TVA EMPLOYEE CONCERNS
SPECIAL PROGRAM

REPORT NUMBER: 311.04-SQN

REPORT TYPE: Sequoyah Nuclear Plant Element

REVISION NUMBER: 1

TITLE: Health Physics Policies, Practices, and Management Control

REASON FOR REVISION:

Revised to incorporate SRP comments and SQN corrective action response.

Revision 1

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TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT

EMPLOYEE CONCERNS TASK GROUP

OPERATIONS

CEG

Subcategory: Health Physics

Element: Health Physics Policies, Practices, and Management Control

Report Number: 311.04 - SQN Revision 1

Concerns:

SQP-86-009-001	XX-85-063-001
SQP-86-009-002	XX-85-028-X02
XX-85-084-001	XX-85-028-X03
XX-85-066-001	XX-85-098-002
XX-85-009-002	I-86-238-SQN
WI-85-038-001	JLH-86-003
XX-85-015-001	JMA-85-001
XX-85-026-001	RII-85-A-0064

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I. Title: Health Physics Policies, Practices, and Management Control - 311.04-SQN

The scope of the 311.04-SQN evaluation consisted of the investigation of 16 concerns. The concerns involved the following areas of the Health Physics (HP) program:

1. Personnel contamination (Concern SQP-86-009-001)

2. HP response to radiation/contamination alarms or indications of abnormal radiological conditions (Concerns XX-85-084-001 and XX-85-066-001)

3. Distribution of personnel radiation doses (Concern XX-85-009-002)

4. Containment "at power" entries (Concerns SQP-86-009-002, WI-85-038-001 and XX-85-015-001)

5. Management support of HP programs (Concern XX-85-026-001)

6. Verification of system contents (Concern XX-85-063-001)

7. Radiation Work Permit (RWP) procedures (Concerns XX-85-028-X02 and XX-85-028-X03)

8. Radiological Survey frequency (Concern XX-85-098-002)

9. C-Zone Emergency Procedures (Concern I-86-238-SQN)

10. Auxiliary Building Secondary Containment Enclosure (ABSCE) breaches (airborne radioactivity concern) (Concern JMA-85-001)

11. Frisker Locations (Concern JLH-86-003)

12. Adequacy of the SQN HP program in general (Concern RII-85-A-0064)

II. Specific Evaluation Methodology

1. Concern SQP-86-009-001 states: An incident at Sequoyah Nuclear Plant which resulted in employees being radioactively contaminated could have been prevented and reflects managements attitude toward radiation safety and personal safety of the employees. |R1

2. Concern SQP-86-009-002 states: The transfer of responsibility for HP from Muscle Shoals to Sequoyah places the individual responsible for HP in a position where much pressure from plant management can be exerted and has caused compromises of previously established HP policy regarding personnel access during unit operation. |R1

3. Concern XX-85-084-001 states: Questionable practices by HP at Sequoyah in 1982 led to possible overexposures. HP would respond to radiation alarms and unplug units. |R1

4. Concern XX-85-066-001 states: Sequoyah: Three years ago HP at Sequoyah was notified of higher-than-expected radiation levels in the Reactor Building. When notified by telephone, HP personnel speculated on the reasons for the high radiation level, and did not respond immediately to investigate. CI feels that wasting time speculating on cause and not responding immediately is a concern for safety. |R1

5. Concern XX-85-009-002 states: Sequoyah: There is no regard for personnel safety at operating plants. Management (known) directed that the oldest employees be assigned to "hot" work in order for them to reach their radiation levels first. A supervisor (known) made the statement that "older folks won't be long around." |R1

6. Concern XX-85-028-X02 states: Sequoyah: RWP 02-2-00214 (sign-in sheet) contains falsified signatures. |R1

7. Concern XX-85-028-X03 states: Sequoyah: RWPs are not being completed according to procedure requirements. RWP 02-2-00214 is an example. |R1

8. Concern XX-85-098-002 states: Sequoyah: Radiation areas are not monitored often enough.

9. Concern I-86-238-SQN states: An anonymous individual mailed in a safety concern to (WSRS) requesting that emergency procedures be written to encompass all aspects of possible emergency situations in a C-Zone. Procedures should cover specific areas such as spread of contamination, possibility of injury, possibility of a fire, possibility of poor breathing atmosphere, etc. |R1

10. Concern JLH-86-003 states: According to TVA's General Employee Training (GET) classes and plant procedures, employees are to be frisked as soon as exiting a "C-Zone." Currently, an employee has to search for a frisker. In the process of looking for a frisker, an employee can contaminate doors and/or the floor. One of TVA's objectives is to keep down contamination, and the current process does not adequately control the spreading of contamination.

    Example: When exiting pipe chase on elevations 690 and 669, one has to pass through closed doors to get to a frisker. On elevation 669 an employee has to hunt for a frisker as evidenced on December 12, 1985. |R1

11. Concern JMA-85-001 states: A high risk possibility of not securing ABSCE type breaches if a valid high-radiation condition occurs in the Auxiliary Building or during an announced evacuation or evacuation alarm sounded may cause persons to leave the Auxiliary Building before sealing penetration. |R1

12. Concern WI-85-038-001 states: Watts Bar Nuclear Plant: The practice of persons entering the lower contaminated area of the reactor containment for nonemergency repairs while the reactor is operating should be reevaluated. Recent studies indicate the biological effects of personnel exposure to neutron flux are more serious than previously believed. This practice is in effect at Sequoyah and resulted in an accident around 1983/1984 and is planned to be implemented at Watts Bar. |R1

13. Concern XX-85-015-001 states: Sequoyah: The practice of personnel entering the lower containment area of the reactor containment for nonemergency repairs while the reactor is operating should be reevaluated since recent studies indicate the biological effects of personnel exposure to neutron flux are more serious than previously believed. This practice caused an accident in the incore instrument probe room at Sequoyah in 1985 and is still continued. |R1

14. Concern XX-85-026-001 states: Sequoyah: Inadequate upper management support provided the HP department to enforce an effective radiological safety program. No disciplinary action is taken when employees intentionally bypass monitors. |R1

15. Concern XX-85-063-001 states: Sequoyah Operators and Health Physics: Failure to know and verify the contents of a system. Example: HP gave go ahead to open a line in the unit 2 Turbine Building, saying everything was okay and clean. After opening the line the next night, the entire area was roped off for contamination. This occurred in January/February 1984. |R1

16. Concern RII-85-A-0064 states: This allegation expressed concerns about the Sequoyah HP program. The concerns are summarized below:

    1. TVA does not have the ability to run an HP operation.

    2. An individual lost a radioactive source at the site and never reported the loss to management.

    3. The location of radiation monitors are not as indicated on the ASIL-3 procedure.

    4. Smears are taken into the HP office to count and are then thrown into the trash.

5. The smear counting area in the HP office was contaminated. This "contaminated area" was used as an eating area.

6. Air samples are taken improperly, e. g., floor level. Respirators were not worn by workers in high contamination areas (areas with surface contamination greater than ten thousand dpm).

7. The individual claims he was dismissed from employment as a result of a conspiracy and that he was not treated fairly during his training period. (This item is being handled solely by the Intimidation and Harassment Category.)

8. HP technician did not cover the head and filters of air sampling monitors before and after exiting areas to be monitored.

Closure of this matter should involve an evaluation of the HP program and practices to include air sampling program, respiratory protection program, and training program. Implementation and compliance with written procedures should be assessed. |R1

This report was prepared in accordance with the Operations Concern Evaluation Group (Ops. CEG) evaluation plan and the Health Physics subcategory evaluation plan. |R1

All K-forms, previous NSRS line management, and ERT reports assigned to element 311.04-SQN were evaluated. The evaluations were performed by four evaluators and consisted of investigations of all open[1] item concerns, evaluations and verifications of previous reports, responses, and investigations of closed[2] item concerns, interviews with cognizant personnel, and reviews of applicable regulations and governing procedures. The specific items reviewed for each element are identified in the findings of that concern. All previous investigations and reports were assessed for the adequacy of the methodology, findings, and recommendations. Also, all respective corrective actions are verified completed or working. |R1

With the exception of XX-85-028-X02 and item 7 of RII-85-A-0064, all of the concerns are assigned solely to the Operations CEG. |R1

Note: 1 "open" item denotes no previous investigation(s) were performed. |R1
2 "closed" item denotes previous investigations were performed.

Item 7 of concern RII-85-A-0064 raises a question of potential intimidation and harassment in that the CI states he was terminated as the result of a conspiracy and treated unfairly during his in-plant HP training. This item will be evaluated solely by the Office of Inspector General. Concern XX-85-028-X02 raises allegations of document falsification and is, therefore, also a shared concern with the Office of Inspector General. |R1

III. Findings

1. SQP-86-009-001 raises a concern that personnel at Sequoyah were contaminated and that the incident, which was preventable, reflected poor management attitudes regarding radiological health and safety. No information detailing the incident was available; therefore it is not known when the incident occurred, the area of the plant in which the incident occurred, the activity in progress which caused the incident, the number of persons contaminated, whether or not internal contamination was involved, nor the extent of the contamination. The evaluation consisted of 2 parts. Part 1 is an evaluation of plant procedures intended to prevent both internal and external radioactive contamination of personnel. Part 2 is an evaluation of plant procedures regarding action taken when plant personnel become contaminated, including corrective action taken to prevent recurrence. |R1

   A. Part 1 - Prevention of Personnel Contamination |R1

      10 CFR 20 establishes general requirements for protection of personnel in restricted areas against exposure to licensed radioactive materials. These requirements include limits on concentrations of radionuclides in air with regard to internal exposure, requirements for handling radioactive materials with regard to external exposure, and survey requirements pertinent to both internal and external exposure. In addition, U.S. NRC Regulatory Guides 8.15 (Acceptable Programs for Respiratory Protection) and 8.8 (Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Reasonably Achievable) establish guidelines for protecting personnel from both internal and external contamination hazards. Additional guidance and/or requirements are provided by 30 CFR Part 11, "Respiratory Protective Devices," and NUREG-0041, Manual of Respiratory Protection Against Airborne Radioactive Materials.

