nuclear Power

Enclosures

cc (Enclosures):

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for Inspection Programs

TVA Projects Division  
U.S. Nuclear Regulatory Commission  
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Sequoyah Resident Inspector  
Sequoyah Nuclear Plant  
2600 Igou Ferry Road  
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ENCLOSURE 1

6N 38A Lookout Place

FEB 05 1988

Mr. Ronald Sanacore, Vice President  
American Nuclear Insurers  
The Exchange, Suite 245  
270 Farmington Avenue  
Farmington, Connecticut 06032

Dear Mr. Sanacore:

Enclosed is our response to Mr. Larson's letter of December 14, 1987, regarding ANI's December 1987 special nuclear liability inspection of Sequoyah Nuclear Plant. We have attempted to respond to the significant comments, as well as the formal recommendations contained in the letter, and we look forward to discussing any further question you might have.

Because of the special emphasis placed in your letter on the functioning of the Sequoyah Plant Operations Review Committee (PORC), I feel it might be helpful to provide some additional comments separate from the enclosure. I view the PORC as an important link in the safe operation of any nuclear power plant. One of the areas that we knew needed improvement was the functioning of this group. As part of that effort last fall, we shifted the focus on PORC's work of procedural review to an operational safety review function. This effort gained added emphasis when Mr. Steve Smith was assigned as the new plant manager at Sequoyah. As you may recall, this transitional phase of the PORC and the corrective actions being taken were related to your investigators prior to their review. Indeed, the problems outlined in your letter concerning the operation of the PORC were essentially the same as those already noted and being addressed by Mr. Smith and Mr. Bynum. Consequently, we generally agree with your findings that PORC can operate more effectively. We have taken actions to correct your findings, but additional work is needed to bring PORC up to my standards and this effort will continue.

However, it is important to note, as we discussed in our meeting in my office in Chattanooga on January 25, 1988, after the inspection and receipt of your letter, you consider the decisions made by PORC in the meeting you attended to be appropriate and not to be a risk to the safe operation of the plant.

Mr. Ronald Sanacore

FEB 05 1988

TVA's nuclear power program is not yet at the level of performance that I expect and intend to achieve. I appreciate your suggestions to help us better achieve excellence.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

S. A. White  
Manager of Nuclear Power

ATTACHMENT  
SEQUOYAH NUCLEAR PLANT  
ANI NUCLEAR LIABILITY INSURANCE  
DECEMBER 8-11, 1987 INSPECTION

Response to Recommendations

On-Site Safety Review

ANI Recommendation 87-1

The Plant Manager or Assistant Manager should chair all PORC meetings.

TVA Response

The Plant Manager has chaired all PORC meetings since assuming his position in November 1987. TVA will continue this practice with the Assistant Manager of ONP as his alternate. In the unlikely event that neither of these individuals is available and a PORC meeting is necessary, a substitute senior manager, appointed by the Plant Manager, may chair a PORC meeting.

ANI Recommendation 87-2

All PORC members should be required to attend PORC meetings; the use of alternates should cease.

TVA Response

The Plant Manager has emphasized to all regular PORC members that they are not to use alternates except in unusual circumstances such as leave, sickness, or emergencies. PORC meetings will take precedence over other normal work activities. Alternates are being randomly scheduled to attend regularly scheduled PORC meetings as non-voting members so that further experience can be obtained in the enhanced PORC process.

ANI Recommendation 87-3

All unnecessary personnel should be excluded from PORC meetings.

TVA Response

Unnecessary personnel are excluded from PORC meetings. The PORC chairman enforces this practice. PORS along with senior managers designated to perform PORC oversight (see TVA Response to Recommendation 87-12) will monitor and provide feedback on this recommendation to the PORC Chairman.

ANI Recommendation 87-4

Those organizations that typically present items to the PORC should be formally instructed as to their responsibilities and expectations regarding PORC presentation.

and

ANI Recommendation 87-5

Those who present items to the PORC should be required to give formal presentations to the committee.

TVA Response

TVA agrees with ANI Recommendations 84-4 and 5 and guidance for presenting items to PORC is being incorporated into AI-48, "Plant Operations Review Committee (PORC) Charter". This revision has been prepared and approval is expected by February 8, 1988.

ANI Recommendation 87-6

Those who present items to the PORC should be required to have a high level of knowledge of the item being presented.

TVA Response

The enhanced guidelines for PORC presentations in response to ANI recommendation 87-4 and 87-5 will resolve this recommendation. Presenters are much more aware of the type and level of knowledge required by the PORC than they were during your December 1987 inspection. The PORC Chairman will continue to emphasize this area.

ANI Recommendation 87-7

Last minute PORC items ("walk-ins") should be minimized as much as possible.

TVA Response

Last minute review items are discouraged by PORC. Agenda items are presented first. The PORC chairman monitors PORC activities with regard to "walk in" items and defers such items until they can be scheduled for a subsequent meeting. There may be true emergency or high priority items that the chairman will choose to review.

ANI Recommendation 87-8

Expedite the training of PORC members and alternates in their specific committee responsibilities (for example, review of unreviewed safety question issues).

TVA Response

All PORC members and alternates are required to take Qualified Reviewer (QR) and Unreviewed Safety Question Determination (USQD) training with all training to be completed by February 29, 1988. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Recommendation 87-9

Increase PORC member accountability for performance during PORC meetings.

TVA Response

Individual member performance during PORC meetings is monitored by the PORC chairman. Emphasis is placed on individual knowledge and interaction during PORC meetings with special emphasis on USQDs, Root Cause Analysis and Corrective Action. PORC members will be held accountable for knowledge of safety requirements in their area of expertise. Feedback to the individual and his manager is provided by the PORC chairman.

ANI Recommendation 87-10

All PORC meeting participants should be required to review meeting materials, including previous meeting minutes, prior to meetings.

TVA Response

All PORC members are now required to review pertinent meeting materials; including agendas, previous minutes and other backup material, prior to meetings. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Recommendation 87-11

All PORC members and alternates should be provided copies of meeting minutes, regardless of whether or not they attended the respective meeting.

TVA Response

All PORC members and alternates are being provided copies of the meeting minutes to review. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Recommendation 87-12

The regular attendance of non-PORC members who have considerable safety review experience should be required in order to augment the meeting and enhance the quality of interactions and decisions and set examples for others.

ANI Recommendation 87-13

Formal critiques of each PORC meeting should be conducted for the purposes of identifying strengths and weaknesses of the group and the individuals involved and to provide for future improvements to the safety review function.

TVA Response

Experienced nuclear managers knowledgeable in the areas of USQDs and PORC operations attend PORC meetings on a periodic basis. The Assistant Manager of Nuclear Power, Site Director, the Assistant to the Plant Manager (Development), and PORS Manager periodically attend PORC meetings. One of these managers attends a PORC meeting weekly. In addition, the PORC Oversight Section of PORS has committed to have a representative present for each scheduled PORC meeting. PORS will provide feedback, including deficiencies noted and recommendations for improvement, following each scheduled PORC meeting.

ANI Recommendation 87-14

An action plan should be developed and implemented for the purposes of independently evaluating the effectiveness of past PORC activities and establishing corrective actions for noted deficiencies.

TVA Response

The recommendations and comments by ANI appear to be focused on the effectiveness of the PORC process. TVA concurs that the PORC process does need improvements and is committed to accomplishing these improvements. However, TVA believes that an additional independent evaluation of past PORC activities would yield little or no additional benefit in defining these improvements. In the past, PORC has been responsible for reviewing procedures, programs, modifications, Technical Specification changes, revisions to Physical Security Plans, revisions to Radiological Emergency Plans and a number of other items. All of these items are developed and reviewed by the responsible technical organizations as well as other review organizations such as Division of Nuclear Quality Assurance, NSRB, NMRG, PORS, and Division of Nuclear Licensing and Regulatory Affairs. For example, a Technical Specification change is typically initiated by the responsible technical organization, reviewed by the Division of Nuclear Licensing and Regulatory Affairs, reviewed by PORC, reviewed by the Nuclear Safety Review Board and finally reviewed by the NRC. A modification would be reviewed by the originator, as well as organizations responsible for design, construction and operation. These reviews include in-depth technical reviews. In addition to the technical reviews by the initiating organization and other affected line organizations, the PORC and the NSRB provide additional reviews of the safety evaluations.

The adequacy of plant systems and programs to support safe operation has been verified through a number of programs. A very thorough Design Baseline Verification Program (DBVP) has verified the adequacy of design and

construction including modifications. The Restart Test Program followed the DBVP and demonstrated all safe shutdown and accident mitigation functions. The Surveillance Instruction Review Program identified and corrected problems with the plant instructions used to demonstrate compliance with the Technical Specifications. The Operational Readiness Review Team along with the Institute of Nuclear Power Operations has looked at the readiness of the staff to support restart and the NRC has conducted many inspections covering virtually every aspect of plant operations. These efforts, plus others such as Employee Concern Program investigations, indicate that decisions affecting safety have been and continue to be sound.

#### Tour Observations (Radiological Control)

##### ANI Recommendation 87-15

All personnel entries to Radiologically Controlled Areas should be governed by Radiation Work Permits (ANI/MAELU Criterion 8.9.2)

##### TVA Response

Sequoyah plans to implement a computerized access control system in late 1988. At that time we plan to cover all entries into the RCA by RWPs (for work activities and administrative purposes). As you are aware, all personnel entering RCA's are issued dosimetry and subject to TVA's Radiological control program.

