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USNRC

SEQUOYAH NUCLEAR SAFETY REVIEW BOARD
MINUTES OF MEETING NO. 136
NOVEMBER 20-21, 1991

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EXECUTIVE SUMMARY

OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Sequoyah Nuclear Safety Review Board (NSRB) meeting No. 136 was held November 20-21, 1991. All members and advisors were present for both days, except L. W. Myers who was present on November 20.

It was noted during the meeting that a number of site responses were incomplete, inaccurate, or did not address the specific NSRB concerns. A technical specification change submitted for NSRB concurrence was also technically deficient. Site management concurred with this assessment and agreed that future submittals would be improved to provide thorough and accurate information for NSRB consideration.

Discussed below are key items from the meeting:

Site Chemistry Program

Recent findings by Site Quality Assurance and Corporate Chemistry indicated that significant problems existed in the Sequoyah Chemistry Program which, if not promptly corrected, could impact plant chemistry control. For example, required data trend analyses were not being performed, chemicals were purchased to incorrect specifications, some training was delinquent, and several procedure preparation and use deficiencies were identified.

The Plant Manager and the Technical Programs Manager are working together to develop a corrective action plan. Corporate Chemistry personnel have been assigned to assist the site.

Radiological Controls

The NSRB found that the poor design of the Westinghouse-supplied steam generator shot-peening equipment from a radiological standpoint has resulted in appreciable unnecessary personnel radiation exposure. For example, the design did not adequately consider crud traps, source shielding, or quick changeout capability for components requiring maintenance. For instance, a dust cover, with the potential for exposure of 100 R/hour, must be changed out by hand. In addition, the Westinghouse fuel inspection equipment was more contaminated than expected, resulting in excessive radiological concerns during equipment setup, including "hot particle" problems.

The following action items resulted from this review: (1) the Westinghouse steam generator shot-peening equipment design should be reevaluated and actions taken to reduce radiation exposure and improve overall radiological design prior to the shot-peening for the Unit 2 outage and (2) the Sequoyah Nuclear Plant and Westinghouse radiological control/As Low As Reasonably Achievable programs should be assessed to identify and correct the weaknesses that led to these problems.

The Site Vice President and the Engineering Manager concur with this assessment and the associated corrective action.

TVA Exh. 70

CLEAN REGULATORY COMMISSION

Locket No. SG-390 Official Ex. No. TVA 70

In the matter of TVA

Staff _____ IDENTIFIED _____

Applicant RECEIVED

Introducer _____ REJECTED _____

Other _____ WITHDRAWN _____

DATE 9-13-02 Witness _____

Clerk R. DAVIS

MINUTES

SEQUOYAH NUCLEAR SAFETY REVIEW BOARD
MEETING NO. 136
NOVEMBER 20-21, 1991

Members:

T. J. McGrath, Chairman
R. R. Calabro
M. A. Cooper
R. L. Lumpkin, Jr.
W. C. McArthur
G. R. Mullee
L. W. Myers (November 20 only)
P. G. Trudel
J. L. Wilson

Advisors:

W. R. Cobean, Jr.
T. L. Gerber
J. N. Grace
T. A. Peterson
G. Toto

Technical Administrator:

J. M. Pleva

Also in Attendance:

J. R. Bynum (November 20 only)
(Vice President, Nuclear Operations)

W. Holland (November 21 only)
(NRC Resident Inspector)

P. D. Krippner (November 21 only)
(American Nuclear Insurers)

J. E. Carignan
(Manager, Nuclear Safety Review Board Support)

C. G. Hudson
(Manager, Radiological Control)

Attachment to the Minutes:

A - Action Items
B-F - Subcommittee Reports

The minutes of Nuclear Safety Review Board (NSRB) meeting No. 133 and special meeting 134 and 135 were approved.

It was noted during the meeting that a number of site responses to NSRB concerns were inadequate. Some responses were incomplete, inaccurate, or did not address the specific NSRB concerns. A technical specification change submitted for NSRB concurrence was also technically deficient. Site management concurred with this assessment and agreed that future submittals would be improved to provide thorough and accurate information for NSRB consideration.

The following topics of interest were discussed:

Site Chemistry Program

Recent findings by Site Quality Assurance (QA) and Corporate Chemistry indicated that significant problems existed in the Sequoyah Nuclear Plant (SQN) Chemistry Program which, if not promptly corrected, could impact plant chemistry control. Among the deficiencies noted were: inadequate procedures, failure to follow procedures, unauthorized changes to QA records, lack of management oversight in laboratory operations, failure to perform required analyses, poor data trending, and some training was delinquent.

The Plant Manager and the Technical Programs Manager are working together to develop a corrective action plan. In addition, the Chemistry Improvement Program being considered by the Chemistry staff should be promptly and aggressively developed and implemented (A136-1).

Radiological Controls

The NSRB Chairman noted that TVA and Westinghouse were "Partners in Performance." However, it appeared that Westinghouse may have provided less than expected services (in regard to As Low As Reasonably Achievable (ALARA)) during the U1C5 outage. The NSRB found that the poor radiological engineering design of the Westinghouse-supplied steam generator shot-peening equipment had resulted in appreciable unnecessary personnel radiation exposure. For example, the design did not adequately consider crud traps, source shielding, or quick changeout capability for components requiring maintenance. For instance, a dust cover, with the potential for exposure of 100 R/hour, must be changed out by hand. In addition, the Westinghouse fuel inspection equipment was more contaminated than expected, resulting in excessive radiological concerns during equipment setup, including "hot particle" problems.

The following action items resulted from this review: (1) the Westinghouse steam generator shot-peening equipment design should be reevaluated and actions taken to reduce radiation exposure and improve overall radiological design prior to the shot-peening for the Unit 2 outage (A136-2) and (2) the SQN and Westinghouse radiological control/ALARA programs should be assessed to identify and correct the weaknesses that led to these problems (A136-3).

These corrective actions should include assessing the performance of Radiological Engineering, as well as the extent of early management involvement in the ALARA process.

Corrective Action Backlog

The NSRB found that the site was taking action to reduce the previously identified backlog of corrective actions. For instance, the site has an established Tier 2 goal to achieve specific backlog reductions for actions opened before February 15, 1991, and to preclude additional backlog accumulation during fiscal year 1992. In addition, the Site Vice President had created a task force to improve the implementation of the Corrective Action Program. However, the NSRB noted that the progress on closure of outstanding environmental qualification-related items is slow, and innovative approaches to correct the problem are not being considered. Interviews indicated this situation was being attributed to a lack of funding or resource allocation. The NSRB did not agree that funding is the issue, and the Engineering Manager agreed to review this item and report his results at the next NSRB meeting (A136-4). In addition, the Site Vice President will report on the results of the task force actions at the next meeting (A136-5).