The evaluation included a review of both TVA-wide and Sequoyah-specific implementing procedures. TVA CODE VIII, OCCUPATIONAL RADIATION PROTECTION, establishes the general requirements for the radiation protection program.

The TVA Radiation Protection Plan defines more specific requirements applicable to all TVA nuclear facilities, including requirements for airborne radiological assessment and protection programs, protective clothing requirements, survey requirements, and radiological incident and personnel contamination reporting requirements.

At Sequoyah, the primary radiological control program implementing procedures are the Radiological Control Instructions (RCIs). The RCIs establish general limits and guidelines governing the radiological protection program. Detailed instructions which implement the RCIs within the HP Section are the ASILs, DSILs and HPSILs (section instruction letters). All TVA and Sequoyah procedures dealing with personnel contamination were reviewed and determined to be in compliance with regulatory requirements. Personnel contamination control programs are described by way of SQN RCI-1, RCI-3, RCI-4, and RCI-11. In addition, RCI-14 describes the RWP program with regard to prescribing protective requirements for workers. Sequoyah HP-SILs 2, 3, 5, 7, 8, and 10 provide detailed instructions regarding both internal and external personnel contamination control programs, including respiratory protection and bioassay programs.

B. Part 2 - Personnel Contamination Incidents |R1

The evaluation of HP practices following incidents of personnel contamination were examined. HP-SIL 10 establishes procedures to be followed in the event of personnel contamination, both external and internal. This includes procedures for decontamination, reporting, and corrective action. In addition, actual records of personnel contamination were examined.

Sequoyah HP divides the incidents into 2 categories, reportable and nonreportable. Nonreportable incidents require a Personnel Contamination Report, form TVA 17093, and are considered incidents which occurred because of unforseeable circumstances such as a punctured glove or torn protective clothing. Reportable incidents require, in addition to a Personnel Contamination Report, a Radiological Incident Report, (RIR) form TVA 17143, and are considered incidents which were preventable and caused by a failure to follow prescribed procedures. Examinations of the reportable and nonreportable summary files revealed that since 1984 there have been 180 reportable incidents of personnel contamination and approximately 400-500 nonreportable incidents (not counted).

Both the Personnel Contamination Reports and RIRs require review by applicable HP and plant management, and they require recommended corrective action. It was noted that the number of reportable incidents has declined, year to year, since 1984.

2. Concern SQP-86-009-002 was evaluated with regard to the technical aspects and potential consequences of the alleged circumventing of HP personnel access requirements. Since the concern referred to access requirement for personnel during plant operation, it was determined that this reference pertained only to containment entries. The investigation, therefore, centered on containment entries, practices, and governing procedures, both past and present, to determine if indeed HP requirements had been detrimentally altered as a result of the referenced reorganization. |R1

A review of several TVA forms 9880, Employee Status and Information Record, for employees involved in the transfer of HP responsibilities from Muscle Shoals to the Division of Nuclear Power identified June 1, 1982, as the effective date of transfer.

Interviews with several members of Sequoyah HP management revealed that plant-level, PORC-approved, instructions for Reactor Building entry are contained in SQN AI-8, "Access to Containment." No specific HP instruction exists covering the same topic; however, certain hazards and/or conditions typically found inside the Reactor Building are addressed in several HP instructions.

A review of SQN-AI-8 (revision 17) and all of its prior revisions (revision 0 first approved January 26, 1977) revealed no significant changes in entry limitations or requirements during or after the transfer of authority in question.

Interviews with several members of Sequoyah HP management indicated specific guidelines for Reactor Building entry had not been changed to any great extent during the past 4 years with the possible exception that past practice had been to lower reactor level to approximately 30 percent of full reactor power before entry. Radiation surveys taken at 50 percent and 100 percent indicated no significant increase in man-rem if the scope of work was limited. Based on these findings, subsequent necessary entries have been made at power levels greater than 50-percent power. No plant instructions could be found supporting either the 30-percent or the greater-than-50-percent guidelines.

3. Concern XX-85-084-001 was previously investigated by NSRS Report I-85-806-SQN. Findings of the NSRS report are as follows:

   (Designations for individuals have been extracted directly from the NSRS report.)

   A. Based upon interviews with Public Safety Officers (individuals B, C, D, E, and F), no information was obtained that HPs failed to properly respond to radiation alarms (portal monitors, hand/foot monitors, or friskers).

   B. Individuals B, C, D, and E stated that they had observed an RM-14 frisker alarming at the 690-foot elevation containment air lock because of noble gases or other causes of high background. At one time, the frisker had read as high as 5,000 dpm. When the HP arrived and confirmed the radiation level, the public safety officer post and frisker would normally be moved to an area of lower background. When the radiation levels were not confirmed, the frisker was replaced if it continued to alarm.

   C. Individuals B, C, D, E, and F stated that the hand/foot monitors at the 690-foot elevation access point from the Turbine Building to the Auxiliary Building frequently went off. Both the hand/foot monitors and the portal monitor would alarm because of high background from trash, tools, or laundry in the area. The HPs would respond to these alarms and move the material causing the high background away from the monitors. These individuals could not recall any cases where the monitors were unplugged or turned off when alarming to true radiation levels; if one hand/foot monitor was unplugged or turned off because of instrument malfunction, the adjacent hand/foot monitor remained operative.

   D. Individuals B, C, D, E, and F could recall no instances where the hand/foot monitor or portal monitor from the refuel floor to the Control Building had been turned off or unplugged when alarming to a confirmed radiation level.

E. Individuals B, C, D, E, F, and G could recall no instances when both the hand/foot monitor and the portal monitor were out of service and a frisker was not then used to check for personnel contamination. No instances were recalled when the exit from the regulated area was left unmonitored.

F. Individual H stated that entries into the Containment Building during plant operation allowed the transfer of small amounts of noble gas through the airlock. With the sensitivity of the RM-14 frisker to very small increases in background, the noble gases would frequently cause the frisker to alarm, thus requiring the relocation of the frisker station.

G. No one interviewed stated that HP had zeroed their pocket chambers without recording the dose. However, an HP technician from the time period of concern (individual A) stated that on occasion he had zeroed a pocket chamber without recording the dose in the presence of the individual. Based upon the work an HP was doing when requested to read and zero a pocket chamber, past practices had included an occasional delay in recording the information.

   Reading the dose and recognizing the individual would allow the HP to defer recording this information (SSN information was available in the HP laboratory). However, the current requirements of DSILs (reference 8) make this practice unlikely in that more information, including pocket chamber serial number, is now required to be recorded. Regardless of any delays in recording pocket chamber dose or failure to record that dose, the official record of exposure would be unaffected since it is based upon thermoluminescent dosimetry (TLD).

Conclusions of the report are stated below, as well as the results of the document search.

Concern XX-85-084-001 was not validated. Based upon the statements of the CI, the concern involved multiple events that would have represented general HP practices that should have been readily observed by other individuals. However, NSRS could find no evidence from the randomly selected individuals interviewed that such practices existed. |R1

A review of applicable documentation supports the findings of the NSRS report I-85-806-SQN. It was noted that Area Plan 3 (references 2 and 3 of the NSRS report) has been cancelled and superseded by the Radiation Protection Plan. Since all copies of the Area Plan (Radiation Protection Manual, Area Plan 3) were returned to the Distribution Center Clerk, LP 45164 D-C, it was not available for review; however, this did not affect the NSRS findings and conclusions.

4. Concern XX-85-066-001 was previously investigated by Sequoyah line management in report XX-85-066-001 (reference 27), and involved the perception by the CI that because HP did not respond immediately to radiation alarms or unknown situations, the radiological safety of plant personnel could be compromised.

   The Sequoyah Line Response report was reviewed for adequacy and determined to fully address the scope of the concern. Therefore, no follow-up was determined to be necessary.

   Findings of the line report are as follows:

   A. Sequoyah has not experienced abnormal radiation levels during periods of operation.

   B. The only event that resulted in unanticipated radiation levels in the Reactor Building was the thimble tube ejection in April 1984. HP was present at the beginning of the event and maintained control throughout the recovery process.

   C. Follow-up conversations with Quality Technology Corporation (QTC) regarding additional information yielded only that unit 1 was operational and the alarm was in upper containment. No specific dates or persons contacted could be provided.

   D. HP supervisors cannot recall any instance that would coincide with the employee concern.

5. Concern XX-85-009-002 was previously investigated by NSRS (reference 51). It should be noted that the NSRS report also addresses concern XX-85-009-001. XX-85-009-001 was a concern which was retracted by QTC when the CI indicated it contained inaccurate information as worded. The concern was reworded and reissued as XX-85-009-002. The concern involves an allegation by the CI that "hot" (high radiation area) work was assigned to older employees first, as directed by plant management. The NSRS investigation and review of radiation exposure records found no evidence that older individuals working at Sequoyah had received disproportionately high levels of exposure when compared to other workers in their sections or organizations. The NSRS report was reviewed and determined to fully address the scope of the concern; therefore, it was determined that no additional investigative action or follow-ups were required. The NSRS findings are stated as follows:

A. A review of radiation exposure records of 179 craft workers and foremen assigned to Sequoyah during the period from October 1979 to March 1981 revealed that none of them had received a dose which would have prevented or restricted their work in regulated areas. A review of doses for subsequent periods for these same individuals indicated that one individual had received a quarterly exposure above the currently imposed 70-percent administrative limit, thus influencing the work assignments made by the supervisor but not limiting the employment of the individual.