Until the computerized access control system can be implemented, personnel entries to Radiologically Controlled Areas (RCA) will be covered by a Radiation Work Permit (RWP) under the following conditions:

1. Entries into radiation areas where worker exposures are expected to exceed 50 mrem/day whole body or when extremity monitoring is required.
2. Entries into high radiation area.
3. Entries into contamination areas.
4. Entries into airborne radioactivity areas.
5. Activities or operational tasks that have the potential for creating significant radiological hazards.
6. Activities or operational tasks that have the potential for creating significant radiological hazards.
7. At the discretion of the Radcon Group.

These requirements result in all significant radiological type work activities being governed by an RWP.

The present program allows for inspection type activities and work on non-contaminated systems to be performed without an RWP, provided that items 1-7 above do not apply. In fact this system captured essentially all our station dose for 1986 and 1987.

#### Radioactive Waste Management

##### ANI Recommendation 87-16

Radioactive materials should not be stored outside except for a short period of time. (ANI/MAELU Criteria 4.2.33.9)

##### TVA Response

Drums and radioactive waste shipping casks stored outside (near railroad bay) were being prepared for shipment. Normally, they are placed outside just prior to shipment. However, the casks observed by the ANI inspectors involved a situation where shipment of casks containing radioactive waste demineralizer resins was delayed while awaiting characterization and scaling factor determination in order to comply with 10 CFR 61. This has been completed, and waste is being prepared for shipment.

LSA boxes stored in the radwaste yard contain excess material from outages. These boxes are currently being inventoried. The inventory is expected to be completed by May 1988, waste shipped as necessary, and the remaining material appropriately marked and stored in van trailers for use during future outages.

#### Responses to Significant Comments

##### ANI Comment - page 5

As a result of this evaluation, ANI has concluded that TVA/Sequoyah is moving in a positive direction toward operational readiness for the restart of Sequoyah Unit II; however, based on ANI's findings, reevaluation of staff readiness to operate Unit II should be conducted by TVA/Sequoyah management prior to restart.

##### TVA Response

The readiness of the staff to restart Sequoyah Unit 2 is being evaluated. In August 1987, the Manager of Nuclear Power initiated formal operational readiness review (ORR) of Sequoyah by assigning a highly qualified team, independent of the line organization, to come onsite and review the qualification and motivation of personnel at Sequoyah Unit 2. This ORR Team was further charged to review the availability of necessary supporting resources for the safe and reliable testing, operation, and maintenance of the plant.

The preliminary findings of the ORR team were made available to the Plant Staff in early October 1987 and the plant immediately began corrective

actions. The formal report was issued on January 5, 1988 however, restart issues had been identified in the preliminary report and corrective actions are complete or nearing completion for all restart issues.

Operators have been given special training on the need for formality and discipline in operation and shift crews will be receiving special classroom instruction and simulator training, prior to restart, on key issues such as criticality control.

A group of Shift Operating Advisors (SOAs) has been formed to observe and assist shift crew personnel during heatup. These SOA's are managers and former SRO's with operating experience. Most also have experience at other utilities. The SOA program is a formal proceduralized program and the SOA's have been trained on what is expected of them. They will report daily to the Plant Manager as well as the Site Quality Manager.

ANI Comment - page 5

The issue which ANI believes should be reviewed is the standards by which TVA/Sequoyah is measuring its staff operational readiness. It is not evident from this inspection what standards are being used. It is ANI's opinion that TVA/Sequoyah should measure itself against absolute industry standards for operational readiness and not against progress made to date at Sequoyah. These standards should be communicated to all personnel and should become the approved yardstick by which TVA/Sequoyah measures its staff readiness.

TVA Response

The TVA nuclear power program is being infused with talent from a wide range of backgrounds to provide the standards of excellence for the nuclear program. The Deputy Site Director, Plant Manager, Assistant to the Plant Manager and Quality Assurance Manager are examples of such talent. In addition, special reviews and assistance by very experienced individuals and groups are being used to compare our activities to standards of excellence. The Operational Readiness Review (ORR) Team and members of the Institute of Nuclear Power Operation have performed a very detailed review of operational readiness at Sequoyah.

They have reviewed Sequoyah against standards of excellence and many improvements have been made since the ORR interim report was made available in October 1987. The restart requirements in the ORR report are substantially complete and they will be verified during heatup prior to actually commencing restart of SQW Unit 2. Industry standards of excellence are incorporated into procedures and training on an ongoing basis.

ANI Comment - page 6 - Item 1

Radiological boundaries, in many instances, were not fully adhered to. Many roped-off areas in the auxiliary building had water running out of the area past the boundary. Other areas had material (hoses, poly, etc.) inside the

roped-off areas that breached the vertical plane of the boundary. All of these conditions serve to decrease the sensitivity toward radiological boundaries and should not be allowed to continue.

TVA Response

There is a significant effort underway to improve housekeeping and reduce the number of radiological boundaries. Managers are held accountable for observing and correcting violations of radiological boundaries as well as general housekeeping. Attention to detail in these and other areas is being strongly emphasized by senior plant management.

ANI Comment - pages 6 and 7

We also observed a number of areas in the radwaste control room that could be improved.

- Hydrogen header supply gage was marked "OOS" in felt tip pen.
- A number of informal markings were made near switches and gages with pen and dymo-type labels.
- A hold (number 1035) was on the gas stripper feed pump and switch since January 5, 1986.
- Temporary alteration 81-11-77 on the cask decon pump and switch appears to be very old.
- Spent resin storage tank level gage was reading substantially greater than 100% full.

TVA Response

Informal labeling using felt tip pen and Dymo-tape is specifically not allowed. Operator aids are controlled by administrative procedure SQA-142 and prior to restart, operations management will conduct an audit of control panels to ensure that only controlled operator aids are in use.

The year old Hold Order on a gas stripper feed pump and switch was the result of an inoperable pump motor receiving low priority for repair.

These motors are not readily available and the motor has been sent off site for rewinding. It should be returned and reinstalled by August 1, 1988. This motor is not critical to the operation of the associated evaporator unless the remaining two motors fail.

There are two temporary alterations associated with the cask decon pumps that have been converted to design changes but the work plans have not been prepared to make the physical changes. These changes are scheduled to be complete by August 1, 1988.

The level gage observed was not operating correctly. A new type of level gage for the spent resin storage tank has recently been chosen. The repair will commence as soon as the new gage and parts can be procured, the design package

completed and the work plan developed. Since this has the potential to be a high exposure rate job we will carefully look at the ALARA aspects before commencing work. This work will be completed by June 1, 1988.

Revised Responses to questions in your letter of April 15, 1987.

Question A.1

Please explain the purpose and advantage to the most recent reorganization of the modification groups.

TVA Response

The purpose and advantage of the most recent reorganization of the modifications group was to reduce redundancy in organizations and provide clear accountability for work by consolidating construction functions under the Division of Nuclear Construction. This will help ensure that design changes are consistently controlled in accordance with regulations and procedures. The changes were made to provide clear lines of authority and responsibility and strengthen consistency between corporate and site functions. In the current matrix organization, activities and priorities of the Modification Group are established by the Site Director while the technical direction and support functions for the group are provided by the Division of Nuclear Construction. Site Modifications Groups can serve as resource pools for all sites during periods of high activity such as outages, when engineers and qualified craftsmen are needed temporarily at other sites.

Question A.2

It is not obvious whether or not sufficient management energy has been expended to address and resolve communications problems between the plant and engineering. Please explain what actions have been taken to solve these types of communications problems.

TVA Response

Key managers from Engineering, Modifications and the Plant Staff meet face to face on a daily basis to resolve problems. These meetings, referred to as Plan of the Day meetings, are for the primary purpose of determining which organization or individual needs assistance in accomplishing scheduled work and to make that assistance available. Key items on the plant schedule must be explained by the cognizant manager. This meeting has been very effective in eliminating communications problems, and the daily contact has resulted in a developing teamwork.

Question B.1

Many temporary modifications incorporated before shutdown remain in place in the plant. Why have these temporary modifications not been converted to permanent modifications?

TVA Response

In the past there has not been adequate attention to eliminating temporary modifications or incorporating them into plant design. Temporary modifications are now being closed as rapidly as possible but the workload on the Division of Nuclear Engineering as a result of restart effort has prevented closure of all of the temporary modifications. Continued emphasis will be maintained on the reduction of temporary modifications and the Operations Superintendent is now directly responsible for monitoring and controlling temporary modifications. Requests for temporary modifications are being carefully screened and are being denied for long term changes. This will keep the number of new temporary modifications from growing while the old ones are being closed.

Question B.2

The guidelines for issuing a waiver for DCR submittal on a long-standing TACF were not clear to those personnel interviewed. It was not evident as to how long this waiver is good for, nor was it clear as to how many successive waivers can be granted. What is being done to resolve these situations?

TVA Response

Sequoyah Administrative Procedure AI-9, which prescribes the temporary modification process, allows the Plant Manager to grant a waiver of the requirement for issuing DCR's on long-standing, temporary modifications as long as they do not degrade nuclear safety. The procedure does not address how many successive waivers can be granted. TVA does recognize the problem associated with long-standing TACFs and expects to close all 72 temporary modifications which were in place before 1984 by the unit 1 cycle 4 refueling outage. Further controls have been placed on more recent temporary modifications including a monthly review by the responsible organizations.