U1C5 Fuel Inspection

The NSRB discussed the results of the fuel inspection that was conducted following off-load of the SQN U1C5 core. The fuel inspection had identified three fuel rods with open defects and several assemblies with grid damage. NSRB noted that fuel inspection results and reactor coolant chemistry conditions resulting from expected defects could have been better communicated to the affected organizations. QA inspectors were unaware of the loose parts, and Radiological Control (RADCON) management indicated they were unaware of the magnitude of the leaks and the potential for "fuel fleas." There is a need to improve overall communications of fuel inspection/performance results (specifically in outage preparation) to all affected organizations (A136-6).

Threshold for Radiological Deficiency Reports (A133-1)

There was an NSRB concern that the threshold for identification of radiological deficiencies and investigation of incidents appear to be too high. While the NSRB review found that Site RADCON management understands the importance of high standards and thorough incident investigations, the formal site response to the NSRB was unsatisfactory. The response merely noted the existence of relevant site procedures. The Site Vice President agreed to pursue this item further.

Post-Accident Sampling Training (A132-6)

The NSRB was concerned that training on the post-accident sampling system did not recognize the time or radiation exposure constraints that exist when collecting and analyzing samples. The NSRB reviewed the site response on this item and discussed it with the Site and Corporate Chemistry managers. It was found that Corporate Chemistry did not agree with the site response, and it remained questionable whether the sampling time requirements specified in the procedure could be met. The NSRB also pointed out that Corporate Chemistry should have been involved earlier with the site in addressing this concern. This item remains open.

Unmonitored Radiation Release Paths (A133-9)

The response from the site incorrectly indicated that no unmonitored pathways existed at SQN. However, four unmonitored pathways had been identified by Corporate Chemistry, and actions were being taken to provide monitoring and additional procedural control. (These pathways only exist if there is primary to secondary leakage.) This issue remains open pending final site management review and approval.

Review of Past Engineering Technical Specification (TS) Submittals (A133-4)

SQN Engineering had not yet taken action to address this concern. In addition, SQN Engineering, along with Site Licensing, agreed to assess the reasons that one of the technical specification changes submitted for NSRB concurrence at this meeting contained technical deficiencies. This item will remain open.

Subcommittee Activity Summary

Quality Assurance and Safety Oversight (QASO) Subcommittee

The site recently implemented a number of actions that are in line with the TVA quality theme. A new Overview Committee meets regularly on communication strategy, and a mid-level management meeting is held to review recent events and issues. These initiatives are expected to result in improved communications.

A review of usefulness of trend reports noted that a Corporate Engineering Task Force developed a new program on self-monitoring for Site Engineering which had been coordinated with Corporate QA. However, Site Engineering needs to continue to work with QA to ensure QA reports accurate trends. The subcommittee will continue to monitor progress on this item (A133-3).

The Site Quality Manager reported that he expects to make a shift to more emphasis on audits versus monitoring over the next several months and is expecting to achieve a new balance by summer 1992. The subcommittee cautioned that the new balance not lose the advantage of monitoring where more prompt results are desirable. This area will receive continuing overviews by the subcommittee as plans develop and are executed.

Operations and Maintenance (O&M) Subcommittee

During the subcommittee control room observation, several operators and one shift technical advisor (STA) were questioned on their expectation of the heat-up rate that would result due to a loss of residual heat removal flow with the coolant level in the mid-nozzle region (i.e., reduced inventory). None could give an engineering estimate of the heat-up rate or the time to boiling. However, the STA indicated that these calculations could be made, and one unit operator knew the heat-up rate for normal inventory. Immediate corrective actions to address this concern were being aggressively pursued by the Plant Manager.

The Fire Protection Improvement Program is comprehensive, but the NSRB is concerned regarding the timeliness of the plan (1994 scheduled completion date). It was noted that the NRC had a similar concern. In addition, the long-term ownership and management of the Fire Protection Program had not been identified. The site will report on this open action item at the next NSRB meeting (A128-2).

During the observation of a maintenance activity on a motor operated valve (MOV), poor ALARA practices were observed. The work was being performed about eight feet above grade in a C-zone. Also in the space, there was a pipe about knee high used to discharge spent radioactive resin. The survey map indicated the pipe had radiation levels of about five times background, but was not posted as a hot spot or marked in any way. A step-off pad for the valve work was located where the pipe makes a 90-degree turn. The workers indicated "the step-off pad was always" in a low radiation area and they were using the pad as a waiting/sitting area. However, the area experienced a shine from two directions from the resin discharge pipe. The Corporate Radiological Controls Manager is bringing this concern to the attention of Site RADCON for action.

This observation also noted that while the procedures were being used to control the work, the discipline of making procedure entries and logging pertinent information was not always being made. This limited observation was brought to the attention of the Plant Manager.

Radiation Control and Chemistry (RAD/CHEM) Subcommittee

Corporate Chemistry and Corporate RADCON will continue to evaluate elimination of the Radiological Assessment Review Committee (RARC) at both SQN and Browns Ferry Nuclear Plant (BFN). This item will be addressed at the next meeting (A133-2).

The NSRB found a BFN incident investigation that was not properly dispositioned as part of the generic review process. Nuclear Experience Review (NER) had forwarded the incident investigation to Training instead of SQN, and Training's disposition of the incident investigation was incomplete. After the currently underway internal review of the NER program is completed, the Corporate NER Manager should examine the findings and determine if further assessment and actions are required. NER will provide assessment and actions to the NSRB for review (A136-7).

Engineering, Construction, and Modification Subcommittee

Testing performed on MOVs during the ongoing UIC5 refueling outage had yielded significant information regarding the feasibility of the currently defined testing schedule, behavior of valves (predictability and similarity), and adequacy of thrust calculations. With regard to differential pressure (dP) testing results, in all cases valves performed well and the thrust required for valve function under differential pressure (dP) flow conditions was less

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than calculated. Therefore, the calculation methodology which reflects recent NRC test results appears conservative. On the other hand, because thrust settings were increased before testing, in 6 of the 13 tests the resulting thrust was higher than would be allowed considering all valve loads, including seismic loads. In four cases, this discrepancy was resolved by lowering the thrust setting using more realistic differential pressure values. For the two power operated relief valve block valves, a Justification for Continued Operation (JCO) has been written to justify operation until the next refueling outage at which time replacement yokes will be installed.