B. Sequoyah exposure records were reviewed for the period of January 1980 to June 1985 to determine if any personnel had exceeded 70 percent of either quarterly limits or annual limits. Thirty-six individuals exceeded a quarterly dose of 2.1 rem or an annual dose of 2.8 rem. Of the 20 TVA employees, 10 were craft engineers/technicians and 10 were craft personnel. Of the 10 craft personnel, 6 were currently employed at Sequoyah. A comparison of the employment records and exposure records of the other 4 individuals who had exceeded the 70-percent administrative limit revealed the following: |R1

1. One craft employee exceeded 70 percent of his quarterly exposure limit in the period January through March 1984. He was terminated at the end of his temporary appointment on April 13, 1984--into the next quarter for exposure limits. There was no indication that the employee's termination was affected by his exposure at Sequoyah. |R1

2. Another craft employee exceeded 90 percent of his annual limit in 1983. However, his temporary appointment at Sequoyah was terminated in February 1983, with a first quarter dose at Sequoyah less than 70 percent of the quarterly limit. There was no indication that the employee's termination was affected by his exposure at Sequoyah. |R1 |R1 |

3. A third employee exceeded 90 percent of his annual limit in 1984 and resigned at Sequoyah to accept other employment. The employee had been previously employed in 1984 at Browns Ferry Nuclear Plant (BFN) and subsequently returned to BFN during 1984. He remained a TVA employee into the second calendar quarter of 1985. Almost all of his 1984 dose was received at BFN. There was no indication that this employee's resignation from Sequoyah was affected by his radiation exposure. |R1

4. A fourth craft employee exceeded 90 percent of his annual limit in 1983 and resigned at Sequoyah to accept other employment. The employee left Sequoyah during the first quarter of 1983 and had received less than 70 percent of the quarterly dose at that time. Although the employee subsequently received radiation exposure in 1983, there was no indication that the employee's resignation was affected by his exposure. |R1

C. Based upon the exposure record of 179 craft personnel for the period October 1979 to March 1981, no pattern of selection of personnel for hot work based upon age was found in any of the craft sections.

D. Based upon an interview with the first craft employee, plant management had discussed, in the 1979-1980 time period, options that could be taken if employees approached the quarterly or annual dose limits established by RCI-1. No information was received from the employee or the craft supervisor (the second craft employee) of that timeframe that any direction was provided to preferentially expose older workers. |R1 |R1 |

E. The supervisor who was alleged to have made the statement that "older folks won't be long around" is no longer a TVA employee, could not be located from his last known address, and thus could not be interviewed.

F. An individual who was craft foreman from the 1980 time period was unaware of any "management direction" regarding the assignment of personnel to "hot work" based upon age. |R1

Conclusions from the NSRS report are as follows:

Concern (XX-85-009-002) was not validated. NSRS could find no objective evidence that Sequoyah management told supervisors in the 1980 timeframe to assign older personnel to work in high radiation areas ("hot work"). There is no evidence that older personnel were preferentially assigned "hot work." During the period in question, no individual received a dose high enough to require any consideration of work restrictions, even using the more conservative TVA policy exposure limits. |R1

6. Concerns WI-85-038-001 and XX-85-015-001 raise questions about personnel exposure to neutron radiation during containment entries, specifically lower containment, while the reactor is at power (critical). Concern XX-85-015-001 was previously investigated at Sequoyah in a Sequoyah Line Response report (reference No. 54). Concern WI-85-038-001 is an identical restatement of XX-85-015-001 except that it is directed at Watts Bar. A review of the two concerns and the Sequoyah Line Response resulted in the determination that the line response adequately addresses both concerns; therefore, both concerns are addressed as a single concern. |R1 |R1 |R1 | |

Findings from the Sequoyah Line Response are as follows:

A. Maximum neutron dose (mrem) for an individual was 190 and 210 in 1983 and 1984, respectively.

B. Maximum gamma dose (mrem) for an individual was 3,110 and 3,360 in 1983 and 1984, respectively.

C. Average neutron dose (mrem) was 21 and 24 in 1983 and 1984, respectively, as compared with average gamma dose (mrem) of 259 and 451.

D. Neutron dose is typically a factor of 10 less than gamma dose.

E. Quality factor (factor used to convert an exposure to radiation into dose to humans) of 10 for neutrons is accepted by all scientific and rulemaking bodies.

F. Some recent literature publications suggest that quality factor be increased by about a factor of 2.

G. Nearly all utilities enter containment for repairs and maintenance at power.

H. Entry into containment at power was not the direct cause of the thimble tube ejection incident.

Conclusions from the report are summarized below:

A. Even if quality factor increased by a factor of 5, the effect from neutrons would still be of less concern than gamma radiation.

B. Entry into containment at power is acceptable from a dose standpoint.

Recommendations from the Sequoyah Line Response are as follows:

Sequoyah HP and Site Services Branch will continue to monitor quality factor discussions and recommend changes accordingly.

This evaluation concurred with the findings of the Sequoyah Line Response report. A review of supporting documents justified the findings of the line response report, specifically in the area of neutron exposure quality factors. It was found in one journal report of recent publication (reference 30) that quality factors for neutrons range from 3.43 to 13.4 depending upon neutron energies. It was also found that a quality factor increase of a factor of 5, reference Sequoyah Line Response, based upon the 1983 and 1984 average neutron exposures reported, would not exceed the average gamma exposures and that the total gamma component of the overall exposure would still be the most limiting criterion for exposure. It should also be noted that Sequoyah, as well as all TVA nuclear facilities, use the quality factor required by 10 CFR 20.4(c)(3) in determining neutron dose. |R1

A review of the NSRS report I-84-012-SQN (reference 31) did not indicate that the thimble tube ejection, the accident at Sequoyah referred to in the concerns, was a direct result of entry into containment while at power.

7. Concern XX-85-026-001 alleges that Sequoyah HP receives inadequate upper management support in enforcing the radiological safety program. Also, the CI states that no disciplinary action is taken when employees intentionally bypassed monitors. The concern was previously evaluated at Sequoyah by line management in an Sequoyah Line Management Response report (reference 32). The report was reviewed for adequacy and determined to fully address the scope of the concern.

   A follow-up interview was conducted to determine the status of the reports corrective action recommendations.

   Findings and recommendations of the line management report are summarized below:

   No actual incidents were identified in the investigation where employees did not receive disciplinary action for deliberately bypassing radiation monitors. |R1

   Interviews with HP personnel and reviews of plant procedures and records did not indicate inadequate upper management support to enforce an effective radiological safety program. The plant superintendent is immediately notified of all RIRs that have been designated as major by HP. RIRs are then sent to the employee's supervisor for appropriate corrective action. Afterwards the plant superintendent or designee reviews the action taken. If he perceives the action to be inappropriate, he sends the RIR back to the supervisor for appropriate action.

There were some instances where processing the RIRs took too long. This is very ineffective when the employee is a temporary hire and has left by the time the RIR is processed. In some cases, the person initiating the RIR did not receive feedback as to the disposition of the RIR. |R1

The recommendation from the report is that a summary of RIRs will be sent to all HP technicians for their information and those RIRs still active will be discussed with plant managers at the managers' meetings to ensure prompt action.

An interview was conducted with a supervisor in the HP Section to determine the status of the corrective action recommendation. Based upon the results of the interview, it was determined that the corrective action has not yet been implemented. The HP representative stated that summaries of RIRs were not distributed to HP technicians nor were they currently being discussed in plant managers meetings. The individual also stated that a procedure revision will be implemented that will specify disciplinary actions to be taken with a RIR.

8. Concern XX-85-063-001 involves the perception by the CI that HP and Operations personnel may fail to know and verify system contents before authorizing the breaching of the system. The concern was previously investigated by NSRS (reference 52). A review of the investigation and report determined that the scope of the concern was fully addressed by NSRS and that further evaluation was unnecessary.

   Findings of the NSRS report are as follows:

   (Designations for individuals have been extracted directly from the NSRS report.)

   A. Modifications personnel (individuals A and B) and HP personnel (individuals C and D) provided suggestions that any contamination in the Turbine Building, elevation 662.5 (under the condenser), would probably have been from work in the steam generator blowdown (SGBD) system. However, individual B could find no record of any unit 2 blowdown lines that had been breached with water in them during the months noted in the employee concern.

   B. Individual E stated that work had been done on the SGBD system (time period not remembered) involving the installation of two 4-inch valves which had required the draining of the associated piping up to a boundary valve.

      He stated that there had been some leakage past the boundary valve and that the area had been roped off as a contamination zone as a precaution.

C. Individual E stated that when the SGBD system was cut into on the 685-feet level (adjacent to the flash tank), the workers had been dressed out as a precautionary measure. Once HP had surveyed the inside of the pipe, the area was declared clean and protective clothing requirements were removed.

D. Based on HP surveys of the Turbine Building, elevation 662.5, unit 2, the only contamination area identified during the January-February 1984 period was on the SGBD pumps. RWP 02-2-00925 timesheets 0001 and 0002 indicated general cleanup/decontamination of these areas at a time before 1400 on two days. This contamination area did not coincide with the concern of record because:

1. These contamination areas were not established coincident with any work on the nearby SGBD piping.

2. The timing of the decontamination on the RWPs was such that the CI would not have observed the decontamination process when he reported to work the "next night."

E. Surveys of the unit 2 Turbine Building area during the January-February 1984 period showed that some areas around the SGBD system had been zoned as a regulated area because of radioactive material in the piping system as a result of primary-to-secondary leaks.

F. Two modifications to the SGBD system in the 1983-1984 period were identified by RWPs in which radioactive/potentially radioactive piping was breached. However, as detailed below, neither of the cases fit the description provided by the CI.