The plant manager and staff are carefully reviewing requests for temporary modifications and placing limits on how long they can be used. Close management attention should result in plant personnel having a clearer understanding of the guidelines and is expected to solve this problem.

Question B.3

The process for getting a TACF DCR worked on was not clear to those interviewed. What is being done to resolve this?

TVA Response

The process for removal of a TACF by making it a permanent change includes processing a DCR which will receive management review as well as Change Control Board Review. The Operations Unit Manager is now responsible for reviewing and establishing priorities for the work needed to safely operate and maintain the units including the reduction of temporary modifications. The daily War Room meetings provide a forum for the resolution of problems and discussion of needed action. This forum provides the operations organization with the means to elevate priorities and resolve problems associated with temporary modifications. Issues that in the past might have been handled as temporary modifications are now receiving immediate support from Division of Nuclear Engineering, Systems Engineering, maintenance and modifications organizations in order to achieve permanent solutions. Representatives from all affected organizations are present and therefore actions on issues are quickly communicated.

ENCLOSURE 2

# ANI AMERICAN NUCLEAR INSURERS

BURT C. PROOM, CPCU  
President and Chief Executive Officer

NUCLEAR ENGINEERING DEPARTMENT  
Ronald Sanborn, Vice President

April 15, 1987

Mr. David H. Marks  
Division of Purchasing  
1575A Chestnut Street Tower II  
Sixth and Chestnut Streets  
Chattanooga, TN 37401

Subject: ANI/MAELU Nuclear Liability Insurance Inspection  
Facility: Sequoyah Nuclear Power Station  
Policy Numbers: NF-247/MF-102  
Date: February 24-27, 1987

Dear Mr. Marks:

Stan Focht, Steve Sagatias, and I conducted a nuclear liability inspection at the Sequoyah facility to review plant modification control, health physics, plant status, start-up activities, and previous recommendations.

One suggestion to post frisking instructions was offered. Past recommendations 85-2 and 86-1 were closed, and no new recommendations were made. Some key Sequoyah staff members were not available for initial or follow-up discussions. Consequently, several of our questions and concerns were not fully resolved. We would appreciate your written response within sixty (60) days to help us close the issues discussed in this letter.

## INSPECTION ITEMS

### Plant Modification Control

We reviewed plant modification procedures and discussed further details with Darrell Widner, Engineering Supervisor; Jim Maddox, Project Administration Supervisor; Barry Willis, Assistant Plant Manager; and Boyd Patterson, Superintendent of Maintenance. This review gave us the opportunity to become familiar with Sequoyah's modification process, and the changes that had been made. We were particularly interested in the overall modification process, as well as the specifics of temporary modifications, drawing control, and modification package review.

APR 20 1987

The comments in this letter are based upon conditions, practices and property observed or information made available in the course of the inspection which was made for underwriting purposes. These comments do not purport to list all hazards nor to indicate that other hazards do not exist. No responsibility is assumed for the correction or control of any conditions, practices or property, and neither the making of the inspection nor any report or correspondence thereon shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that the facilities, operations or property are safe or harmful, or are in compliance with any law, rule or regulation, or in compliance with any technical specification by any government authority or agency.

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The Exchange Suite 245 / 270 Farmington Avenue / Farmington Connecticut 06032 / (203) 677-7305 ■ Eng. Dept. (203) 677-7715 / TLX No. 643-029

The following observations include many noteworthy programmatic improvements and several items which require additional clarification. We have also collected these unresolved issues in the Attachment to aid you in responding to them.

#### Overall Modification Process

- \* Improvements have been made in governing procedures and administrative systems, including the formation of the CCB (Change Control Board).
- \* DNE (Engineering) is much more involved in the entire process (design through implementation).
- \* The sequence of performing modifications is more carefully considered than in the past.
- \* More realistic, "do-able" work packages are being generated.
- \* The purpose and advantage of the most recent reorganization of the modifications group are not clear.
- \* It is not obvious as to whether or not sufficient management energy has been expended to address and resolve communications problems between the plant and engineering. An example of this type of problem is the past use of two different types of drawings by the plant and engineering, and the configuration control discrepancies that resulted.
- \* The people we interviewed were not in agreement as to who was ultimately responsible for prioritizing and scheduling modifications.
- \* The final DCR (Design Change Request) and ECN (Engineering Change Notice) closeout processes do not appear to formally consider the user's needs.

#### Temporary Modifications

- \* Increased management scrutiny was noted in the TACF (Temporary Alteration Control Form) approval process.
- \* Increased DNE involvement, particularly relating to the preparation of USQDs (Unreviewed Safety Question Determinations), was evident.
- \* A more stringent tracking system is in place, which includes the requirement of initiating a DCR or obtaining a waiver from the Plant Manager after sixty days.
- \* Many temporary modifications incorporated before shutdown remain in place in the plant.
- \* The guidelines for issuing a waiver for DCR submittal on a long-standing TACF were not clear to those personnel interviewed. It was not evident as to how long this waiver is good, nor was it clear as to how many successive waivers can be granted.
- \* The process for getting a TACF DCR worked on was not clear to those interviewed.

#### Drawing Control

- \* Overall improvements have been made in the drawing control process, such as:
  - 1) adopting a one drawing system;
  - 2) clarifying responsibilities for drawing control; and
  - 3) the commitment to update as-configured drawings within fifteen days of lifting hold orders on modifications.

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Modification Package Review

- \* Periodic reviews during the modification process and team walkdowns are improvements in the review process.
- \* It was not evident that the PORC (Plant Operations Review Committee) members feel responsible for reviewing modification package USQDs in great detail to ensure that an Unreviewed Safety Question does not exist.
- \* No agenda is provided to PORC members and alternates before meetings are held.
- \* Modification workplans are not reviewed by PORC members prior to PORC meetings.

Issues Facing Sequoyah

We discussed plant startup and other issues with Larry Nobles, Plant Manager. We were provided information on EQ (Equipment Qualification), the Design Baseline Verification Program, Ampacity, drawing deficiencies, cable splicing problems, Technical Specification surveillance instruction reviews, restart testing considerations, Employee Concerns, the Piece Parts Program, control room ceiling replacement, small bore pipe hangers, trending program deficiencies, the Operability Lookback Program, Appendix R modifications, steam generator tube plugging, and the Operational Readiness Program. This discussion helped us understand the amount and scope of work to be accomplished before startup.

Health Physics

We discussed the Health Physics staff and organization with Bob Prince, Superintendent - Radiological Control. The Sequoyah Radiological Control section organizational structure and staff size appear sufficient to establish and monitor guidelines concerning proper radiological practices as related to insurance purposes. We believe that the current organization, which has the Radiological Control Superintendent reporting directly to the Plant Superintendent, provides for the most effective management.

We reviewed the generation of RWPs with Jerry Osborne, ALARA Health Physics Supervisor, and John Leamon, ALARA Health Physicist. The RWP format meets the requirements of ANI/MAELU Radiation Work Permit criteria, section 8.9 (Revision 2). The RWP program provides sufficient documentation of the radiological controls imposed on workers, rad control coverage, identification of ALARA concerns, and current survey information.

Don Crawley, Radiological Control Field Operations Supervisor, described contamination control measures and radiation surveillance at the site. The performance of these surveys appears sufficient in terms of frequency, posting, review by supervisors, and document retrievability. The establishment and achievement of the plant c-zone reduction goals were noted.

We discussed the external radiation dosimetry program with Sandy Harrison, Dosimetry Shift Supervisor, and Al King, Dosimetry Health Physicist. The dosimetry program meets the requirements of ANI/MAELU External Dosimetry criteria, section 8.4 (Revision 2).

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We reviewed aspects of records retrieval with Diane Larsen, Corporate Health Physicist. TVA has performed their own self-audit based upon the guidelines of ANI/MAELU Bulletin 80-1A, Records Retention. A full 80-1A inspection was not performed; instead an overview of locating documents was conducted. Overall, the ability to find records, as listed in 80-1A, is satisfactory.

#### Previous Recommendations

We reviewed recommendation 85-2 with Mr. Bob Dwyer, Licensed Operator. This recommendation addressed the control of operator aids and the review of the P-250 computer user's manual, and was closed.

We discussed recommendation 86-1, regarding review of the QA audit program, with Phil Szczepanski. We also reviewed NSRB-P1, "Review and Audit Responsibilities", and Revision 12 of the NSRB Charter. This recommendation was also closed.

#### Declined Licensing Amendment

We discussed with Tim Andreychek, a Westinghouse Contractor, a denied Technical Specification change concerning auxiliary feedwater hardware modifications. No insurance concerns were identified.

#### Facility Tour

We took a facility tour with Victor Taylor and Jerry Osborne. We toured the Auxiliary Building, Radwaste Areas, Radiochemistry Laboratory, Control Room, and Turbine Building. Generally, housekeeping and plant conditions were average to worse than average when compared to other stations we routinely visit. We noticed the effort to reduce the amount of contaminated areas, but continuing effort is needed in this area.