Cable testing issues were reviewed by the subcommittee. TVA had committed to Hi-Pot test the top three ranked Unit 1 pull-by conduits as part of the current Unit 1 outage, as these conduits could not be shown to be qualified based on BFN pull-by testing experience. While three cables demonstrated leakage current rates in excess of expectations, none were shown to be due to pull-by damage. The cable damage found would not have prevented the cables from functioning at design voltages and are judged by Nuclear Engineering to be random jacket damage with root cause unknown. In resolving the location and cause of the test failures, two additional cables were found which were not in use or expected to be present in these conduits. These two cables were subsequently tested and did not show pull-by damage. This NRC concern should be resolved.

Safety Assessment/Safety Evaluation SA/SE Subcommittee ..

The subcommittee review found no unreviewed safety questions (USQ) in the review of 36 SA/SEs.

The subcommittee reviewed recent NRC internal policy statements that indicate a USQ automatically exists when a utility upgrades a safety-related piece of equipment from analog to digital technology. NRC plans to issue a generic letter (GL) on this item. Corporate Engineering, Licensing, and Maintenance, along with site organizations are evaluating TVA's position on whether a USQ exists on analog to digital upgrades. The subcommittee will continue to monitor this item.

Technical Specification Changes

The following technical specification changes were reviewed by the NSRB:

No. 91-13

This change requires the pressurizer Power Operated Relief Valves (PORV) to be tested in hot shutdown, rather than cold shutdown, to simulate some pressure and temperature effects on the valves. This change complies with guidance recommended in GL 90-06 and fulfills a TVA commitment to NRC. The NSRB approved the change.

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No. 91-16

This change revises the required actions for testing of the loss of power instrumentation (Action 20 of Table 3.3-3) and the containment spray/automatic switchover to containment sump functions (Action 18 of Table 3.3-3).

The NSRB noted that the proposed change to Action 18 did not address all operational considerations and therefore was rejected by the NSRB. The site resubmitted a TS change that only revised Action 20 of Table 3.3-3 and the NSRB approved the change. SQN Licensing, along with Nuclear Engineering, is reviewing the reason the original change submitted to the NSRB was deficient.

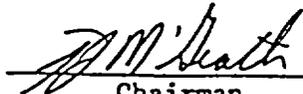
ACTION ITEMS CLOSED

The following action items were closed:

- A133-5 - Independent Safety Engineering provided a schedule for reviews through March 31, 1992.
- A133-6 - NER is informally keeping track of repeat occurrences. Only a few have occurred over the last year.
- A133-8 - Performance monitoring of the vendor conducting analysis of environmental samples has been increased and there have been no problems in 1991. A new vendor is also being pursued.
- A133-10 - The Radiation Exposure System is now operating at 98.8 percent availability.
- A133-11 - BFN and Watts Bar Nuclear Plant Site Engineering have been informed of the error in the SQN contractor's heat-up and cool-down curve analysis.

Next NSRB Meeting

The next NSRB meeting is scheduled for February 19-20, 1992.


Chairman

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ATTACHMENT A

SEQUOYAH NUCLEAR SAFETY REVIEW BOARD

ACTION ITEMS LIST

<u>Action</u>	<u>Responder</u>	<u>Due</u>
A136-1 - Develop and implement a Chemistry Improvement Program.	R. J. Beecken	01-03-92
A136-2 - Evaluate Westinghouse shot-peening equipment design for As Low As Reasonably Achievable (ALARA) concerns if used for U2 outage.	J. L. Wilson	02-19-92
A136-3 - Assess the Sequoyah and Westinghouse radiological control/ALARA programs to ensure radiation exposure tasks are effectively managed.	J. L. Wilson P. G. Trudel	02-19-92
A136-4 - Evaluate the reasons for the environmental qualification backlog items and report results to the Nuclear Safety Review Board.	P. G. Trudél	02-19-92
A136-5 - Report on corrective action backlog task force results.	J. L. Wilson	02-19-92
A136-6 - Improve overall communications of fuel inspection/performance results to affected organization.	R. R. Calabro R. J. Beecken	02-19-92
A136-7 - Present results of the Nuclear Experience Review effectiveness review.	G. R. Mullee	02-19-92

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ATTACHMENT A

SEQUOYAH NUCLEAR SAFETY REVIEW BOARD

ACTION ITEMS LIST

<u>Action</u>	<u>Responder</u>	<u>Due</u>
A133-1 - Evaluate the threshold for initiating radiological deficiency reports and related incident investigations.	J. L. Wilson	02-19-92
A133-2 - Evaluate elimination of the Radiological Assessment Review Committee.	W. C. McArthur	02-19-92
A133-3 - Modify and use Quality Assurance performance indicators until Nuclear Engineering indicators are finalized.	P. G. Trudel	02-19-92
A133-4 - Review past technical specification submittals to determine if review process can be improved.	P. G. Trudel	02-19-92
A133-7 - Investigate the Bypassed and Inoperable Status Indications.	P. G. Trudel	02-19-92
A133-9 - Conduct a formal review to assess impacts from unmonitored radiation release paths.	J. L. Wilson	02-19-92
A132-6 - Report on improvements in Post-Accident Sampling training.	R. J. Beecken	02-19-92
A128-2 - Inform the Nuclear Safety Review Board of progress in resolving fire protection program problems.	J. L. Wilson	02-19-92

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QUALITY ASSURANCE AND SAFETY OVERSIGHT (QASO)
SUBCOMMITTEE REPORT

Effectiveness of Nuclear Experience Review (NER) Program

The effectiveness of implementation and recurrence control of the NER program, including the basis for not implementing vendor recommendations, was discussed with J. D. Smith. It was noted that Site Standard Practice 4.4, "Managing Nuclear Experience Review Program," has been revised to require Plant Manager and Engineering Manager approval for not implementing a Nuclear Steam Supply System vendor recommendation. Mr. Smith stated that this process was also used for other vendor information. A section for vendor manual impact was added to the NER review form.

With regard to effectiveness, Mr. Smith noted that responses are checked to ensure that actions are complete. In addition, there is follow-up check performed on 100 percent of the procedure/programmatic issues, 10 percent on hardware issues and 5-10 percent on training issues. Mr. Smith keeps track of repeat occurrences on an informal basis and noted only a couple of instances over the past two years.