1. Work Plan 10476 required the draining and flushing of the steam generator blowdown lines to accomplish the tie-in of 4-inch lines. Although the work was performed in September 1983, details were compared with the event described by the CI to provide an indication of how HP imposed protective requirements and general practices. In this work, the following sequence occurred:

   a. The drain valve on each SGBD pump was used as a sample point before draining. A lab coat, gloves, booties and shoe covers, and surgeon's cap were required.

b. HP coverage was required when draining the system. Based upon the survey referenced in the RWP, the drain and flush operation was conducted in the immediate area of the SGBD pumps. The area around the SGBD pumps had previously been zoned as contaminated. Coveralls, taped gloves, taped booties and shoe covers, and a surgeon's cap were required.

c. No evidence was found that the draining operation increased the level of contamination in the work area.

d. The SGBD piping was subsequently cut, welding in 4-inch lines and associated valves. Protective requirements included coveralls, plastic suit, gloves, booties and overshoes, canvas hood, and full face mask. The plastic suit, hood, and facemask were required only while breaching the system.

2. WP 11021 cut into the SGBD system piping on the 685-foot level, This work was done in August of 1984. The following sequence indicates HP practices in that timeframe.

a. Special instructions required continuous HP coverage and a requirement to contain all water.

b. Protective requirements included continuous HP coverage and a requirement to contain all water.

G. Modifications personnel (individuals A, B, E, and F) had no negative statements about the adequacy of HP personnel knowledge of plant systems. Individuals A, E, and F stated that the HP technicians establish conservative protective requirements; at times, they believed excessive protection was required.

H. A Modifications supervisor (individual A) stated that he considered Modifications personnel responsible for determining the contamination sample points before breaching a system and for understanding what contamination may be in the system and the potential leakage paths. He considered HP to be responsible only for performing surveys and setting protective requirements.

An HP supervisor (individual G) considered HP personnel responsible for identifying potential contamination problem areas. Neither modifications nor HP personnel considered Operations personnel responsible for informing craft personnel of the contents of a system before breaching that system.

Conclusions of the NSRS report are stated below:

Concern XX-85-063-001 was not validated. No evidence was found that an event occurred as described by the CI. Potentially contaminated systems in the Turbine Building had been breached on other occasions leading to scenarios similar to that described by the CI. In these cases, the HP personnel treated these systems as potentially contaminated conducting surveys, and requiring protective clothing until the areas were declared clean. No evidence was found to corroborate the opinion that Operations and HP personnel do not provide adequate information or verify system contents. |R1

9. Concerns XX-85-028-X02 and XX-85-028-X03 relate to the CI's perception that RWPs are not maintained in accordance with procedures and RWP timesheets contain falsified signatures. A similar concern, XX-85-028-001, was evaluated in the Operations CEG report 311.03-SQN. This report contains an evaluation of a QTC report regarding RWP timesheets and is considered pertinent to this report. The concerns were previously evaluated in NSRS report I-85-514-SQN. | |R1 | |

The findings and recommendations of the NSRS report are summarized as follows:

I-85-514-SQN-01 - Revision to HPSIL-7 to Define Worker Signature Transfer Requirements

The RWPs provide a unique opportunity for incorrect entries which may not be discovered until after the worker is no longer available to correct his documentation. Although the NQAM and AI-7 provide overall guidance on the correction of quality assurance records, HPSIL-7 provides no additional guidance on correction of RWP entries. Corrections have been made to the RWPs without any traceability to the original documentation. Thus, it cannot be conclusively demonstrated that the employees had made the data entries as required by HPSIL-7.

Recommendation

HPSIL-7 should be revised to clearly define the requirements for transcription of information between RWPs

I-85-514-SQN-02 - Traceability for Transcribed RWPs 02-2-00214 and 02-2-00250 |R1

RWP 02-2-00214, Timesheet 0002 (1984), and RWP 02-2-00250, Timesheet 0030 (1984), sign-in sheets were transcribed without traceability to the original sign-in sheets.

Recommendation

The Quality Assurance records for RWPs 02-2-00214, Timesheet 0002, 02-2-00250, and Timesheet 0030 should be supplemented with information providing traceability to the original worker sign-in sheets.

I-85-514-SQN-03, RWP Changes to Reflect Current Airborne radiological Information

The need to transcribe data to a new timesheet due to "piggy backed" air data is indicative of programmatic problems with the RWP Timesheets. The Sequoyah HP-proposed changes to the RWP and RWP Timesheet should resolve the problem of individuals making entries on the timesheet for days beyond those covered by the airborne data.

Recommendation

No action required beyond incorporation of the proposed changes to the RWP and RWP timesheet.

The Sequoyah line management response to the NSRS report (reference memorandum from Abercrombie to Whitt, dated January 16, 1986) is as follows:

Sequoyah Nuclear Plant Response to I-85-514-SQN-01

Health Physics Section Instruction Letter (HPSIL)-7 will be revised to clearly define the requirements for transcription of information between RWPs. The revision will be completed by February 28, 1986.

RWP Timesheets 02-2-0214, Timesheet 0002, 02-2-0250 , and Timesheet 0030 were reviewed to determine whether or not the recommended supplements had been made according to the NSRS recommendation. These timesheets were determined not to have been supplemented with the appropriate information as recommended by NSRS.

A review of HPSIL-7 was conducted to determine whether the recommended revision to the section instruction letter had been affected. It was found that ASIL-4 was revised to meet the recommendations of NSRS report I-85-514-SQN instead of HPSIL-7, as it was determined by Sequoyah HP that the revision was more appropriate there. This revision addresses the methodology for providing transcription copies of HP records. |R1

An interview was conducted with an individual from HP to ascertain whether or not the revision to ASIL-4 addressed the handling of RWP timesheets. The revision has addressed the problem of transcriptions. Revisions to the RWP program have resulted in a decreased frequency of timesheet revisions.

In addition, report 311.03-SQN identified QA record deficiencies in Sequoyah RWP timesheets and identified a need for appropriate corrective action. These findings are applicable to this report. |R1

10. Concern XX-85-098-002 questions the frequency of radiological surveys and implies that they are not conducted often enough. This concern was evaluated previously in NSRS report I-85-615-SQN (reference 33). A review of the NSRS report and applicable regulations, procedures and documents was conducted to verify the adequacy of the NSRS report which was found to fully address the scope of the concern. The NSRS findings are as follows:

    A. The frequency of surveys required by Radiological Control Instruction RCI-1, Section X (reference 7), was found to satisfy the requirements and commitments. RCI-1 states:

        > Surveys shall be performed on a routine basis to assess radiation exposure rates, contamination, and airborne radioactivity levels. Additional surveys shall be performed whenever required by plant conditions or work requirements to assure the protection of personnel and to monitor plant conditions.

    B. The specific frequency of radiological surveys required in areas with an active Radiation Work Permit (RWP) is established in RCI-14 (reference 8) and was found to meet the requirements of RCI-1.

        RCI-14, Section III, requires that:

        > Periodic radiological surveys will be performed in all areas covered by an active RWP. The survey period will vary, depending upon radiological conditions, but will not exceed seven days....

Provisions are made for more frequent surveys if system changes occur to change the radiation dose rate. RCI, Section V, requires that:

> If the job location is in an area where significant changes in dose rate are likely to occur, a radiological survey should be performed just before the start of work

C. The RPM requirement that a person should not unnecessarily expose himself to radiation while performing radiation surveys i.e., maintain exposure of HP technicians as low as reasonably achievable (ALARA) has been satisfied by an exception in RCI-14 that:

> At the discretion of the plant health physicist or his assistant, the survey period may be extended for ALARA purposes, in increments of 7 days, by making the extension in writing to the responsible shift supervisors.

Additionally, according to HPSIL-7 (reference 9), routine surveys (a survey once every seven days) may be deleted for an individual area if an RWP is not in effect in the particular area or if radiation levels exceed 1000 millirem per hour and no work is scheduled in that area. Thus, radiation exposure of health physics personnel will be maintained ALARA if no surveys are required to support ongoing work.

D. For many areas of the plant which are routinely accessible, surveys are documented on preprinted survey sheets which establish the weekly survey routine to ensure that a survey is conducted once every seven days.

E. Surveys are scheduled on these preprinted sheets for specific shifts throughout the week. A review of these preprinted sheets found that numerous areas outside the regulated area (i.e., the cafeteria and hallway by the electrical shop) were surveyed more frequently than once a week to check for the presence of transferable contamination.

F. Routine surveys of the Containment Building and various rooms in the Auxiliary Building are scheduled based upon work planned during operation or for a particular outage. A survey status list and/or a monthly schedule of routine surveys are maintained at the HP lab/control point to ensure that the frequency of surveys meet the requirements of RCI-14. A review of the monthly schedule at unit 1 containment control point (marked-up calendar) indicated that containment surveys were currently being conducted on a five-day schedule.

G. Surveys for the Auxiliary and Containment Buildings were reviewed for the period of July through September 1985. The frequency of radiation surveys of 15 locations for the duration of this period indicated that these locations had received a routine survey on a seven-day schedule.

H. RWP timesheets from 1984 demonstrated that surveys had been conducted on at least a seven-day schedule in accordance with RCI-14. Because of the nature of the work, one of the timesheets had radioactivity/contamination surveys performed on five days in an eight-day period.

I. Based on interviews with individuals C and D (designated by NSRS report), few personnel (less than 25 percent) review the survey sheets at this time in the outage (two to three months into the outage) before entry into containment on an RWP. Personnel were observed at the control points for unit 1 for a period during which approximately 20 individuals processed through the control point, with none reviewing surveys. A check of the associated RWP timesheets showed that these individuals had previously worked in containment on those timesheets. Individual D stated that when an RWP timesheet is first opened, all radiation hazards are discussed by the HP with the associated foreman, using the survey map. The HP at the control point reiterates this information when the work crew enters the RWP for the first time. Additional instructions to workers on subsequent entries are provided to the workers only on a case-by-case basis. A control point HP Techtician
(individual C) was observed giving instructions to workers on special dosimetry requirements on a reentry on one job because of the nature of the work on reactor coolant pumps. Radiation levels were not reiterated to these individuals since it was unchanged from their last entry.