The posting of standing RWPs (Radiation Work Permits) and special RWPs was noted at the radiation control point. Radiation and contamination areas were properly posted and barricaded. The radiation/contamination surveys were current in terms of the requirements of plant procedures HPSIL 1 and 2.

If, upon frisking, an individual sets off a frisker alarm, it is very important that notification instructions are readily available. Frisking instructions were not observed, therefore the following suggestion is made.

Suggestion: Frisking instructions should be posted at all frisking stations. (ANI/MAELU Criterion 8.7.2.3)

We noted the following Radwaste concerns while on the tour.

1. The Radwaste Control room (669 foot level) had several gauges which indicated offscale and/or had bent needles.
2. Hold orders for repairing radwaste system pumps were dated as early as January 5, 1986.
3. Inconsistencies in labeling (use of dymo tape and different numbering systems) were evident on the radwaste control panel.

007443 1174

- 4. A radwaste system temporary hose that was installed in 1982 remains a temporary modification.
- 5. The amount of DAW (Dry Active Waste) to be processed is very large.

We discussed these observations and other items relating to radwaste with John Qualls, Radwaste Control Section Supervisor. He pointed out recent improvements in DAW compaction ratios and planned enhancements to the radwaste program. It was evident from these discussions and from the size of the radwaste group that radwaste is a low priority. This is reinforced by the tour observations. Additionally, we learned through discussions with Radiological Controls that HPSIL 36, "Radwaste Segregation", is seldom, if ever, used. Sequoyah should consider raising the priority of radwaste work. We may review this area in more detail during future liability inspections.

We made several observations while touring the Radiochemistry Laboratory.

- 1. General lab cleanliness and neatness was below average.
- 2. Several expired prepared reagents were present, contrary to station procedures.
- 3. Several prepared reagents were not labeled in accordance with station procedures.
- 4. There was a significant crack in the glass of one of the fume hoods.

We did not have time to discuss these items with Chemistry personnel. We did state these observations at the exit meeting. We may review these areas in more detail at a future liability inspection.

We observed the control room to be generally quiet and orderly. We toured the turbine building after the exit meeting and found it to be very clean and well maintained.

Environmental Monitoring

On Friday, February 27, we presented ANI/MAELU Information Bulletin 86-1, "Environmental Monitoring Programs," to TVA corporate environmental personnel. Rick Piccolo, ANI Health Physics Manager, joined us for the presentation, which was well received. The results of that meeting will be forwarded in another letter.

We have summarized our concerns in the enclosed Attachment. Please provide responses to these items and the suggestion within sixty (60) days.

We appreciate the cooperation of the Sequoyah staff.

Very truly yours,



Kurt N. Larson  
Facility Engineer

KNL/lgg  
Attachment

cc: H. Abercrombie, V. Dudley, J. Hoffman H. Higgins, Jr.

0004431175

Attachment

Concerns to be Addressed

Sequoyah Nuclear Liability Inspection

February 23-27, 1987

A. Modification Process

1. Please explain the purpose and advantage of the most recent reorganization of the modifications group.
2. It is not obvious whether or not sufficient management energy has been expended to address and resolve communications problems between the plant and engineering. Please explain what actions have been taken to solve these types of communications problems.
3. The people we interviewed were not in agreement as to who was ultimately responsible for prioritizing and scheduling modifications. What is being done to resolve this situation?
4. The final DCR (Design Change Request) and ECN (Engineering Change Notice) closeout processes do not appear to formally consider the user's needs. What actions will be taken in this area?

B. Temporary Modifications

1. Many temporary modifications incorporated before shutdown remain in place in the plant. Why have these temporary modifications not been converted to permanent modifications?
2. The guidelines for issuing a waiver for DCR submittal on a long-standing TACF (Temporary Alteration Control Form) were not clear to those personnel interviewed. It was not evident as to how long this waiver is good for, nor was it clear as to how many successive waivers can be granted. What is being done to resolve these situations?
3. The process for getting a TACF DCR worked on was not clear to those interviewed. What is being done to resolve this?

C. Modification Package Review

1. It was not evident that the PORC (Plant Operations Review Committee) members feel responsible for reviewing modification package USQDs (Unreviewed Safety Question Determinations) in great detail to ensure that an Unreviewed Safety Question does not exist. Why is this the case?
2. No agenda is provided to PORC members and alternates before meetings are held. Please explain why.
3. Modification workplans are not reviewed by PORC members prior to PORC meetings. Please explain why.

000443 1176

ENCLOSURE 3

1535B Chestnut Street Towers II

September 11, 1987

Marsh & McLennan, Inc.  
1221 Avenue of the Americas  
New York, NY 10020

Attention: Mr. Luke Sanna

CONTRACT 77P66-142911 (ANI POLICY #NF-247) - NUCLEAR LIABILITY INSURANCE -  
SEQUOYAH NUCLEAR PLANT - FEBRUARY 24-27, 1987 INSPECTION

Enclosed are TVA's comments on the subject inspection report. We note that there were no recommendations in the report and are of the opinion that the types of concerns expressed would have been better addressed at the exit conference. Therefore, in the future we request that such matters be handled in the exit meeting.

Please convey our comments to ANI.

Very truly yours,  
\* original signed by  
David H. Marks  
David H. Marks, Supervisor  
Nuclear Fuels Section

ATTACHMENT

SEQUOYAH NUCLEAR PLANT (SQN)  
ANI NUCLEAR LIABILITY INSURANCE  
FEBRUARY 1987 INSPECTION

A. Modification Process

1. Please explain the purpose and advantage of the most recent reorganization of the modifications group.

TVA Response:

This concern is addressed in attachment A (Volume 2 of the TVA Nuclear Performance Plan, Sequoyah Nuclear Plant, pages II-1 and II-2). Other actions taken by the SQN Modifications Branch in this area are listed below.

2. It is not obvious whether or not sufficient management energy has been expended to address and resolve communications problems between the plant and engineering. Please explain what actions have been taken to solve these types of communications problems.

TVA Response:

The SQN Modifications Manager designated Jim Robinson, Assistant Modifications Manager, to serve on the staff of Doug Wilson, Project Engineer, Division of Nuclear Engineering (DNE), as a liaison between DNE and Modifications. Walter V. Horn, Deputy Modifications Manager, now attends the daily plant scheduling meetings to coordinate activities between plant sections and Modifications.

3. The people we interviewed were not in agreement as to who was ultimately responsible for prioritizing and scheduling modifications. What is being done to resolve this situation?

TVA Response:

Attachment B was provided to each Modifications manager to discuss with his employees.

4. The final DCR (Design Change Request) and ECN (Engineering Change Notice) closeout processes do not appear to formally consider the user's needs. What actions will be taken in this area?

TVA Response:

A procedure, SQEP-60, "Handling of Modifications Using Design Change Notices," is being developed to help correct this issue.

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B. Temporary Modifications

1. Many temporary modifications incorporated before shutdown remain in place in the plant. Why have these temporary modifications not been converted to permanent modifications?

TVA Response:

A commitment was made to clear pre-1984 temporary alteration control forms (TACFs) by the end of unit 1, cycle 4 operating period. Temporary modifications are converted to permanent modifications on a priority basis. Currently, the highest priority is to safely restart and operate both units.

2. The guidelines for issuing a waiver for DCR submittal on a long-standing TACF were not clear to those personnel interviewed. It was not evident as to how long this waiver is good for, nor was it clear as to how many successive waivers can be granted. What is being done to resolve these situations?

TVA Response:

The guidelines for handling TACFs are listed in Administrative Instruction 9 (AI-9). A copy of AI-9 is attached (see attachment C). We believe the existing procedure is adequate.

3. The process for getting a TACF DCR worked on was not clear to those interviewed. What is being done to resolve this?

TVA Response:

The process for TACF DCRs is identical to all DCRs. Prioritizing work requests was addressed in attachment B.

C. Modification Package Review

1. It was not evident that the PORC (Plant Operations Review Committee) members feel responsible for reviewing modification package USQDs (Unreviewed Safety Question Determinations) in great detail to ensure that an Unreviewed Safety Question (USQ) does not exist. Why is this the case?

TVA Response:

We do not agree with this conclusion. PORC members do receive USQDs in sufficient detail to ensure that no USQs exist. USQDs for ECNs are prepared by DNE and are received not only in informal PORC meetings, but special attention is given to the USQDs in the final PORC meeting. USQDs are prepared by persons who meet minimum qualifications goals as specified by SQA119 and are certified by the Power Operations Training Center (POTC).

2. No agenda is provided to PORC members and alternates before meetings are held. Please explain why.

TVA Response:

PORC meetings are generally held twice daily. The morning PORC meeting does not use an agenda since each item is discussed in great detail, including scope, required testing, review cycle, USQDs, and other important items. For the afternoon PORC meeting, an agenda is used to schedule discussion of routine items. In summary, an agenda is used when appropriate, but discussions are not limited to those items listed on the agenda.

3. Modification workplans are not reviewed by PORC members prior to PORC meetings. Please explain why.

TVA Response:

Most workplans are not reviewed by the PORC members themselves before the PORC meeting. To fully understand the answer to this topic, you must understand the entire PORC review process. A vital part of the PORC process is the informal review performed by various plant sections as detailed by AI-4 and AI-19 before the item is considered by the formal PORC. This review by cognizant, responsible persons is a vital part of the PORC process. It is not considered feasible for PORC members to personally review every item that comes to the committee; however, it is important for the plant manager to have a total PORC process that ensures a proper review. We believe we do.