The subcommittee was satisfied with what was presented and recommends that Action Item A133-6 be closed.

Corrective Action Program

The subcommittee interviewed several management personnel from the Licensing, Quality Assurance, Nuclear Engineering and other plant organizations regarding the Corrective Action Program. As was well known previously and documented in various reports, there is a trend of increasing backlog in almost all categories of corrective actions.

The site has established Tier 2 goal 2.2.4 to achieve specific backlog reductions for actions opened before February 15, 1991, to preclude additional backlog accumulation during fiscal year 1992. Interviews indicated that not all managers viewed these goals as attainable. In addition, some stated they could still, with high probability, achieve their goals even though they had insufficient resources. Those concerns were communicated to senior management during the goal establishment process.

All personnel interviewed stated that they believe that all significant corrective actions being opened are dealt with in a timely manner. Furthermore, everyone stated that they did not believe that there were any significant problems outstanding in the backlog. In general, it was the perception of the subcommittee that there was an attitude of "we'll do the best we can with what we've got to work with and given priorities." Many people did not demonstrate a strong effort to tackle the backlog reduction with a highly motivated and innovative approach.

The Nuclear Engineering Manager reported that he has a proposal with the Senior Vice President of Nuclear Power which will provide some additional resources for reducing the Nuclear Engineering backlog. The Nuclear Engineering Manager anticipated favorable action.

The Plant Manager discussed his analysis of the backlog and his plans to take actions to improve the situation. He attributes much of the problem to a lack of discipline to continually attack the backlog. To improve that culture, he is holding his staff accountable and is regularly discussing their performance in the backlog area with them. Additionally, he intends to make improvements in the planning/scheduling of backlog work and to implement an improved management information system. He does not plan to request additional resources or funding.

An action which the site has taken to improve the implementation of the corrective action program was the creation of a Correction Action Task Group on October 17, 1991. The task group meets daily to review proposed or issued corrective actions. As a result, some unnecessary actions (estimated about 10 percent) are screened out early, and many corrective actions are focused on what is necessary to fix the problem versus unnecessary enhancements which can be handled by other routine means.

The subcommittee recommends that the site give increased attention to establishing motivation throughout the site personnel involved to reduce the corrective action backlog. Elements which might be involved include reexamining goals to get complete buy-in at least with key managers and appropriate communications and recognition/rewards for good performance in this area.

Root Cause of Personnel Errors

The QASO Subcommittee has been concerned for some time about the large percentage of events at Sequoyah Nuclear Plant being attributed to personnel error as the root cause. In the past, incident investigations appeared to be rather superficial and stopped short of identifying the underlying root causes of personnel error. The Human Performance Enhancement System (HPES) is resulting in recognition and correction of true root causes and should eventually lead to reduction in the number of personnel errors.

The subcommittee met again with the HPES Coordinator and others to learn what progress has been made toward reducing personnel errors. We were pleased to find that several management initiatives have been undertaken toward improving communications which had been a cause of personnel error and in recognizing quality performance.

The site recently implemented a number of actions that are in line with the TVA quality theme. A new Overview Committee meets regularly on communication strategy, and a mid-level management meeting is held to review recent events and issues. These initiatives are expected to result in improved downward communications, which sometimes have been weak, upward communications which have been even weaker, and peer communications between different organizations.

The new Quality Program recognizes and rewards individuals and teams, including contractors, who have made significant contributions in support of the Quality Program. Nominations are reviewed by a peer group and awards are presented by top management in front of the workers' peers. Rewards include parking privileges, badges, suspenders, certificates, etc., but of greatest significance is the feeling of having performed well and the motivation this provides for doing quality work. In contrast to the former negative approach of having personnel errors displayed on a billboard above the gatehouse, we now see positive indicators and the slogan "Quality is Right - On Time." By accentuating the positive, this management initiative helps to reduce personnel error, as the statistics are beginning to show.

While these new management initiatives are very commendable and are proving to be effective, there are indications from limited interviews and reports that incident investigations may not always be aggressively pursued and acknowledge all of the true root causes of personnel error.

Incident investigation teams appear to be staffed with part-time participants who are not all trained in root cause analysis. While pursuing the HPES process, it appears they may not always probe deeply for root causes. Without adequate indoctrination, it is feared that the past practice of placing the blame almost entirely on the worker without management sharing responsibility will be continued, and not all root causes will be recognized and fully corrected. There are several interesting cases on the agenda for the Plant Event Review Panel which should provide a useful indicator for the subcommittee.

The subcommittee recommends that consideration be given to providing all potential participants in incident investigation, training on the HPES process (which is aimed primarily at performance enhancement, not merely performance evaluations) and in root cause analysis. It was also noted that a greater effort needs to be made to achieve full-time participation of incident investigation team members, especially during outages when there are many distractions.

In summary, management initiatives implemented over the last year address underlying root causes of personnel error. These initiatives already are producing favorable results. However, some concerns remain with regard to the depth of incident investigations, the training of participants, and the need to minimize distractions during investigations. The subcommittee will continue to follow progress in reducing personnel errors and addressing root causes.

Justifications for Continued Operation (JCO) Procedures

A follow-up conversation was held with J. R. Smith concerning the status of the proposed JCO standard. The standard has been drafted, coordinated, and is scheduled to go to the Plant Operation Review Committee the week of November 25. Sensitivity training has been held with senior and mid-level managers, and additional training will be held upon implementation. The subcommittee is satisfied with progress made in this issue and plans no further action.

Trend Report Usefulness Follow-Up

Trend reports issued by Quality Assurance (QA) have not been regarded as useful by Site Engineering. This situation has existed for some time without resolution.

As an alternative to the QA report, a Corporate Engineering Task Force has developed a new program, based on a contractor's recommendations, (coordinated with Corporate QA) to provide information for self-monitoring by Engineering. A multisite agreement was reached on categories of work to be covered and goals for all sites. Input data has recently been submitted by the sites, and a report using an agreed-upon format is forthcoming. Engineering expects that the effectiveness of the program will be measured by QA audits.

It appears to the subcommittee that, while self-monitoring is commendable, there remains the need for Engineering to work with QA to modify their reporting of trends to improve usefulness for Engineering. Corporate QA (under new management) has initiated an effort to improve their trend reports. However, Engineering should be involved further to ensure they are satisfying all participants and customers. The subcommittee will continue to monitor progress on this item until completion (A133-3).