Conclusions of the report are as follows:

Concern XX-85-098-002 was not validated. The frequency of radiation surveys, with the flexibility to have more surveys when changes in radiation levels are anticipated, was judged to adequately meet the requirements. |R1

After a review of site procedures, it was determined that the conclusions are valid.

11. Concern I-86-238-SQN consists of a request to implement a procedure encompassing all aspects of possible emergency situations in a C-Zone. No previous investigations of this concern have been conducted. The evaluation of this concern consisted of a review of current HP procedures governing radiological safety in contaminated areas and Sequoyah emergency procedures, policies and guidelines to determine the adequacy of each to mitigate C-Zone emergency situations. The following general programmatic areas were examined:

    A. Training of plant employees in their responsibilities during emergencies

    B. Scope of responsibilities for different classifications of employees.

    C. Training of those employees permitted access to radiologically controlled areas.

    An interview with a supervisor identified plant instructions (listed in the reference section) issued to provide guidance to employees in the event of situations described in the concern. The supervisor explained how plant practice is to provide intensive training to those selected groups of employees who will be responsible for handling specific problems such as fire, medical, or the release of radioactive material. Nonspecific training is provided to the general plant staff, and is designed to explain the responsibilities. The employee has to identify and report the emergency and then to evacuate the area while the selected groups handle the situation.

    An interview with technicians and operations personnel reiterated the safety supervisor's position that specific groups such as Operations and Radiological Control are responsible for handling emergencies dealing with fires and injuries in contaminated areas. Other plant employees are expected to report such event and then evacuate the area.

    An interview with a supervisor identified those GET courses provided to all plant employees that explain each employee's responsibility. The supervisor also identified specialized courses provided to employees who frequent the plant's radioactively contaminated areas.

    These specialized courses provide additional information concerning how the employee should react to fire and/or medical situations when radioactive materials are involved.

Attendance of the GET class on Fire Protection (GET-7) verified that objectives as listed in the training plan (SGET-GET-7) were covered during video presentation and by classroom discussion.

The Standard Practice (SQS-25) provides guidance in how to select a protective breathing apparatus, how to use the plant Hazard Control Manual (SGA-181, SQS-7 and SQS-21) and how to recover from a spill of radioactively contaminated liquid (SQA-131).

The Hazard Control Instructions (HCIs) deals with general responsibilities of supervisors (G-2) and employees (G-3). Additional HCIs cover specific problems such as fire and medical emergencies (G-15, G-21, and G-23), the release of plant gases (HM-20) and respiratory protection (PPE-20).

Abnormal Operating Instructions (AOIs) provides guidance for fires (AOI-30), abnormal releases of radioactive material (AOI-31) and chlorine releases (AOI-33).

Site Radiological Emergency Plan and its Implementing Procedures Document (SQN-REP and SQN-IPPs) cover medical emergencies (IPD-10), and HP practices (IPD-14).

Site Physical Security Instruction (PHSI-13) provides for the correct response to plant fires.

A site Employee)Handbook is given to each employee and provides a brief overview of safety, security, and personnel procedures and steps.

NRC Inspection Reports 50-327/85-07 and 50-328/85-07 reviewed TVA's actions during the radiological emergency preparedness drill held at Sequoyah between February 5 and February 7, 1985. No violations or deviations were identified. |R1

General and Specific Training Plans (GET-7, GET-3.1, HP Level 0, I, and II) are designed to inform employees of their responsibilities and available procedures.

12. Concern JLH-86-003 raises concerns about the location of friskers with regard to their proximity to contaminated area exits. This concern has not been previously investigated. The evaluation described in this report consisted of the review of applicable regulations and procedures, interviews with HP technicians and training supervisors, and field walkdowns to verify placement of friskers.

Sequoyah Nuclear Plant, RCI-1, revision 30, "Radiological Program," Section III, paragraph E, states that "frisking stations are located throughout the regulated area. These friskers are to be used when personnel contamination is suspected, and upon leaving a C-Zone." In addition, HPSIL-10, revision 8, "Personnel Decontamination and Confiscation of Contaminated Articles," states personnel should frisk immediately after or as soon as practical upon exiting a C-Zone. Background readings can not exceed 200 dpm, in accordance with RCI-1, and this means that there will be instances when a frisker will be a distance from the zone. Because of this, it is possible that contamination could be tracked to a frisker.

Current HP procedures account for the possibility of spreading contamination on the way to a frisker. RCI-1 states a person should contact HP immediately if contamination is detected, and stay there. An HP technician will respond to the location for assistance. The technician will also survey the pathway the employee took and any items they may have touched, such as phone, frisker probe, or door knob. If contamination is determined to have been spread, the area and items will be decontaminated immediately, if possible, or zoned off until it can be deconned.

Instructors for Sequoyah's GET inform personnel that a frisker will not always be readily available because of reasons such as background being excessively high.

The example was substantiated concerning the fact that exiting elevation 690 and 669 pipe chases requires passing through closed doors; however, an independent survey revealed that background levels in both pipe chases exceeded 200 dpm, therefore a frisker had to be placed elsewhere. On elevation 669, the frisker had been removed from the frisking booth near the elevator because of high background and placed near the 'A' holdup tank room. Consequently, personnel may not have been aware it had been moved and would have had to look for the frisker.

13. JMA-85-001 expresses a concern that in the event of a radiation or evacuation alarm or notice, the operator in charge of an Auxiliary Building Secondary Containment Enclosure (ABSCE) type breach may leave the area without sealing the breach. This concern was evaluated by a review of the governing procedures and interviews with Sequoyah Operations Section personnel. Sequoyah Technical Instruction 77 (TI-77) establishes the responsibilities and procedures governing the breaching of the ABSCE. Section 4.2.1 (note) on breaches requires an Unresolved Safety Question Determination (USQD)evaluation of the ability to isolate the breach within 4 minutes of receiving an Auxiliary Building Isolation (ABI) or high radiation signal. TI-77 requirements were confirmed in an interview with the Sequoyah Operations Supervisor who further stated that operators are instructed in this and are knowledgeable of their responsibility to seal any ABSCE type breaches before evacuating or leaving the area. |R1 | |R1

14. Concern RII-85-A-0064 raises 8 items of concern. |R1

With the exception of one item, which involved charges of intimidation and harassment and was referred to the Office of the Inspector General, the items were evaluated as follows: |R1 |

A. TVA Lacks Ability to Run an HP Operation |R1

The evaluation included the review of NRC, INPO, TVA-QAB, and American Nuclear Insurers (ANI) audits/evaluations of the Sequoyah HP program from 1984 to the present. Applicable Section Instructions and Radiological Control Instructions were reviewed and implementation of the instructions observed. Program documentation was reviewed and randomly verified by field walkdowns. Interviewed personnel included both HP technician and supervisory personnel. |R1

The 1985 NRC-SALP Report gave radiological control at SQN a 2 rating. The 1984 SALP Report gave Sequoyah radiological controls a 1 rating. These ratings indicate a "satisfactory performance" (2 rating) to a "high level of performance" (1 rating). Since 1984, Sequoyah HP has had only one Severity Level III NRC violation (however, no civil penalty was involved and the violation involved a radiation waste shipment, not radiological protection). During this period, there were eight NRC inspections, and Sequoyah HP had eight Level IV and two Level V violations. The 1984 INPO evaluation listed three findings in the radiation protection area. The 1985 INPO evaluation identified three findings and one Good Practice. Five QAB audits were conducted during 1984 and 1985. A total of nine deviations were identified in the QAB Audit Reports.

The HP program at Sequoyah is currently under the direction of the Superintendent, Radiological Controls. This position was created in 1986 and reports directly to the Plant Manager. The Superintendent, Radiological Controls is designated as the "Radiation Protection Manager" (RPM) as defined by NRC in Regulatory Guide 1.8. The individual in this position meets the qualification criteria for the position of RPM according to Regulatory Guide 1.8.

B. Unreported Loss of Radioactive Source |R1

HP SIL-11, "Leak Testing of Radioactive Sources," provides the guidelines for source inventory and control. Sources are routinely inventoried on a weekly basis. In addition, these sources must be signed for by qualified personnel before and after use. Interviews with HP technicians from different shifts demonstrated the procedure

was understood. None of the technicians could recall any instance of a lost or missing source. An independent survey of the source locker verified that all sources were accountable. Random source inventories from 1985 and early 1986 were reviewed with no discrepancies being found.

C. Radiation Monitors Not Located According to ASIL-3 |R1

HP ASIL-3, revision 10, "Orienting of Health Physics Technicians for Inplant Work at Sequoyah," contains attachment C-6, which is a listing of radiation monitors and their locations. This attachment is used by HP technician trainees as an aid in learning the location of these monitors.

Two HP technicians who had completed their Performance Verification Sheets within the last year stated that all monitors are in the locations listed in Attachment C-6. They did say that some were difficult to locate because of their location, e.g., behind pipes, hangers. A random verification was performed by walkdown, and all monitors checked were in proper location according to attachment C-6.

D & E. Smears Thrown into Trash/Smear Counting Area Used as an Eating Area |R1

Both of these items deal with the handling of smears in the HP lab counting room. The evaluation of these items consisted of interviewing HP field operations personnel and examination of applicable HP procedures. The findings of this evaluation are as follows:

1. Smears are handled and counted on a designated counter top in the counting room. This area is posted as a regulated area; therefore, eating, drinking, and use of tobacco products are not allowed in this area. |R1

2. The remainder of the count room and HP field facilities is not a regulated area; therefore, eating, drinking, and use of tobacco products are allowed in these areas.

3. The HP lab, counting room, and regulated counter top are required to be routinely surveyed at least daily. Any contamination detected is required to be immediately deconned. (Reference: SQN HP-SIL-4)

4. After counting, all smears whether contaminated or not, are placed in a "contaminated material" designated container and never in the clean trash receptacles.

5. HP technicians do not normally eat in the counting room even though it is not prohibited except on the regulated area counter top.