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## II. CONDUCT OF SEQUOYAH ACTIVITIES

### 1.0 STRENGTHENING SEQUOYAH MANAGEMENT AND ORGANIZATION

TVA's revised Corporate Nuclear Performance Plan sets forth the new TVA nuclear power organization that will correct deficiencies in corporate support activities. Consistent with the restructuring of TVA's corporate nuclear organization to provide for effective management of its nuclear activities, the Sequoyah organization has also been restructured. The organizational changes discussed in Sections II.1.1 and II.1.2 have accomplished a strengthening of corporate support and site line activities and achieved consistency between corporate and site functions.

In a number of areas, Sequoyah managers and their organizations lacked clear assignments of responsibility and authority. Accordingly, efforts have been undertaken to clarify each manager's area of responsibility, establish accountability and assure resources to perform assignments as discussed in Section II.1.3.

Finally, in some Sequoyah positions, managers and supervisors did not have the desired level of plant knowledge. As a result, TVA continues efforts to improve the level of plant operations and systems understanding among line managers and supervisors as discussed in Section II.1.4.

#### 1.1 Strengthening Functional Support

Sequoyah nuclear site support organizations have been reorganized into functional departments that generally parallel the functional departments in TVA's nuclear headquarters. Where applicable, each site support organization receives technical direction from its respective corporate department. The Sequoyah Site Director is responsible for planning, scheduling, coordinating, and providing project direction for the activities of the site support organizations. Tables 1 and 2 show the revised Sequoyah site and nuclear plant organizations.

The Sequoyah Site Director approves and controls the activities conducted on site. He has the authority and responsibility for ensuring adequate staffing of the organization and ensuring the safe, economical, and efficient operation, maintenance, and modification of the facility within the policies and guidelines established by the Manager of Nuclear Power. The Site Director directs the activities of the site to ensure the site is in compliance with licensing commitments, TVA policies and directives, quality assurance requirements, and applicable local and state requirements. The Site Director develops and implements site programs to ensure the performance and documentation of site activities in accordance with established quality program requirements and policies. The Plant Manager, Site Services Supervisor, Manager of Projects, Planning and Scheduling Supervisor, Financial Planning Supervisor, and Personnel Services Supervisor report directly to the Site Director. The site Project Engineer, Licensing Manager, Site Quality Manager, and Modification Manager report to the Site Director for day-to-day functional supervision. The Site Director maintains an interface with the Directors of Nuclear Engineering, Nuclear Safety and Licensing, Nuclear Quality Assurance, Nuclear Construction, and other TVA organizations to ensure effective implementation of corporate goals and objectives.

To ensure effective and consistent design and engineering control at Sequoyah, design engineering personnel and functions have been placed under the Director of DNE who reports directly to the Manager of Nuclear Power. To ensure that implementation of plant design changes at Sequoyah is consistent with established TVA policy, practices, and procedures and conforms to applicable NRC and federal regulations, site modifications activities at Sequoyah have been placed under the Director of Nuclear Construction who reports directly to the Manager of Nuclear Power. To ensure effective and consistent application of the quality assurance program, site quality assurance and quality control functions have been assigned to the Director of Nuclear Quality Assurance who reports directly to the Manager of Nuclear Power. TVA has placed responsibility for TVA nuclear regulation and licensing functions for Sequoyah under the Site Licensing Manager who reports directly to the Director of Nuclear Safety and Licensing. The Director of Nuclear Safety and Licensing reports to the Manager of Nuclear Power.

To ensure effective and consistent program and technical direction at Sequoyah, the Division of Nuclear Services has been assigned corporate responsibility and authority in such areas as radiological control, system operations (fire protection, nonradiological environmental control, industrial safety and security), emergency preparedness, management systems (configuration management, information systems, records management, and office administration), the nuclear procedure system and nuclear fuels.

# Attachment B

April 9, 1987

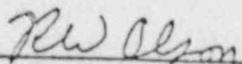
All Modifications Managers

Subject: SEQUOYAH NUCLEAR PLANT (SQN) - ANI/MAELU NUCLEAR LIABILITY  
INSURANCE INSPECTION OF FEBRUARY 24-27, 1987

During this inspection, there were some comments made to the inspectors by Modifications engineers and managers about prioritizing and scheduling work that concerned them. The following is the way work is presently handled in Modifications:

1. The direction that SQN Modifications receives on how to do work is the responsibility of the Division of Nuclear Construction in Knoxville.
2. The direction that SQN Modifications receives on what to work on and when it is to be worked on is the responsibility of the SQN Site Director.

The work in SQN Modifications is prioritized and scheduled as directed by the SQN Site Director.

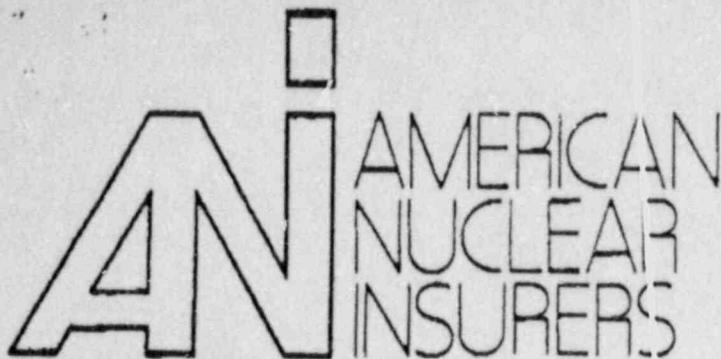
  
R. W. Olson

RWO:VLH

cc: H. L. Abercrombie, O&PS-4, Sequoyah  
L. M. Nobles, POB-2, Sequoyah

02970

ENCLOSURE 4



BURT C. PROOM, CPCU  
President and Chief Executive Officer

NUCLEAR ENGINEERING DEPARTMENT  
Ronald Sannocore, Vice President

February 11, 1988

Mr. David H. Marks  
Division of Purchasing  
Tennessee Valley Authority  
1575A Chestnut Street Tower II  
Sixth and Chestnut Streets  
Chattanooga, TN 37401

Subject: ANI/MAELU Nuclear Liability Insurance Inspection  
Facility: Sequoyah Nuclear Plant  
Policy Numbers: NF-249/MF-102  
Date: February 3-5, 1988

Dear Mr. Marks:

Mark Poirier, Paul Krippner and I recently conducted a nuclear liability inspection of the Sequoyah facility. Our primary objective was to determine what safety review oversight responsibilities are held by various site and corporate groups and how these responsibilities are implemented. We also discussed the results of the last Sequoyah nuclear liability inspection with site and corporate management.

We observed signs that indicate the Nuclear Performance Plan is being implemented onsite, and we also observed appropriate support for the recommendations offered in our December 24, 1987 letter. Several corrective actions are already being implemented. Generally, we noted improvement in the functioning of the PORC (Plant Operations Review Committee). No new recommendations were made.

TVA needs to demonstrate that the changes implemented at TVA will result in significant improvements in Sequoyah's performance in the near future. We intend to continue to monitor the performance of Sequoyah as startup approaches. In order for this to be timely, we ask that you forward to us, on an ongoing basis, all correspondence that is generated as a result of the monitoring of Sequoyah's performance during this phase, such as the results of the ORRG's (Operational Readiness Review Group's) monitoring of plant operations. We ask that you forward this information to us the same day that

The comments in this letter are based upon conditions, practices and property observed or information made available at the time of the inspection which was made for underwriting purposes. These comments do not purport to list all hazards nor to indicate that other hazards do not exist. Responsibility is assumed for the correction or control of any conditions, practices or property, and neither the making of the inspection nor report or correspondence thereon shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that the facilities, operations or property are safe or harmful, or are in compliance with any law, rule or regulation, or in compliance with technical specification by any government authority or agency.

it is generated. The results of these types of performance evaluations will help ANI/MAELU in its decisions regarding Sequoyah.

#### TVA Presentations to ANI

Dick Gridley, Bill Hannum, and Bob McKay provided us with several presentations related to regulatory activities, safety review, and the procedures rewrite effort. These presentations were very informative and improved our perspective of where TVA has been and is going in these areas.

#### Operational Readiness Review (ORR)

We discussed the ORR with Frank Fogarty and Joe Bynum. We discussed the purpose of the ORR, the composition of the ORR team, the nature of the review, the results of the ORR, and the draft response to the ORR report.

We were satisfied with the thoroughness of the ORR. The findings of the group closely paralleled those of ANI/MAELU, particularly in the area of standards of operation. We have a better understanding of the standards being utilized for evaluating Sequoyah plant restart and subsequent excellence in your hardware, people and programs. As indicated in our December 24, 1987 letter, Sequoyah is moving toward operational readiness. Continued diligence in implementing the planned corrective actions is essential for achieving operational readiness.

We intend to closely monitor the activities of the ORR team during plant heatup. The team's critical evaluation of Sequoyah's performance during this period will assist us in evaluating our insurance risk at Sequoyah.

#### Plant Operating Review Staff (PORS)

We met with John Sullivan and Mike Cooper to discuss the purpose of PORS, the group's organization, the backgrounds of the people in PORS, the types of activities PORS is engaged in, and the future plans for PORS. We were most interested in the type of safety review oversight responsibilities held by the PORS, particularly with regard to the PORC.