Interview With Site Quality Manager

The subcommittee discussed the overall management of Site Quality with the manager. In the backlog area, he and his organization are utilizing the corrective action escalation process and are awaiting site action plans expected in about three weeks. He reported that he expects to make a shift to more emphasis on audits versus monitoring over the next several months and is expecting to achieve a new balance by summer 1992. The subcommittee cautioned that the new balance not lose the advantage of monitoring where more prompt results are desirable. This area will receive continuing overviews by the subcommittee as plans develop and are executed.

OPERATIONS AND MAINTENANCE (O&M)
SUBCOMMITTEE REPORTReview and Observation of Safety-Related Work

The subcommittee observed the preparation of a motor operated valve (MOV) in the Unit 1 Fire Water System. The work was performed by an apprentice electrician, a journeyman electrician, a machinist, and a foreman.

During the observation, poor As Low As Reasonably Achievable practices were observed. The work was being performed about eight feet above grade in a C-zone. Also in the space, there was a pipe about knee high used to discharge spent radioactive resin. The survey map indicated the pipe had residual radiation levels of about five times background. However, the pipe was not posted as a hot spot or marked in any way. A step-off pad for the valve work was located where the pipe makes a 90-degree turn. The workers indicated "the step-off pad was always" in a low radiation area. They used the pad as a waiting/sitting area. Contrary to this belief, the area experienced a shine from two directions from the resin discharge pipe.

The required documentation was present at the work site and was being used to control/direct the work. However, required data and signatures were not always made in real time. Some examples are:

- The serial numbers of the meter and test equipment had not been entered in the procedures.
- After meggering the valve motor from the Motor Control Center and obtaining 0 ohms (a ground condition) where 1 meg ohm is acceptable, the performers did not record the results. The leads were lifted at the motor and infinity was indicated for the leads and motor. After reconnection and remeggering at the Motor Control Center, an acceptable insulation value was obtained. The discrepancy was not yet resolved, and the craft was preparing to remegger with a different instrument. However, sign-offs for relanding the leads had not been made.

The verifier, a machinist, was questioned as to the consequences of miswiring the motor (phase change). He was able to discuss the potential for reverse rotation of the motor. They were counting on the MOV Analysis and Test System crew to verify again the proper direction of motion.

This observation noted that procedures were being used to control the work, but the discipline of making procedure entries and logging pertinent information, both required as data and a narrative of observation, was not always being made. The Plant Manager has been informed of the result of this observation.

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Discussions with the Maintenance Manager

The subcommittee met with Larry Bryant to learn Mr. Bryant's philosophy and expectations concerning reactor and personnel safety and productivity as applied to maintenance.

Several recent incident investigation reports and the incident involving the inadvertent loss of A train residual heat removal during environmental qualification maintenance activities on Valve 1-FCV-63-72 on October 15, 1991, were discussed. It was apparent that Mr. Bryant has a good grasp of issues important to reactor and personnel safety. Mr. Bryant indicated that reactor safety and personnel safety took precedence over production. He pointed out the extra time taken to align plant conditions in a favorable manner was necessary to support the outage and help minimize risk.

Mr. Bryant said that he believed in using and following accurate procedures and making required sig offs in real time. Mr. Bryant was very knowledgeable of industry events and appears to have high and proper standards.

Main Control Room Observations

We observed the control room operation with Unit 2 at 100 percent and Unit 1 in the middle of the outage. In the control room, there were at least 20 people which included operators and maintenance/modification workers. The modifications of the alarm system is an extremely large and ambitious undertaking. Those alarms that are common and from Unit 2 are displayed in a CRT in the Unit 1 area. This requires communication between Unit 1 and Unit 2 personnel which is difficult with one unit operating and the other in an outage. There have been a few errors in the connections to the alarm system. However, alert operations personnel directly communicated with the maintenance/modification worker, thereby averted a problem with Unit 2. All of this "hubbub" added to the sense of a control room that was under control but not orderly.

The operators were not wearing uniforms. It was difficult to see who was in charge of what. There was no discrimination apparent between the Shift Operating Supervisor, Assistant Shift Operating Supervisor (ASOS), and the unit operators (UO). The conduct of the UOs was alert, but there was not always a formal report of alarms or actions with formal repeat back between the UOs, other UOs, and the ASOS.

During the subcommittee control room observation, several operators and one shift technical advisor (STA) were questioned on their expectation of the heat-up rate that would result due to a loss of residual heat removal flow with the coolant level in the mid-nozzle region (i.e., reduced inventory). None could give an engineering estimate of the heat-up rate or the time to boiling and steam evolution would occur. The STA did indicate that these calculations could be made, and one UO knew the rate for normal inventory. This item was brought to the attention of the Plant Manager and immediate corrective actions were taken.

CF 000084

The subcommittee did not review auxiliary unit operator performance as an agenda item due to time constraints. This item will be addressed by the subcommittee in subsequent meetings.

Fire Protection Improvement Program (A128-2)

Fire protection at Sequoyah Nuclear Plant (SQN) has been found to need a "Fire Protection Improvement Plan." An outline of one was approved and docketed with the NRC on or about October 4, 1991. The plan is comprehensive but does a poor job of identifying the history that led to its necessary development. This lack was identified by the NRC in their November 13 letter on the subject. The plan also does not plan to take emergency measures to correct defects promptly, such as correcting the planning and training defects apparent in the Modification group. Justification for taking until 1994 to complete this item has not been given.

In August, Quality Assurance (QA) completed an audit of the Fire Protection System at SQN, and that report provides a good status. That audit fully justifies whatever resources are devoted to correcting the problems identified. QA has established an ambitious audit and observation schedule to monitor this item.

Finally, the long-term ownership and management of the SQN Fire Protection System has not been identified, and that is a major shortcoming. No matter what is fixed now, unless owner/operator takes care of it in the future, it will disappear. It is scheduled for proposal to the Site Vice President in October 1992.