F. Air Samples Improperly Taken/Respirators Not Worn in High (>10,000 dpm) Contamination Areas |R1

Interviews with HP trainees and training supervisors indicated that technicians are taught to avoid locating an air sampler on a contaminated surface since a possibility exists that the sampler might collect loose surface contamination. This could result in a higher calculated airborne activity that would not be truly representative of the airborne activity. This would result in the recording of higher airborne radioactivity concentration levels on applicable survey forms and RWPs might lead to a requirement for respiratory protection. These measures would, however, be conservative and would not lead to an increased risk to the workers. It is also understood by those interviewed that situations can develop where there may be no alternate location to place an air sampler in order to obtain a representative sample of workers breathing zone. In this case, technicians are instructed to exercise caution such that the air sample would not become contaminated because of loose surface contamination.

Random observations of HP technicians pulling air samples revealed proper sampling practices. All those observed set up the air sampler as close to breathing zone as possible, considering location of work and available equipment. All were knowledgable of their task.

NUREG 0041 establishes guidelines by which respirators should be utilized. It states "Personnel who are responsible for establishing . . . and maintaining respiratory protection programs must exercise sound judgment by providing and using engineering controls, where feasible, and by avoiding unwarranted use of respirators." RCI-14, revision 5, provides guidelines for use of protective clothing. Attachment 3 states that except for (1) breaching a radioactive or potentially radioactive system or (2) welding, grinding or burning a contaminated component, respiratory protection is not recommended until contamination levels exceed 10,000 dpm, or 10 times the level expressed in the concern. HP, according to TVA RPP, does have authority to prescribe respiratory protective devices when deemed necessary.

A review of randomly selected RWPs was performed, and in the cases reviewed, the initiating technician of the RWP followed the guidelines set forth in RCI-14, attachment 3.

G. (Not applicable to this report)

H. Air Sample Heads Not Covered Prior to or After Sampling |R1

This item expressed concern over HP technicians not covering the air sampler heads before and after taking air samples. The evaluation of this item consisted of an interview with a Sequoyah HP shift supervisor and review of HP procedures. HP technicians are taught to avoid cross-contamination of air sample filters; however, the means by which they accomplish this is up to their discretion. There are no requirements for covering air sampler heads before or after sampling. It should be noted also that if an air sample filter should become cross-contaminated, the resulting air data would indicate higher airborne activity than that which actually existed resulting in more conservative protective measures being required than necessary and in no way compromising worker safety.

Conclusion

1. SQP-86-009-001 - The concern was not validated. No evidence of personnel contamination as a result of poor management attitudes toward radiological safety was found. Reviews of Sequoyah procedures indicated that the programs in place governing both internal and external personnel contamination control and safety adequately implement and comply with regulatory requirements. Personnel contamination is documented and investigated by way of RIRs. This evaluation did not identify any deficiencies in the Sequoyah personnel contamination control program. The concern does not affect the safe operation of the plant.

2. SQP-86-009-002 - The concern was not validated. Examinations of applicable procedures and interviews with cognizant personnel indicated that changes made to containment access procedures were made prior to the transfer of HP to the DNP and that those changes did not compromise the health and safety of workers. The concern does not affect the safe operation of the plant. |R1

3. XX-85-084-001 - The concern was not validated. The NSRS investigation could find no evidence that HP personnel did not properly respond to radiation monitor alarms. This report concurs fully with the NSRS findings and conclusions. The concern does not affect the safe operation of the plant. |R1

4. XX-85-066-001 - The concern was not validated. This report concurs with the Sequoyah Line Management Report findings and conclusions that HP, or any other safety organization, responds to an alarm or unknown situation with deliberateness and caution to prevent possible hazard and ensure personnel safety. The concern does not affect the safe operation of the plant.

5. XX-85-009-002 - (XX-85-009-001) The concern was not validated. NSRS found no evidence indicating that older persons are assigned to the "hottest" (high radiation) work. This report concurs with the NSRS findings and conclusions. The concern does not affect the safe operation of the plant.

6. WI-85-038-001 and XX-85-015-001. These concerns were not validated. As stated in the Sequoyah line response report, "Even if [the] quality factor increased by a factor of 5, the effect from neutrons would still be of less concern than gamma radiation." Therefore, the practice of entering containment while at power for nonemergency repairs does not need to be reevaluated. The investigation documented in the Sequoyah line report indicates compliance with 10 CFR 20 requirements regarding neutron dose assessment. The policy of allowing "at power" containment entries had no direct bearing on the thimble tube ejection accident at Sequoyah. This report concurs with the Sequoyah line response. The concern does not affect the safe operation of the plant.

7. XX-85-026-001 - The concern was not validated in that HP does receive adequate upper management support to enforce the radiological safety program. No evidence was found by Sequoyah line management to support the allegation that employees who intentionally bypass monitors were not disciplined. Some needed improvements in the present RIR program were noted and corrective action recommended to upgrade the program. This report concurs fully with the Sequoyah line report. The concern does not affect the safe operation of the plant.

8. XX-85-063-001 - The concern was not validated. NSRS found no evidence that the incident occurred as described by the CI or to corroborate the opinion that Operations and HP personnel do not provide adequate information or verify system contents. This report concurs with the findings and conclusions of the NSRS report. The concern does not affect the safe operation of the plant.

9. XX-85-028-X02 and XX-85-028-X03 - Concern XX-85-028-X02 was found to be indeterminate and XX-85-028-X03 was validated. Both concerns were evaluated by NSRS in report I-85-514-SQN and were subsequently evaluated by QTC. NSRS subsequently referred this concern to the Office of General Counsel (OGC) for further investigation. OGC completed its evaluation and issued report OGC-86-021 on March 20, 1986.

   HP committed to revise their procedures concerning transcription of QA records. The revision to ASIL-4 is considered to meet this commitment. A recommendation to clarify QA record requirements for RWP timesheets and enhance worker awareness of their responsibility to properly handle QA records was made by Operations CEG report 311.03-SQN, and appropriate corrective action is being considered at this time by SQN personnel. Official dose records are derived from TLD data and not RWP timesheets; therefore, these concerns do not affect the safe operation of the plant.

10. Concern XX-85-098-002 - The concern was not validated. NSRS findings verified that radiological surveys are carried out according to procedural requirements, are sufficient to maintain an adequate assessment of plant radiological conditions, and comply with regulations. This evaluation concurs with the findings and conclusions of the NSRS report. The concern does not affect the safe operation of the plant.

11. I-86-238-SQN - The concern was not validated. The evaluation of the concern concludes that existing radiological protection procedures, emergency procedures, and personnel training programs address the handling and mitigation of any potential C-Zone emergency situations. No programmatic deficiencies were found. The concern does not affect the safe operation of the plant.

12. JLH-86-003 - The concern was not validated. The review of applicable plant procedures, personnel training, and plant walkdowns indicated that an adequate number of friskers are placed throughout the plant in locations as convenient as possible to existing C-Zones with regard to background radiation requirements and that personnel training regarding knowing frisker locations, using friskers properly, and knowing what action to take when contamination is indicated is in compliance with regulatory and plant procedural requirements. No programmatic deficiencies were found. The concern does not affect the safe operation of the plant.

13. JMA-85-001 - The concern was not validated. SQN TI-77 adequately addresses the securing of ABSCE breaches and it was determined that Sequoyah operators are properly instructed and aware of their responsibilities regarding this. The concern does not affect the safe operation of the plant since it was not validated.

14. RII-85-A-0064 - The concern was not validated. None of the deficiencies expressed in the concern were found to exist and the concern does not affect the safe operation of the plant. |R1

IV. Root Cause

The following concerns were not validated; therefore, no root cause evaluation was necessary.

1. SQP-86-009-001
2. SQP-86-009-002
3. XX-85-084-001
4. XX-85-066-001
5. XX-85-009-002
6. WI-85-038-001
7. XX-85-015-001
8. XX-85-026-001
9. XX-85-063-001
10. XX-85-098-002
11. I-86-238-SQN
12. JLH-86-003
13. JMA-85-001
14. RII-85-A-0064

Concern XX-85-028-X02 was indeterminate.

Concern XX-85-028-X03: The root cause of the concern, as stated, is determined to be a programmatic deficiency in a plant procedure which has been corrected by the revision to ASIL-4. |R1

V. Generic Applicability

Concern XX-85-028-X03 is considered generically applicable to all other TVA Nuclear Plants that employ RWP timesheets because of the scope and nature of the programmatic deficiencies noted in the HP's QA records disposition and management system.

Concerns WI-85-038-001 and XX-85-015-001 are generically applicable to both Watts Bar and Sequoyah but are not validated for either plant.