It was apparent from these and other discussions that the charter for PORS has not been fully developed. The POS (PORC Oversight Section) does provide oversight in the area of USQD (unreviewed safety question determination) and procedure change review, but it was not apparent that strict responsibility has been given to PORS in the area of direct PORC oversight as a staff function to the Plant Manager. This type of oversight responsibility could include items such as formal critiques of PORC meetings and evaluations of overall safety review processes currently being used.

ANI/MAELU encourages the development of a PORS charter that includes this type of specific oversight responsibility for PORS. The group should be used as effectively as possible to help improve the performance of plant operations.

We ask that you send us a copy of the PORS charter when it is written.

PORC Meeting

I attended the February 4 PORC meeting in its entirety. I saw improvements in the quality of presentations and in the amount and quality of group interactions.

Continued improvement can still be made in the areas of reducing the number of people at the meeting (28 at one count), better participant preparation for the meeting, ensuring all members are present, and increasing vigorous discussion. We will continue to monitor these areas for further signs of improvement.

Nuclear Manager's Review Group (NMRG)

We discussed the NMRG with Dick Mullee. We reviewed the group's purpose and organization, the experience level of NMRG personnel, the group's method of functioning, and future plans for the NMRG.

We were particularly interested in the role the NMRG will play in evaluating Sequoyah's future performance in the areas of weakness indicated by the ORR. It is our understanding that the NMRG will continue to interview personnel regarding the implementation of ORR corrective actions, will review all ORR areas in the future, and will perform comprehensive annual reviews of station performance. ANI/MAELU will monitor the results of these evaluations and factor them into our decisions regarding Sequoyah. Mr. Mullee agreed to allow us to review the results of NMRG reviews. We ask that you forward these documents to us as soon as they are available.

Nuclear Safety Review Board (NSRB)

We discussed the NSRBs with Bill Hannum. These discussions included the NSRBs' purpose, organization, membership roles, activities, and the types of recommendations made by the NSRBs.

Our primary concern was the role taken by the Sequoyah NSRB with respect to the functioning of the PORC. We reviewed the minutes of NSRB meeting numbers 88 through 97, with particular emphasis on the observations brought before the NSRB and the resulting actions taken by the NSRB with regard to the PORC.

From our review of this material and the discussions with Dr. Hannum, it is evident that the Sequoyah NSRB was aware of deficiencies in the functioning of PORC and has been active in working to resolve these deficiencies.

We strongly encourage the continued NSRB monitoring of PORC activities and the subsequent issuance of NSRB recommendations to effect improvements in the PORC process, as appropriate. We will continue to follow the NSRB's activities in this area. We ask that you forward to us copies of NSRB correspondence regarding PORC, as well as Sequoyah NSRB minutes commencing with meeting number 98.

Shift Operating Advisor (SOA) Program

Paul Krippner reviewed the SOA program and the accompanying administrative instruction AI-50 with Joe Benum and Larry Jackson. The SOA position was established to monitor the effectiveness of implementation of AI-30, Nuclear Plant Conduct of Operations. ANI has noted the creation of similar positions at several utilities. We recognize the advantages of the SOA position, and we encourage its use at least through Unit 2 startup.

Paul reviewed the AUC (Auxiliary Unit Operator) Watchstanding Proficiency Certification Program for content and completion status. The quality of the potential questions used in testing and the minimum acceptable performance criteria used in the evaluation of students appears to be adequate. Successful completion of the certification process by the AUCs should adequately address the ORR findings in that area. Perhaps more importantly, it should result in a highly qualified group of AUCs which will aid in Unit 2 startup.

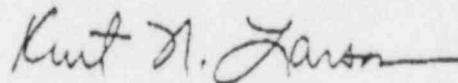
Summary of Requested Information

Again, we ask that you forward to us, on an ongoing basis where appropriate, the following material as soon as it is available.

1. Subsequent ORR evaluations and associated responses
2. PORS charter
3. NMRG review results and associated responses
4. NSRB correspondence regarding PORC, and NSRB minutes starting with meeting number 98
5. All other correspondence and reviews associated with Sequoyah's performance prior to startup.

We offer our appreciation to the corporate and site staffs for their availability and cooperation.

Very truly yours,

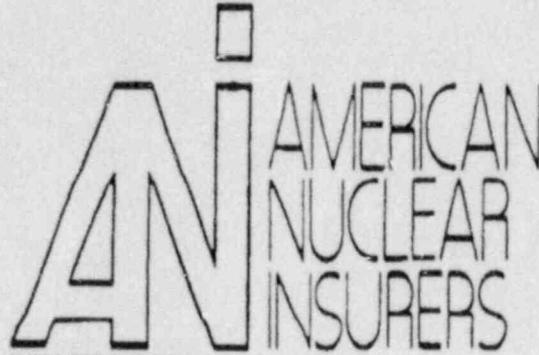


Kurt N. Larson  
Facility Engineer

KNL/lgg

cc: H. Abercrombie  
V. Harkleroad  
H. Higgins, Jr.  
C. Mason  
L. Sanna

ENCLOSURE 5



BURT C. PROOM, CPCU  
President and Chief Executive Officer

NUCLEAR ENGINEERING DEPARTMENT  
Ronald Sanacore, Vice President

March 1, 1988

*rec'd via  
teletype  
3/1  
KC:CHF*

Mr. Steven White  
Manager of Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
Chattanooga, TN 37401

Re: Sequoyah Nuclear Plant  
ANI NF-247/MF-102  
Nuclear Liability Insurance Inspection of December 8-11, 1987

Dear Mr. White:

Thank you for TVA's response to our December 24, 1987 recommendation letter. Our evaluations of each item are outlined in the enclosed Attachment.

In summary, ANI/MAELU finds TVA's responses to be prompt and to address the areas identified by our recommendations. TVA and ANI/MAELU have additional work to do, however, in order to completely resolve all of the issues raised by the recommendations. In particular, we wish you to consider the nuclear insurance issues addressed in recommendation 87-14. The safety review process in our judgement has adequately addressed nuclear safety issues, however ANI/MAELU needs to gain a better appreciation for the manner in which insurance issues have been resolved. To this end, we have proposed that we better understand your technical programs as well as selectively reviewing past PORC activities to verify the implementation of your programs.

For several of the recommendations, additional information is required which describes in detail TVA's proposed actions. We ask that you provide written comments to our evaluations of your responses within sixty days.

Very truly yours,

Ronald Sanacore

RS/ljb  
Attachment  
cc: L. Sanna

The comments in this letter are based upon conditions, practices and property observed or information made available at the time of the inspection which was made for underwriting purposes. These comments do not purport to list all hazards nor to indicate that other hazards do not exist. Responsibility is assumed for the correction or control of any conditions, practices or property, and neither the making of the inspection nor report or correspondence thereon shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that the facilities, operations or property are safe or harmful, or are in compliance with any law, rule or regulation, or in compliance with technical specification by any government authority or agency.

ATTACHMENT  
Sequoyah Nuclear Plant Liability Inspection  
December 8-11, 1987  
ANI/MAELU's Evaluations of TVA's Responses

Recommendation 87-1

The Plant Manager or Assistant Manager, ONP, should chair all PORC meetings.

TVA Response

The Plant Manager has chaired all PORC meetings since assuming his position in November 1987. TVA will continue this practice with the Assistant Manager of ONP as his alternate. In the unlikely event that neither of these individuals is available and a PORC meeting is necessary, a substitute senior manager, appointed by the Plant Manager, may chair a PORC meeting.

ANI Evaluation

TVA's response is satisfactory. Any substitute senior manager appointed to be a PORC alternate chairman should be experienced in conducting PORC meetings and cognizant and supportive of the changes being made in the way PORC operates.

Recommendation 87-2

All PORC members should be required to attend PORC meetings; the use of alternates should cease.

TVA Response

The Plant Manager has emphasized to all regular PORC members that they are not to use alternates except in unusual circumstances such as leave, sickness, or emergencies. PORC meetings will take precedence over other normal work activities. Alternates are being randomly scheduled to attend regularly scheduled PORC meetings as non-voting members so that further experience can be obtained in the enhanced PORC process.

ANI Evaluation

TVA's response to this recommendation is satisfactory. Alternates should not attend PORC meetings until the meetings have improved to the point where the PORC process is working well.

Recommendation 87-3

All unnecessary personnel should be excluded from PORC meetings.

TVA Response

Unnecessary personnel are excluded from PORC meetings. The PORC chairman enforces this practice. PORC along with senior managers designated to perform

Mr. David H. Marks  
Tennessee Valley Authority  
Page 3

PORC oversight (see TVA Response to Recommendation 87-12) will monitor and provide feedback on this recommendation to the PORC Chairman.

ANI Evaluation

TVA's response is satisfactory; however, approximately 28 people, many of whom did not actively participate, attended the February 4, 1988 PORC meeting. There was no observable attempt during the meeting to determine if these individuals needed to be present.

The intent of this recommendation is to help create a meeting environment that is conducive to professional interactions. Positive action needs to be taken by the PORC chairman at the beginning of meetings to ensure that all unnecessary personnel are excluded.