U1C5 Steam Generator Activities

D. F. Goetcheus provided handouts and discussed with the Operations and Maintenance (O&M) Subcommittee events and results of steam generator work during U1C5. A summary of the pertinent points of discussion is set forth below:

• Secondary Side Activities

Westinghouse redesigned sludge system resulted in effective sludge removal. Sludge amount was greater than anticipated and sludge analysis was not yet complete. Chemical cleaning of the secondary side has now been scheduled for U1C7 and will utilize the Electric Power Research Institute's ethyltoluene diamine process. Morpholine addition to the steam generator occurred about half way through Unit 1's operating cycle. In addition, as cleanup and chemistry changes of the secondary side occurs, the long-term objective is to raise the pH of the secondary side chemistry side to approximately 9.6. The Steam Generator Project has proposed the addition of Nitrogen-16 radiation monitors in the steam generator main steam lines as a means of earlier identification and control of steam generator tube leaks and related integrity.

Primary Side Activities

High radiation source terms probably caused by fuel failures were not forecast, but indeed were real. Consequently, personnel exposures were higher than planned, and there was a significant impact on the steam generator group's As Low As Reasonably Achievable (ALARA) goal. This problem was compounded by a significant increase of the eddy current testing required for all generators and the production rate problems of the tube shot peening. The main problem with shot-peening was excessive humidity and high radiation fields. The average production was less than 200 tubes per day; whereas, 240 tubes per day were forecast. The Westinghouse shot-peening equipment design was less than optimum for the high radiation it was exposed to. The dust cups on the equipment were changed much more frequently than planned. Three or more days were required as an outage extension because of this critical path problem.

Expanded samples for eddy current testing on all generators occurred, and this extended the outage five additional days. Numerous circumferential corrosion indications in the region just above the tube sheet were found by eddy current testing. The largest, a 258 degree circumferential indication, exceeded the Regulatory Guide 1.121 critical crack length of 238 degrees. One other tube in Steam Generator-2 also measured 238 degrees. Ultrasonic testing performed on these and other tubes did reveal a sufficient amount of ligaments between the corrosion cracks which existed to prevent catastrophic failure. Thus, no structural integrity problems were judged to have existed during the last cycle of operation. The total number of tubes that were plugged during UIC5 is 77. The total number of tubes plugged in all generators to date is 144, far less than the margin available. All tubes over 80 degrees critical crack length were stabilized and plugged. This indicates continuing good control of steam generator operations. Shot-peening activities should be more carefully reviewed for ALARA control as well as production improvements. This is discussed in the Radiation Control and Chemistry Subcommittee minutes. O&M will continue to monitor the Steam Generator Project in the future.

Status of SQN Operator Training Program

Lew Myers and Roy Lumpkin met with Don Ashley, representing Corporate Operations Training, and discussed his plans and actions for the correction of NRC deficiencies identified in our operation training materials that are required for submittal every three years. Mr. Ashley explained to us that Corporate Training had developed a three-column action plan for SQN, Browns Ferry, and Watts Bar that specifically has addressed the NRC-identified deficiencies, but also provided means whereby the prevention of these type problems from recurring would be assured. We reviewed the four specific actions he was taking for SQN and considered them acceptable for the necessary remedial measures.

CF 000086

Operational Training Program improvements that could occur if system descriptions were made available for Training Department use and the value of system descriptions for the O&M users of the plant systems were discussed. All parties agreed this was a fruitful area for plant performance improvement and recommended that system descriptions development by Nuclear Engineering be given further consideration.

CF 000087

RADIATION CONTROL AND CHEMISTRY (RAD/CHEM)
SUBCOMMITTEE REPORT

The Sequoyah Nuclear Plant (SQN) Nuclear Safety Review Board (NSRB) RAD/CHEM Subcommittee met on November 19-21, 1991, to review various aspects of SQN's Radiological Program. Included in this review was chemistry, outage performance, Personnel Contamination Reports (PCR), incident investigations, the Chemistry Upgrade Program, Raw Cooling Water Task Force activities and open NSRB items. The following observations with action items were identified:

Steam Generator Shot-Peening Activities

Discussions were held with Radiological Control (RADCON), Project Management, and vendor personnel on the steam generator shot-peening activities to determine why significant exposure overruns were being realized. The subcommittee identified the following:

- The vendor-supplied equipment was very poorly engineered from a radiological standpoint. This resulted in appreciable unnecessary exposure. Failures include, but are not limited to; design of vacuum chambers without regard to crud traps; inadequate primary sources shielding; planned changeout by hand of unshielded 100 R/hour dust cups; lack of comprehensive quick changeout capability of components; inadequate prediction/testing in a steam generator (i.e., humid environment), and a failure to adequately assess and accommodate in the design the possible range of radiological conditions and inadequate engineered controls to limit airborne radioactivity during certain evolutions.
- Radiation levels were significantly higher than expected, which was believed to be primarily due to fuel failure, although steam generator tube sheet levels do not seem to support this.
- Once the higher than expected radiation levels were encountered, many actions were taken which made doses far less than they could have been, although some of these actions could have been taken earlier and been more aggressive.
- The actual design of equipment received little attention from Radiological Control management, even though this first-time task was planned to be over 10 percent of the outage exposure.
- Radiological Engineering became involved very late in the design process, making changes difficult.

The following action items resulted from this review: (1) the Westinghouse steam generator shot-peening equipment design should be reevaluated and actions taken to reduce radiation exposure and improve overall radiological design prior to the shot-peening for the Unit 2 outage (A136-2) and (2) assess the Sequoyah Nuclear Plant and Westinghouse radiological control/As Low As Reasonably Achievable (ALARA) programs to identify and correct the weaknesses that led to these problems (A136-3).

These corrective actions should include assessing the performance of Radiological Engineering, as well as the extent of early management involvement in the ALARA process.

Chemistry Program Review

The subcommittee reviewed with Site Chemistry, Corporate Chemistry, and Quality Assurance (QA) recent weaknesses identified in chemistry by QA and Corporate Chemistry. Among the deficiencies noted were: inadequate procedures, failure to follow procedures, unauthorized changes to QA records, lack of management oversight in laboratory operations, training deficiencies, failure to perform required analyses, and poor data trending. Corporate Chemistry, the Site Chemistry Manager, and the subcommittee are in agreement that there is an apparent lack of technical strength in key areas within the Chemistry staff. The subcommittee concurs with Chemistry management that the series of QA findings point to programmatic deficiencies that need prompt attention.

The Chemistry Improvement Program being considered by the Chemistry staff should be promptly and aggressively developed and implemented. A joint effort with Corporate Chemistry and QA should be utilized (A136-1).

To address the lack of adequate data analysis, trending, and review, the Technical Programs Manager is considering providing an individual to assist Site Chemistry in this area.