All other concerns evaluated in this report pertain to Sequoyah-specific incidents, were not validated, and are therefore not generically applicable to any other TVA facility. No evidence of similar incidents or situations existing at other TVA nuclear plants was found. |R1

VI. References

1. Title 10 Code of Federal Regulations, Part 20
2. Title 30 Code of Federal Regulations, Part 11
3. U.S. NRC Regulatory Guide 8.8 - ALARA
4. U.S. NRC Regulatory Guide 8.15 - Respiratory Protection
5. NUREG 0041 - Manual of Respiratory Protection Against Airborne Radioactive Materials.
6. TVA Code VIII, "Occupational Radiation Protection"
7. TVA Radiation Protection Program (RPP)
8. Sequoyah Nuclear Plant Technical Specifications (STS)
9. Sequoyah Nuclear Plant Final Safety Analysis Review (FSAR)
10. U.S. NRC Regulatory Guide 1.8, Revision 1
11. Sequoyah Nuclear Plant Technical Instruction 77 (TI)77, "Breaching the Shield Building, ABSCE, or Control Building Boundaries"
12. Sequoyah Nuclear Plant Radiological Control Instructions (RCIs) 1-14
13. Sequoyah Health Physics Section Instruction Letters (SILs), HPSIL 1-37, ASIL 1-15, DSIL 1-24
14. NRC Fifth Systematic Assessment of Licensee Performance (SALP) for March 1, 1984 through March 31, 1985 dated September 17, 1985
15. NRC Fourth Systematic Assessment of Licensee Performance (SALP) for January 1, 1983 through February 29, 1984
16. INPO Evaluation of Sequoyah Nuclear Plant - April 1985
17. INPO Evaluation of Sequoyah Nuclear Plant - April 1984.
18. NRC Inspection Reports, Sequoyah Health Physics Program

a.	50-327/86-04,	50-328/86-04,	03/27/86
b.	50-327/85-20,	50-328/85-20,	06/20/85
c.	50-327/85-26,	50-328/85-26,	09/06/85
d.	50-327/84-34.	50-328/84-34,	11/21/84
e.	50-327/84-21,22	50-328/84-21,22	09/17/84
f.	50-327/84-14,	50-328/84-14,	07/27/84
g.	50-327/84-12,	50-328/84-12,	03/29/84
h.	50-327/84-04,	50-328/84-04,	03/12/84

19. SQN-NRC-OIE Inspection Report Nos. 50-327/84-34 and 50-328/84-34 - Response to Violations, Abercrombie to Hufham, dated January 9, 1985 (S53-841218-913)

20. SQN-NRC-OIE Report 50-327/85-20 and 50-328/85-20, Response to Violations, Abercrombie to Hufham, dated July 15, 1985 (S53-850712-964)

21. SQN-NRC-OIE Report 50-327/85-26 and 50-328/85-26, Response to Violations, Abercrombie to Hufham, dated December 30, 1985 (S53-851230-981)

22. SQN-NRC-OIE Report 50-327/86-04 and 50-328/86-04, Supplemental Response to Violations, Gridley (TVA) to Grace (NRC), date July 3, 1986 (L44-860703-800)

23. QAB Audit Reports

    a. QSS-A-85-0009 (L17-850308-801)
    b. QSS-A-85-0010 (L17-850510-801
    c. QSS-A-850012 (L17-850905-800)
    d. QSS-A-85-0016 (L17-860225-803)
    e. CH-8400-14-01

24. NSRS report I-85-514-SQN "Radiation Work Permits" dated December 27, 1985

25. Memorandum from K. W. Whitt to W. T. Cottle, "Corrective Action Response Evaluation," dated January 30, 1986

26. Memorandum O. L. There to M. A. Harrison, "Response to NSRS report I-85-514-SQN," dated February 3, 1986

27. "Investigation/Evaluation of NSRS Referred Employee Concern XX-85-066-001," (SO1-851205-982)

28. "Sequoyah Nuclear Plant (SQN) - Request For Evaluation of [illegible]e Concern XX-85-066-001" (SO1 851025 870)

29. Investigation/Evaluation of NSRS Referred Employee Concern XX-85-015 "Sequoyah/Personnel in Containment While Operating," dated August 28, 1985

30. Radiation Protection Dosimetry, "Kerma Equivalent Factor for Photons and Neutrons Up to 20 MeV," Volume 14, Number 4, pp 289-298, (1986), Nuclear Technology Publishing

31. "Sequoyah Nuclear Plant (SQN) - NSRS Investigation of Unit 1 Incore Instrumentation Thimble Tube Ejection Accident on April 19, 1984 - NSRS Report I-84-012-SQN," (LOD 840830 516)

32. Investigation/Evaluation Report, "Employee Safety Concern - QTC Concern : XX-85-026-001," dated February 4, 1986, (L61-860204-800)

33. NSRS Report I-85-615-SQN, "Frequency of Radiation Surveys," dated December 10, 1985

34. Sequoyah Nuclear Plant Engineering Section Instruction Letter ESSIL-C5, revision 0, "By product Material Radiation Sources"

35. Health Physics Technician Training Lesson Plant HPT-LP-14

36. Sequoyah Nuclear Plant Radiological Survey, Form TVA 17069, Survey Number 0-85-2247

37. Sequoyah Nuclear Plant HP Shift Coordinators Shift Daily Journal (Log), December 12, 1985 entries

38. Title 10, Code of Federal Regulations, Part 50

39. U.S. NRC Regulatory Guide 1.101 "Emergency Planning..."

40. NUREG 0654, revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Responses..."

41. Sequoyah Nuclear Plant Hazard Control Instructions

42. Sequoyah Nuclear Plant Standard Practices Manual

    a. SQA - 131 -"Recovery From a Spill..."
    b. SQA - 181 - "Hazardous Material Control"
    c. SQS - 7 - "Hazard Control Plan"
    d. SQS - 21 - "SQN Hazard Control Instruction Manual"
    e. SQS - 25 - "Breath Apparatus"
    f. SQS - 41 - "Emergency Medical Treatment..."
    g. SQS - 46 - Employee Complaints Concerning Safety and Health"

43. Sequoyah Nuclear Plant SOI-26.2 "Fire Interaction Manual," revision 3, dated June 30, 1986

44. Sequoyah Nuclear Plant AOI-30, AOI-31, and AOI-33

45. Sequoyah Nuclear Plant Administrative Instruction, AI-14, "Plant Training Program"

46. Sequoyah Nuclear Plant Physical Security Instruction, PHYSI-13 "Fire"

47. Sequoyah Nuclear Plant Radiological Emergency Plan

48. Memorandum NRC to TVA dated February 27, 1985 "SQN REP Exercise Evaluation," 50-327/85-07 and 50-328/85-07 (A02 850304 020)

49. Sequoyah Nuclear Plant General Employee Training (GET) Lesson Plans

    a. GET-2.1 "HP Level I"
    b. GET-2.2 "HP Level II"
    c. GET-2.4 "HP Level 0"
    d. GET-3.1 "Security and Emergency Plans"
    e. GET-7 "Fire Protection"

50. Sequoyah Nuclear Plant Administrative Instruction AI-8, "Access to Containment," revision 17

51. NSRS Report I-85-513-SQN*, "Radiation Exposure of Older Personnel," dated December 27, 1985 (Concern XX-85-009-001 and XX-85-009-002)

52. NSRS Report I-85-513-SQN*, "Work Areas Contaminated/Lack of Knowledge of System Contents." (concern XX-85-063-001)

53. Sequoyah Nuclear Plant, REP, Implementing Procedure, (IP)-15

54. Memorandum from H. L. Abercrombie to W. H. Thompson dated September 9, 1985, SO1 850830 802

VII. Immediate or Long-Term Corrective Action

XX-85-028-X03: Pertinent Procedures** have been revised to reflect the current status of determining/classifying RWP-timesheets as QA or non-QA; however, all RWP-timesheets are retained as lifetime records. |R1

XX-85-026-001 - Recommendation to distribute RIR summaries to HP staff has been incorporated (first communications mailed for review 9/10/86) and will be issued each quarter. In the future the summary sheet will be mailed to the Plant Manager as a possible agenda item for his weekly meeting. |R1

The Corrective actions for these two concerns are being tracked on CATD Number 31104-SQN-01. |R1

* Both NSRS reports are transmitted under the same NSRS report number.
** Pertinent reports: AI-7 Rev 39, RCI-14 Rev 5, ASIL-4 Rev 11, HPSIL-7 Rev 15.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
LIST OF EMPLOYEE CONCERN INFORMATION

EGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 31104 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	GENERIC APPL B F	B L	S Q	W B	QTC/NSRS INVESTIGATION REPORT	P S R	CONCERN DESCRIPTION	KEYWORD A / KEYWORD B / KEYWORD C / KEYWORD D
I-86-238-SQN	OP	31104	N	SQN	N	N	N	N K-FORM		NS	AN ANONYMOUS INDIVIDUAL MAILED IN A SAFETY CONCERN TO NSRS REQUESTING TH AT EMERGENCY PROCEDURES BE WRITTEN T O ENCOMPASS ALL ASPECTS OF POSSIBLE EMERGENCY SITUATIONS IN A C-ZONE. P ROCEDURES SHOULD COVER SPECIFIC AREA S, SUCH AS: SPREAD OF CONTAMINATION , POSSIBILITY OF INJURY, POSSIBILITY OF A FIRE, POSSIBILITY OF POOR BREA THING ATMOSPHERE, ETC.	
JLH-86-003	OP	31104	N	SQN	N	N	Y	N REPORT			PER TVA'S GET CLASS AND PLANT PROCED URES, EMPLOYEES ARE TO FRISK AS SOON AS EXITING A "C-ZONE". CURRENTLY, AN EMPLOYEE HAS TO SEARCH FOR A FRIS KER. IN THE PROCESS OF LOOKING FOR A FRISKER, AN EMPLOYEE CAN CONTAMINA TE DOORS AND/OR THE FLOOR. ONE OF T VA'S OBJECTIVES IS TO KEEP DOWN CONT AMINATION, AND THE CURRENT PROCESS D OES NOT ADEQUATELY CONTROL THE SPREA DING OF CONTAMINATION.	
JMA-85-001	OP	31104	N	SQN	N	N	Y	N REPORT		SS	A HIGH RISK POSSIBILITY OF NOT SECUR ING ABSCE TYPE BREACHES. IF A VALID HIGH RADIATION CONDITION OCCURRS IN THE AUX. BUILDING OR DURING AN ANNO UCED EVACUATION OR EVACUATION ALARM SOUNDED MAY CAUSE PERSON TO LEAVE AU X. BUILDING PRIOR TO SEALING PENETRA TION.	
RII-85-A-0064	OP	31104	N	SQN	N	N	N	N K-FORM		NS	THIS ALLEGATION EXPRESSED CONCERN AB OUT THE SEQUOYAH HEALTH PHYSICS PROG RAM. THE ESSENCES OF THE CONCERNS A RE PROVIDED BELOW:1. TVA DOES NOT HA VE THE ABILITY TO RUN AN HP OPERATIO N. 2. AN INDIVIDUAL LOST A RADIOACTI VE SOURCE AT THE SITE AND NEVER REPO RTED THE LOSS TO MANAGEMENT. 3. THE LOCATION OF RADIATION MONITORS ARE N OT AS INDICATED ON THE ASIL-3 PROCED URE. 4. SMEARS ARE TAKEN INTO THE HE ALTH PHYSICS OFFICE TO COUNT AND ARE THEN THROWN INTO THE TRASH. 5. THE SMEAR COUNTING AREA IN THE HP	

ATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 31104 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	GENERIC APPL B F	B L	S Q	W B	QTC/NSRS INVESTIGATION REPORT	PSR	CONCERN DESCRIPTION	KEYWORD A / KEYWORD B / KEYWORD C / KEYWORD D
SQP-86-009-001 T50273	OP	31104	N	SQN	N K-FORM	N	N	N		NS	AN INCIDENT AT SEQUOYAH, WHICH RESULTED IN EMPLOYEES BEING RADIOACTIVELY CONTAMINATED, COULD HAVE BEEN PREVENTED, AND REFLECTS MANAGEMENT'S ATTITUDE TOWARD RADIATION SAFETY AND PERSONAL SAFETY OF THE EMPLOYEES. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. NO FURTHER INFORMATION MAY BE RELEASED. NUCLEAR POWER DEPARTMENT CONCERN.	HEALTH PHYSICS / SAFETY PROGRAM / OPERATIONS / RADIATION PROTCT
SQP-86-009-002 T50273	OP	31104	N	SQN	K-FORM						THE TRANSFER OF RESPONSIBILITY FOR HEALTH PHYSICS FROM MUSCLE SHOALS TO SEQUOYAH PLACES THE INDIVIDUAL RESPONSIBLE FOR HEALTH PHYSICS IN A POSITION WHERE MUCH PRESSURE FROM PLANT MANAGEMENT CAN BE EXERTED, AND HAS CAUSED COMPROMISES OF PREVIOUSLY ESTABLISHED HEALTH PHYSICS POLICY REGARDING PERSONNEL ACCESS DURING UNIT OPERATION. NUCLEAR POWER DEPARTMENT CONCERN. CI HAS NO FURTHER INFORMATION .	HEALTH PHYSICS / SAFETY PROGRAM / OPERATIONS / RADIATION PROTCT
WI -85-038-001 T50026	OP	31104	N	WBN	N REPORT	N	Y	N			WATTS BAR: THE PRACTICE OF PERSONS ENTERING THE LOWER CONTAINMENT AREA OF THE REACTOR CONTAINMENT FOR NON-EMERGENCY REPAIRS; WHILE THE REACTOR IS OPERATING, SHOULD BE RE-EVALUATED. RECENT STUDIES INDICATE THE BIOLOGICAL EFFECTS OF PERSONNEL EXPOSURE TO NEUTRON FLUX ARE MORE SERIOUS THAN PREVIOUSLY BELIEVED. THIS PRACTICE IS IN EFFECT AT SEQUOYAH AND RESULTED IN AN ACCIDENT AROUND 1983/1984 AND IS PLANNED TO BE IMPLEMENTED AT WATTS BAR.	SAFETY PROGRAM / HEALTH PHYSICS / GENERAL / EMPLOYEES

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
LIST OF EMPLOYEE CONCERN INFORMATION

GORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 31104 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	GENERIC APPL B F	B L	S Q	W B	QTC/NSRS INVESTIGATION REPORT	PSR	CONCERN DESCRIPTION	KEYWORD A / KEYWORD B / KEYWORD C / KEYWORD D
XX-85-009-002 T50193	IH OP	00000 31104	S	SQN	N K-FORM	N	N	N	I-85-513-SQN	NS	SEQUOYAH: THERE IS NO REGARD FOR PERSONAL SAFETY AT OPERATING PLANTS. MANAGEMENT (KNOWN) DIRECTED THAT THE OLDEST EMPLOYEES BE ASSIGNED TO "HOT" WORK IN ORDER FOR THEM TO REACH THEIR RADIATION EXPOSURE LEVELS FIRST. A SUPERVISOR (KNOWN) MADE THE STATEMENT THAT "OLDER FOLKS WON'T BE LONG AROUND". DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONSTRUCTION DEPT. CONCERN. CI HAS NO FURTHER INFORMATION.	SAFETY PROGRAM / SAFETY CONDITION / OPERATIONS / EMPLOYEES
XX-85-015-001 T50078	OP	31104	N	SQN	N K-FORM	N	N	N	XX-85-015-001	NS	SEQUOYAH: THE PRACTICE OF PERSONNEL ENTERING THE LOWER CONTAINMENT AREA OF THE REACTOR CONTAINMENT FOR NON-EMERGENCY REPAIRS WHILE THE REACTOR IS OPERATING SHOULD BE RE-EVALUATED SINCE RECENT STUDIES INDICATE THE BIOLOGICAL EFFECTS OF PERSONNEL EXPOSURE TO NEUTRON FLUX ARE MORE SERIOUS THAN PREVIOUSLY BELIEVED. THIS PRACTICE CAUSED AN ACCIDENT IN THE INCORE INSTRUMENT PROBE ROOM AT SEQUOYAH IN 1984 AND IS STILL CONTINUED. C/I HAS NO FURTHER INFORMATION.	SAFETY PROGRAM / SAFETY CONDITION / OPERATIONS / GENERAL
XX-85-026-001 T50028	OP	31104	N	SQN	N K-FORM	N	N	N		SS	SEQUOYAH: INADEQUATE UPPER MANAGEMENT SUPPORT PROVIDED THE HEALTH PHYSICS DEPT. TO ENFORCE AN EFFECTIVE RADIOLOGICAL SAFETY PROGRAM. NO DISCIPLINARY ACTION IS TAKEN WHEN EMPLOYEES INTENTIONALLY BY-PASS MONITORS.	HEALTH PHYSICS / TRAINING / OPERATIONS / RADIATION PROTC
XX-85-028-X02 T50148	IH OP	00000 31104	S	SQN	N REPORT	N	Y	N	I-85-514-SQN		SEQUOYAH- RADIATION WORK PERMIT 02-2-00214 (SIGN-IN SHEET) CONTAINS FALSIFIED SIGNATURES. NO FOLLOWUP REQUIRED	FALSIFICATION / HEALTH PHYSICS / HEALTH PHYSICS / REPORTS
XX-85-028-X03 T50148	IH OP	00000 31104	S	SQN	Y K-FORM	Y	Y	Y	I-85-514-SQN		SEQUOYAH- RADIATION WORK PERMITS ARE NOT BEING COMPLETED PER PROCEDURE REQUIREMENTS. RADIATION WORK PERMIT 02-2-00214 IS AN EXAMPLE. NO FOLLOW UP REQUIRED	RECORDS / NONCONFORMANCE / HEALTH PHYSICS / REPORTS

CATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 31104 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	GENERIC APPL B F	B L	S Q	W B	QTC/NSRS INVESTIGATION REPORT	PSR	CONCERN DESCRIPTION	KEYWORD A / KEYWORD B / KEYWORD C / KEYWORD D
XX -85-063-001 T50175	OP	31104	N	SQN	N	N	N	N K-FORM	I-85-775-SQN	NS	SEQUOYAH OPERATORS AND HEALTH PHYSICS: FAILURE TO KNOW AND VERIFY THE CONTENTS OF SYSTEM. EXAMPLE: HEALTH PHYSICS GAVE GO AHEAD TO OPEN A LINE IN TURBINE BUILDING, UNIT 2, SAYING EVERYTHING WAS O.K. AND CLEAN. AFTER OPENING THE LINE, THE NEXT NIGHT, THE ENTIRE AREA WAS ROPED OFF FOR CONTAMINATION. THIS OCCURRED IN JAN/FEB 84. C/I HAS NO FURTHER INFORMATION. NUC. POWER CONCERN.	HEALTH PHYSICS / SAFETY PROGRAM / OPERATIONS / RADIATION PROTC
XX -85-066-001 T50134	OP	31104	N	SQN	N	N	N	N K-FORM	XX-85-066-001	NS	SEQUOYAH - 3 YEARS AGO, HEALTH PHYSICS AT SEQUOYAH WAS NOTIFIED OF HIGHER THAN EXPECTED RADIATION LEVELS IN THE REACTOR BUILDING. WHEN NOTIFIED BY TELEPHONE, HP PERSONNEL SPECULATED ON THE REASONS FOR THE HIGH RADIATION LEVEL, AND DID NOT RESPOND IMMEDIATELY TO INVESTIGATE. CI FEELS THAT WASTING TIME SPECULATING ON CAUSE AND NOT RESPONDING IMMEDIATELY IS A CONCERN FOR SAFETY. NUCLEAR POWER DEPT CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED	HEALTH PHYSICS / SAFETY CONDITION / OPERATIONS / RADIATION PROTC
XX -85-084-001 T50181	OP	31104	N	SQN	N	N	N	N K-FORM	I-85-806-SQN	NS	QUESTIONABLE PRACTICES BY HEALTH PHYSICS @ SEQUOYAH IN 1982 LEAD TO POSSIBLE OVER EXPOSURE. H.P. WOULD RESPOND TO RADIATION ALARMS AND UNPLUG UNITS. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONST. DEPT. CONCERN. C/I HAS NO FURTHER INFORMATION.	HEALTH PHYSICS / SAFETY PROGRAM / OPERATIONS / RADIATION PROTC
XX -85-098-002 T50152	OP	31104	N	SQN	N	N	Y	N REPORT	I-85-615-SQN		SEQUOYAH - RADIATION AREAS ARE NOT MONITORED OFTEN ENOUGH. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOWUP REQUIRED.	HEALTH PHYSICS / SAFETY PROGRAM / OPERATIONS / RADIATION PROTC

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