Recommendation 87-4

Those organizations that typically present items to the PORC should be formally instructed as to their responsibilities and expectations regarding PORC presentations.

and

Recommendation 87-5

Those who present items to the PORC should be required to give formal presentations to the committee.

TVA Response

TVA agrees with ANI Recommendations 87-4 and 5 and guidance for presenting items to PORC is being incorporated into AI-48, "Plant Operations Review Committee (PORC) Charter". This revision has been prepared and approval is expected by February 8, 1988.

ANI Evaluation

In addition to modifying AI-48, training should be provided to PORC members, alternates, and presenters. Please provide a revised AI-48, as well as a description of the training PORC members, alternates, and presenters will receive.

Recommendation 87-6

Those who present items to the PORC should be required to have a high level of knowledge of the item being presented.

TVA Response

The enhanced guidelines for PORC presentations in response to ANI recommendations 87-4 and 87-5 will resolve this recommendation. Presenters are much more aware of the type and level of knowledge required by the PORC than they were during your December 1987 inspection. The PORC Chairman will continue to emphasize this area.

Mr. David H. Marks  
Tennessee Valley Authority  
Page 4

ANI Evaluation

Procedural guidance regarding this issue is important, but again, presenters should be made directly aware that a high level of knowledge of the presented item is required. We did observe an improvement in the level of knowledge of the presenters during the February 4, 1988 PORC meeting. Continued improvement is necessary.

Recommendation 87-7

Last minute PORC review items ("walk-ins") should be minimized as much as possible.

TVA Response

Last minute review items are discouraged by PORC. Agenda items are presented first. The PORC chairman monitors PORC activities with regard to "walk-in" items and defers such items until they can be scheduled for a subsequent meeting. There may be true emergency or high priority items that the chairman will choose to review.

ANI Evaluation

This response is satisfactory. ANI/MAELU will verify this practice through review of meeting minutes and our attendance at future meetings.

Recommendation 87-8

Expedite the training of PORC members and alternates in their specific committee responsibilities (for example, review of unreviewed safety question issues).

TVA Response

All PORC members and alternates are required to take Qualified Reviewer (QR) and Unreviewed Safety Question Determination (USQD) training with all training to be completed by February 29, 1988. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Evaluation

This response is satisfactory. Please inform us of the status of this training.

Recommendation 87-9

Increase PORC member accountability for performance during PORC meetings.

TVA Response

Individual member performance during PORC meetings is monitored by the PORC chairman. Emphasis is placed on individual knowledge and interaction during PORC meetings with special emphasis on USQDs, Root Cause Analysis and

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Corrective Action. PORC members will be held accountable for knowledge of safety requirements in their area of expertise. Feedback to the individual and his manager is provided by the PORC chairman.

ANI Evaluation

This response is satisfactory; however, we emphasize the importance of providing feedback directly to PORC members regarding their performance during meetings. Members should also be informed that their safety review responsibilities are of paramount importance. Typically, PORC members are held accountable for their PORC performance through performance evaluations.

Recommendation 87-10

All PORC meeting participants should be required to review meeting materials, including previous meeting minutes, prior to meetings.

TVA Response

All PORC members are now required to review pertinent meeting materials including agendas, previous minutes and other backup material, prior to meetings. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Evaluation

This response is satisfactory. We will verify this practice in the future.

Recommendation 87-11

All PORC members and alternates should be provided copies of meeting minutes, regardless of whether or not they attended the respective meeting.

TVA Response

All PORC members and alternates are being provided copies of the meeting minutes to review. This requirement has been incorporated into AI-48 revisions which are expected to be approved by February 8, 1988.

ANI Evaluation

This response is satisfactory. We will verify this practice in the future.

Recommendation 87-12

The regular attendance of non-PORC members who have considerable safety review experience should be required in order to augment the meeting and enhance the quality of interactions and decisions and set examples for others.

and

Recommendation 87-13

Formal critiques of each PORC meeting should be conducted for the purposes of

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identifying strengths and weaknesses of the group and the individuals involved and to provide for future improvements to the safety review function.

#### TVA Response

Experienced nuclear managers knowledgeable in the areas of USQDs and PORC operations attend PORC meetings on a periodic basis. The Assistant Manager of Nuclear Power, Site Director, the Assistant to the Plant Manager (Development), and PORS Manager periodically attend PORC meetings. One of these managers attends a PORC meeting weekly. In addition, the PORC Oversight Section of PORS has committed to have a representative present for each scheduled PORC meeting. PORS will provide feedback, including deficiencies noted and recommendations for improvement, following each scheduled PORC meeting.

#### ANI Evaluation

TVA's response to recommendation 87-12 is satisfactory if at least one experienced manager with broad safety review background attends every regularly scheduled PORC meeting. We suggest that they participate directly in the meeting discussions in order to stimulate group interactions and set an example for the PORC members. The participation of these managers is necessary in addition to PORS at this point. Please identify which experienced nuclear managers TVA has selected for this role and what their responsibilities will be.

As we discussed during the inspection, the intent of recommendation 87-13 is for TVA to consider having the PORC chairman conduct a formal critique after each PORC meeting in order to discuss perceived strengths and weaknesses of the group and the individuals involved. The most effective method perhaps would be to have the entire PORC actively involved in a constructive critique session, including the presenters. This method of providing immediate, direct feedback (both positive and negative) is a proven tool for effecting change and recognizing good performance. These critiques would also provide the opportunity for the chairman to address the group and make his expectations and methods of operation more clearly known.

#### Recommendation 87-14

An action plan should be developed and implemented for the purposes of independently evaluating the effectiveness of past PORC activities and establishing corrective actions for noted deficiencies.

#### TVA Response

The recommendations and comments by ANI appear to be focused on the effectiveness of the PORC process. TVA concurs that the PORC process does need improvements and is committed to accomplishing these improvements. However, TVA believes that an additional independent evaluation of past PORC activities would yield little or no additional benefit in defining these improvements. In the past, PORC has been responsible for reviewing procedures, programs, modifications, Technical Specification changes, revisions to Physical Security Plans, revisions to Radiological Emergency Plans and a number of other items. All of these items are developed and

reviewed by the responsible technical organizations as well as other review organizations such as Division of Nuclear Quality Assurance, NSRB, NMRG, PORC, and Division of Nuclear Licensing and Regulatory Affairs. For example, a Technical Specification change is typically initiated by the responsible technical organization, reviewed by the Division of Nuclear Licensing and Regulatory Affairs, reviewed by PORC, reviewed by the Nuclear Safety Review Board and finally reviewed by the NRC. A modification would be reviewed by the originator, as well as organizations responsible for design, construction and operation. These reviews include in-depth technical reviews. In addition to the technical reviews by the initiating organization and other affected line organizations, the PORC and the NSRB provide additional reviews of the safety evaluations.

The adequacy of plant systems and programs to support safe operation has been verified through a number of programs. A very thorough Design Baseline Verification Program (DBVP) has verified the adequacy of design and construction including modifications. The Restart Test Program followed the DBVP and demonstrated all safe shutdown and accident mitigation functions. The Surveillance Instruction Review Program identified and corrected problems with the plant instructions used to demonstrate compliance with the Technical Specifications. The Operational Readiness Review Team along with the Institute of Nuclear Power Operations has looked at the readiness of the staff to support restart and the NRC has conducted many inspections covering virtually every aspect of plant operations. These efforts, plus others such as Employee Concern Program investigations, indicate that decisions affecting safety have been and continue to be sound.

#### ANI Evaluation

ANI/MAELU believes that there is adequate overlap between nuclear safety review programs to assure nuclear safety issues are addressed. ANI will continue to work with TVA to better appreciate the nuclear safety review process.

#### Recommendation 87-15

All personnel entries to Radiologically Controlled Areas should be governed by Radiation Work Permits. (ANI/MAELU Criterion 8.9.2).

#### TVA Response

Sequoyah plans to implement a computerized access control system in late 1988. At that time we plan to cover all entries into the RCA by RWPs (for work activities and administrative purposes). As you are aware, all personnel entering RCA's are issued dosimetry and subject to TVA's Radiological control program.

Until the computerized access control system can be implemented, personnel entries to Radiologically Controlled Areas (RCA) will be covered by a Radiation Work Permit (RWP) under the following conditions:

1. Entries into radiation areas where worker exposures are expected to exceed 30 mrem/day whole body or when extremity monitoring is required.

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2. Entries into high radiation area.
3. Entries into contamination areas.
4. Entries into airborne radioactivity areas.
5. Activities or operational tasks that have the potential for creating significant radiological hazards.
6. Activities or operational tasks that have the potential for creating significant radiological hazards. [sic]
7. At the discretion of the Radcon Group.

These requirements result in all significant radiological type work activities being governed by an RWP.

The present program allows for inspection type activities and work on non-contaminated systems to be performed without an RWP, provided that items 1-7 above do not apply. In fact this system captured essentially all our station dose for 1986 and 1987.

#### ANI Evaluation

TVA's plans to track all RCA entries by RWP using a new computerized system should address this recommendation. The details of this system will be evaluated during a future inspection.

Meantime, we need more information to evaluate the current interim control of RCA entry and RWPs, such as:

1. The process used to conclude that essentially all station dose for 1986 and 1987 was captured using the existing system.
2. The controls used to ensure all tasks performed in the RCA are evaluated by qualified personnel for the six criteria listed in TVA's response, especially numbers 1, 5 and 7, before the task begins.
3. Methods used to verify that tasks in progress in the RCA are being governed by RWP when required.