Review of Nuclear Experience Review (NER) Process on Browns Ferry Nuclear Plant (BFN) Chemistry Problem

During the review of the Chemistry Program Finding Identification Reports (FIR), an answer to a FIR implied a lack of understanding on the part of Chemistry supervision on the meaning of their signature on a QA record. This has similarities to an event that occurred at BFN which resulted in an incident investigation and a notice of violation. When following this through the NER process with the Corporate NER manager, it was found that:

- The incident investigation was never sent to SQN but, instead, sent to Training.
- Training action was inadequate.
- The Notice of Violation and response, which did not discuss some of the pertinent issues, was sent to the site for information only and no action required.

After the currently underway internal review of the NER program is completed, the Corporate NER Manager should examine the findings and determine if further assessment and actions are required. NER will provide assessment and actions to the NSRB for review (A136-7).

RADCON Preparation for Outage

In a discussion with RADCON management relative to the high contamination levels being experienced during the outage, it was determined that RADCON had never been told to expect "fuel fleas." It is noted that these "fuel fleas" are substantially more radioactive than the standard "hot particle" (10-1,000 times higher), and several have been reported as high as 30-50 R/hour. Several organizations within TVA were aware of either a high probability that these would be present or had actual evidence that they existed, but this was not communicated to the organization defining radiological controls for the outage. This is being addressed in A136-6. It is noted that, once discovered, RADCON took aggressive action to mitigate worker exposure from these.

Raw Cooling Water System Corrosion and Chemistry Upgrade

The Raw Cooling Water Task Force activities and the Chemistry Upgrade Program were reviewed. With regard to the task force, preliminary action plans are being developed, and the Chemistry Upgrade Program is only at the stage of asking for study funding. The subcommittee will continue to follow these activities.

Subcommittee Recommendations on Closure of Open NSRB Items

A133-1 Threshold for initiating radiological deficiency reports.

This item was discussed at length with the RADCON Manager and Corporate RADCON. The subcommittee review found the procedures to be adequate. Interviews indicated that RADCON management understands the need to maintain high expectation and to be increasingly self-critical in order to improve. Additionally, the subcommittee discussed the observation that corrective actions often did not address the root cause or were insufficient to prevent recurrence. This item will remain open pending a revised response. The response only noted the existence of site procedures but did not address the NSRB concern relating to Radiological Incident Report threshold.

A133-2 Elimination of Radiological Assessment Review Committee (RARC). Elimination of RARC will require a revision to SQN's technical specifications. Corporate Chemistry and Corporate RADCON continue to evaluate elimination of RARC at both SQN and BFN, and this item should be completed by the next meeting.

A133-8 Environmental Lab Quality.

Corporate Chemistry, with Site Chemistry Support, has taken action to increase the monitoring of vendor performance which has shown no problems in 1991. In addition, a second vendor is being considered. The subcommittee considers this action sufficient and recommends closure.

A133-9 Unmonitored Pathways.

The response from the site indicated that no unmonitored pathways existed at SQN. However, pathways have been analyzed by Corporate Chemistry (four were found but deemed not to be significant at present), and actions are being taken to provide monitoring and additional procedural control. The subcommittee believes that the issue is complete but is awaiting site management review and approval. Action on this item will be deferred to the next meeting.

A133-10 Excessive Radiation Exposure System (REXS) downtime.

The REXS is now operating at 98.8 percent availability. This item should be closed.

A132-6 Post-Accident System Training.

The subcommittee reviewed the site response and discussed it with the Site and Corporate Chemistry managers. Corporate Chemistry had not reviewed this item, and the Site Chemistry Manager withdrew the response until the question as to whether all individuals could meet the NUREG 0737 sampling requirements had been addressed. This item will remain open.

ENGINEERING, CONSTRUCTION, AND MODIFICATIONS (ENG)
SUBCOMMITTEE REPORT

Plant Process Computer P-250

The ENG Subcommittee discussed the plant process computer (P-250) with D. C. Craven, Technical Support. Recent events have indicated that the computer's reliability is in question. For example, it failed 27 times in a two-week period, and it was unavailable to perform a required Tech Spec neutron flux calibration within a 24-hour period, which caused the plant to enter Limiting Condition of Operation 4.0.3. In addition, vendor-recommended preventive maintenance activities were not being done.

The P-250 computer is the original plant equipment, and only six plants in the United States still use this machine. At this time, plans for its replacement have been deferred. On the other hand, some improvements have been made. The paper tape interface has been replaced with a personal computer interface. A spare P-250 is also now on site. The Preventive Maintenance Program has been enhanced and reliability should improve.

The subcommittee was told that additional enhancements are planned. These plans include interfacing the P-250 with a separate computer to do some data analysis. This enhancement is called Plant Engineering Data System, and Electric Power Research Institute funding is being pursued. If the interfacing computer and software can be qualified to do P-250 required calculations, the P-250, as a data collector, may be suitable for long-term service or could be replaced with a multiplexer at some future date.

A comprehensive plant computer upgrade plan has not been presented to management, and thus does not, as yet, have management support. A project of this complexity needs clear objectives regarding data requirements, software verification, and analog to digital conversion. The subcommittee will revisit this issue in about six months to determine the status of the upgrade project.

Generic Letter (GL) 89-10 Motor Operated Valve (MOV): Results of August (NRC) Inspection and Testing During UIC5 Outage

As a result of the NRC audit conducted in August, NRC concluded that the Sequoyah Nuclear Plant GL 89-10 Program is generally acceptable with both strengths and weaknesses identified. No violations were identified. The two primary NRC concerns were: (1) the status of program development and schedule for full implementation and (2) the intended application of grouping of values. TVA committed to docket the intention to utilize grouping if technical justification could be developed and to reevaluate the schedule for full implementation.

Bob Poole and Dean Romine indicated that testing done during the ongoing U1C5 refueling outage had yielded significant information regarding the feasibility of the currently defined testing schedule, behavior of valves (predictability and similarity) and adequacy of thrust calculations. Schedule impact of testing was determined to be much greater than anticipated due to available outage windows for these tests and set-up time. Seventeen MOVs are being tested in U1C5; approximately 30 MOVs are scheduled for U2C5. Mr. Romine and Mr. Poole indicated, based on U1C5 experience, the schedule for U2C5 is very optimistic.