#### Recommendation 87-16

Radioactive materials should not be stored outside except for a short period of time. (ANI/MAELU Criteria 4.2.33.9)

#### TVA Response

Drums and radioactive waste shipping casks stored outside (near railroad bay) were being prepared for shipment. Normally, they are placed outside just prior to shipment. However, the casks observed by the ANI inspectors involved a situation where shipment of casks containing radioactive waste demineralizer resins was delayed while awaiting characterization and scaling factor

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determination in order to comply with 10 CFR 61. This has been completed, and waste is being prepared for shipment.

LSA boxes stored in the radwaste yard contain excess material from outages. These boxes are currently being inventoried. The inventory is expected to be completed by May 1988, waste shipped as necessary, and the remaining material appropriately marked and stored in van trailers for use during future outages.

#### ANI Evaluation

The situation surrounding these radioactive materials was described to us during the inspection by Larry Jackson and John Qualls. We also understood what work was required before this material could be either shipped or stored undercover. Our concern is that controls need to be established to prevent this situation from occurring again.

#### Comment - Page 5

As a result of this evaluation, ANI has concluded that TVA/Sequoyah is moving in a positive direction toward operational readiness for the restart of Sequoyah Unit 2; however, based on ANI's findings, reevaluation of staff readiness to operate Unit 2 should be conducted by TVA/Sequoyah management prior to restart.

#### TVA Response

The readiness of the staff to restart Sequoyah Unit 2 is being evaluated. In August 1987, the Manager of Nuclear Power initiated formal operational readiness review (ORR) of Sequoyah by assigning a highly qualified team, independent of the line organization, to come onsite and review the qualification and motivation of personnel at Sequoyah Unit 2. This ORR Team was further charged to review the availability of necessary supporting resources for the safe and reliable testing, operation, and maintenance of the plant.

The preliminary findings of the ORR team were made available to the Plant Staff in early October 1987 and the plant immediately began corrective actions. The formal report was issued on January 5, 1988 however, restart issues had been identified in the preliminary report and corrective actions are complete or nearing completion for all restart issues.

Operators have been given special training on the need for formality and discipline in operation and shift crews will be receiving special classroom instruction and simulator training, prior to restart, on key issues such as criticality control.

A group of Shift Operating Advisors (SOAs) has been formed to observe and assist shift crew personnel during startup. These SOA's are managers and former SRO's with operating experience. Most also have experience at other utilities. The SOA program is a formal proceduralized program and the SOA's have been trained on what is expected of them. They will report daily to the

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Plant Manager as well as the Site Quality Manager.

and

Comment - Page 5

The issue which ANI believes should be reviewed is the standards by which TVA/Sequoyah is measuring its staff operational readiness. It is not evident from this inspection what standards are being used. It is ANI's opinion that TVA/Sequoyah should measure itself against absolute industry standards for operational readiness and not against progress made to date at Sequoyah. These standards should be communicated to all personnel and should become the approved yardstick by which TVA/Sequoyah measures its staff readiness.

TVA Response

The TVA nuclear power program is being infused with talent from a wide range of backgrounds to provide the standards of excellence for the nuclear program. The Deputy Site Director, Plant Manager, Assistant to the Plant Manager and Quality Assurance Manager are examples of such talent. In addition, special reviews and assistance by very experienced individuals and groups are being used to compare our activities to standards of excellence. The Operational Readiness Review (ORR) Team and members of the Institute of Nuclear Power Operation have performed a very detailed review of operational readiness at Sequoyah.

They have reviewed Sequoyah against standards of excellence and many improvements have been made since the ORR Interim report was made available in October 1987. The restart requirements in the ORR report are substantially complete and they will be verified during heatup prior to actually commencing restart of SQN Unit 2. Industry standards of excellence are incorporated into procedures and training on an ongoing basis.

ANI Evaluation

In addition to TVA's response to these comments, ANI/MAELU also evaluated the Operational Readiness Review and the associated TVA management response, the information gathered during the February 3-5, 1988 nuclear liability inspection, and supplemental information provided to us since the time of this inspection, including AI-30, "Nuclear Plant Conduct of Operations" and AI-50, "Shift Operating Advisor."

ANI/MAELU has determined that preparation for Sequoyah Unit 2 restart is occurring by addressing key deficiencies in hardware, programs and people. Other deficiencies in these areas, which have been deemed secondary to Unit 2 restart, are being deferred to post-restart action. Concurrently, there is an ongoing effort to address the complex systemic deficiencies which have historically hindered the effectiveness of TVA and Sequoyah management and operations.

Firstly, ANI/MAELU finds that the standards being utilized to guide and measure readiness for restart of Unit 2 are developed and measured by key corporate and site managers as well as independent groups such as the ORR (Operational Readiness Review) group and NMRG (Nuclear Managers Review Group).

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The lower threshold of these standards is equivalent to industry norms. The effort to develop standards to guide and measure the corrective actions for the systemic deficiencies is being conducted by the Office of Nuclear Power. The standards to be utilized in this effort are standards of excellence.

Secondly, ANI/MAELU finds that the TVA measurement of Sequoyah staff readiness for the restart of Unit 2 is based on the Sequoyah staff's apparent level of readiness coupled with direct corporate management involvement, onsite contractor support, and several long and short term oversight groups (for example, SOA, ORR, and NMRG).

ANI/MAELU concludes that the supplemental staff described above is necessary to support the operation of Sequoyah Unit 2 at this time to assure the proper integration of hardware, programs and people, and to assure the continued development of high standards, programs and people. ANI/MAELU does not endorse the concept of supplemental staff over the long term, and we will monitor the effectiveness of its use.

#### Comment - Page 6 - Item 1

Radiological boundaries, in many instances, were not fully adhered to. Many roped-off areas in the auxiliary building had water running out of the area past the boundary. Other areas had material (hoses, poly, etc.) inside the roped-off areas that breached the vertical plane of the boundary. All of these conditions serve to decrease the sensitivity toward radiological boundaries and should not be allowed to continue.

#### TVA Response

There is a significant effort underway to improve housekeeping and reduce the number of radiological boundaries. Managers are held accountable for observing and correcting violations of radiological boundaries as well as general housekeeping. Attention to detail in these and other areas is being strongly emphasized by senior plant management.

#### ANI Evaluation

ANI/MAELU agrees that a significant effort is warranted to reduce the number of contaminated areas of the plant which require boundaries. For example, the high number of roped-off gage panels suggests a generic issue which should be resolved. We will be monitoring your efforts to reduce the number of contaminated areas. Our primary concern, however, is sensitivity to the control of radiological boundaries. ANI/MAELU believes that more aggressive action by SQM management is necessary to improve employee sensitivity to radiological boundaries.

#### Comment - Pages 6 and 7

We also observed a number of areas in the radwaste control room that could be improved.

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- Hydrogen header supply gage was marked "OOS" in felt-tip pen.
- A number of informal markings were made near switches and gages with pen and dymo-type labels.
- A Hold (number 1035) was on the gas stripper feed pump and switch since January 5, 1986.
- Temporary alteration 81-11-77 on the cask decon pump and switch appears to be very old.
- Spent resin storage tank level gage was reading substantially greater than 100% full.

#### TVA Response

Informal labeling using felt tip pen and Dymo-tape is specifically not allowed. Operator aids are controlled by administrative procedure SQA-142 and prior to restart, operations management will conduct an audit of control panels to ensure that only controlled operator aids are in use.

The year old Hold Order on a gas stripper feed pump and switch was the result of an inoperable pump motor receiving low priority for repair.

These motors are not readily available and the motor has been sent off site for rewinding. It should be returned and reinstalled by August 1, 1988. This motor is not critical to the operation of the associated evaporator unless the remaining two motors fail.

There are two temporary alterations associated with the cask decon pumps that have been converted to design changes but the work plans have not been prepared to make the physical changes. These changes are scheduled to be complete by August 1, 1988.

The level gage observed was not operating correctly. A new type of level gage for the spent resin storage tank has recently been chosen. The repair will commence as soon as the new gage and parts can be procured, the design package completed and the work plan developed. Since this has the potential to be a high exposure rate job we will carefully look at the ALARA aspects before commencing work. This work will be completed by June 1, 1988.

#### ANI Evaluation

ANI/MAELU understands that unauthorized labels will be removed before restart. One of our concerns is that widespread use of unauthorized labeling methods was allowed to develop. Please describe TVA's plans to ensure that unauthorized labeling of control boards will be prevented in the future.

Our other concern is that it appears that repairs, temporary alterations and design changes for inoperable radioactive waste processing equipment have not been receiving less than appropriate management attention and priority. Please describe TVA's plans to ensure that radioactive waste processing systems receive sufficient priority to support full operability with minimal interruptions in the future.

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Additional TVA Responses to ANI Items A1, A2, B1, B2, and B3 in ANI to TVA  
Letter dated April 15, 1987

ANI Evaluation

These five items of concern related to the purpose of the Modifications Group reorganization, resolving communication problems between the plant and engineering, and actions to reduce the number of TACFs (Temporary Alteration Control Forms).

Each of these additional responses is satisfactory.