With regard to differential pressure testing results, in all cases valves performed well and the thrust required for valve function under differential pressure flow conditions was less than calculated. Therefore, the calculation methodology which reflects recent NRC test results appears conservative. On the other hand, because thrust settings were increased before testing, in 6 of the 13 tests the resulting thrust was higher than would be allowed considering all valve loads, including seismic loads. In four cases, this discrepancy was resolved by lowering the thrust setting using more realistic differential pressure values. For the two power operated relief valve block valves, a Justification for Continued Operation (JCO) has been written to justify operation until the next refueling outage at which time replacement yokes will be installed.

The overall conclusion expressed by both Mr. Poole and Mr. Romine was that GL 89-10 activities were yielding very valuable information and perspectives on MOV performance, almost more informative than they could digest. They indicated that they have not had time to analyze the data and expect that it would be difficult to accomplish as much as they would like before U2C5. The subcommittee recommends they consider obtaining additional support from Corporate to allow full analysis of data in a more timely manner.

Outstanding Environmental Qualification (EQ) Qualification Deficiency Report (QDR)

Outstanding EQ-related QDRs were discussed with L. P. Woodley, Jr., and V. A. Bianco of Nuclear Engineering (NE). Ten QDRs were identified by NE as belonging to this group, seven of which were discussed with the subcommittee in some detail. The subcommittee's primary interests were related to quality of JCO and progress in deficiency resolution.

The subcommittee was told that JCOs were applicable and were in place. Further, while not required in the past, a revised procedure requiring JCO periodic review is to be issued soon. On the other hand, progress on QDR close-out was slow and, consequently, these EQ deficiencies had recently received upper management's attention. (These backlog items are on J. L. Wilson's "volcano" list.)

The subcommittee was told that Tracking and Reporting of Open Items (TROI) completion dates for five of seven QDRs discussed with the subcommittee were not valid (bogus) and would be missed. This situation was attributed to lack of funding, either allocation of Operations and Maintenance, or Change Control Board capital funding support. In some cases, funding for a study phase had not been obtained. Responsibility for resolving funding questions was not clear, and for older items resolving the funding issue was not itself a TROI commitment.

The subcommittee is concerned that while action, schedule, and responsibility to resolve a deficiency are defined in the QDR, in reality, the action and schedule are dependent on available funding and resources. This leaves the responsible party (generally NE) with identified backlog but with limited ability and responsibility to resolve funding issues. Further, the status of corrective action is not accurately reflected in TROI.

The subcommittee recommends that these concerns be addressed by Sequoyah Nuclear Plant management as part of the bigger question of reassessing and reducing the backlog of corrective actions.

Results of Cable Testing During the Outage

Cable testing issues were discussed with Barry Kimsey and R. L. Collins of NE. TVA had committed to Hi-Pot test the top three ranked Unit 1 pull-by conduits as part of the current Unit 1 outage, as these conduits could not be shown to be qualified based on Browns Ferry Nuclear Plant (BFN) pull-by testing experience. While three cables demonstrated leakage current rates in excess of expectations, none were shown to be due to pull-by damage. The cable damage found would not have prevented the cables from functioning at design voltages and are judged by NE to be random jacket damage with root cause unknown. In resolving the location and cause of the test failures, two additional cables which were not expected to be present in these conduits were found. Given that these two cables do not show pull-by damage, this NRC concern should be resolved.

At this time, the subcommittee does not have further questions on cable testing.

Main Control Room Temperature Control Valves Upgrade

Problems encountered with the design and installation of temperature control valves on the control room and electric board room air conditioning units were discussed with J. McPherson, Projects, and G. Trotter, NE. These problems resulted in an installed design that did not work and a missed NRC commitment.

Incident Investigation S-91-056 documents the deficiencies, causes, and corrective actions. In addition to the identified causes of design deficiencies and missed schedule, the fact that work was stopped for one six-week period due to budget limitations and the shared responsibility (and

apparently limited authority) of the Project Manager and Task Manager to resolve interface problems between NE groups and to obtain a thorough design review, the subcommittee believes contributed to the problems.

The subcommittee recommends that NE look at other selected nonoutage design change notice packages which involve multiple NE disciplines to see if this type of modification is particularly prone to errors and/or is likely to generate a large number of field change notices.

**SAFETY ASSESSMENT/SAFETY EVALUATION (SA/SE)
SUBCOMMITTEE REPORT**

The SA/SE Subcommittee met on November 4, 1991, to complete its review of safety assessments and evaluations assigned to subcommittee members as detailed in the meeting agenda (LA2 910016 800). Attendance at the meeting was as follows:

Members Present

Chairman, J. M. Pleva, NSRB Administrator
 D. J. Gibbs, SQN Operations
 C. W. Burrell, SQN Engineering
 V. D. McAdams, SQN Independent Safety Engineering
 J. E. Strange, Corporate Nuclear Fuel
 R. A. Jarrett, Corporate Engineering

Members Not Present

S. R. Taylor, SQN Training
 M. L. Hellums, Corporate Licensing
 A. L. Varner, SQN Quality Assurance

Others Participating

D. M. Brown, Corporate Nuclear Fuel
 J. J. Loud, Watts Bar Nuclear Plant
 NSRB Administrator

The minutes of meeting No. 24 and special meeting No. 25 were approved.
 D. M. Brown was appointed to the subcommittee as a replacement for
 J. E. Strange.

The subcommittee found no unreviewed safety questions. Thirty-six of the one hundred sixty-six SA/SEs received by NSRB were reviewed. The subcommittee identified 6 minor administrative comments and 11 minor technical comments that will be routed to the preparers and line managers for information and/or response as determined by the subcommittee.

The subcommittee identified that SAs performed without SEs being identified for operations procedures are not being routed to NSRB. The subcommittee will get NSRB on distribution for these SAs.

The subcommittee reviewed NRC internal policy statements that an unreviewed safety question automatically exists when a utility upgrades a safety-related piece of equipment from analog to digital technology. The NRC reasoned that digital technology introduces a potential for new types of common mode failures due to software errors and/or the effects of Electromagnetic Interference and Radio Frequency Interference. Because of NRC internal correspondence, NRC's promises for issuance of a generic letter and the results of recent NRC audits in this area, Corporate Engineering, Licensing, Maintenance, and site organizations are taking a proactive role (since the NRC has not issued any direction in this area) by developing a Corporate position with respect to the implementation of any digital technology. This position will address impact on 10 CFR 50.59 and will apply to both equipment used in safety-related (not just protection systems) and nonsafety-related applications. The subcommittee will obtain the TVA position developed by the team and route to the NSRB.