Public Service
Electric and Gas
Company

Leon R. Eliason
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JUN 23 1995

LR-N95098

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

RESPONSE TO NRC'S NOTICE OF VIOLATIONS & DEVIATION
INSPECTION REPORT 50-272/95-07; 50-311/95-07
DOCKET NOS. 50-272; 50-311

Public Service Electric and Gas (PSE&G) has received the NRC Inspection Report 50-272/95-07, 50-311/95-07, dated May 24, 1994. Within the scope of this report, three violations and one deviation from NRC regulations were cited.

Pursuant to the provisions of 10 CFR 2.201, PSE&G submits its response to the aforementioned violations and deviation item via Attachments I and II (respectively).

Should you have any questions regarding this transmittal, please do not hesitate to contact me.

Sincerely,

L. R. Eliason
Chief Nuclear Officer &
President - Nuclear Business Unit

Attachments (2)

C Mr. T. T. Martin, Administrator - Region I
U.S. Nuclear Regulatory Commission
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Mr. L. N. Olshan, Licensing Project Manager
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Division of Environmental Quality
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

REF: LR-N95098

STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

L. R. Eliason , being duly sworn according to law deposes and says:
I am Chief Nuclear Officer & President of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning the Salem Generating Station, Unit Nos. 1 and 2, are true to the best of my knowledge, information and belief.

L. R. Eliason

Subscribed and Sworn to before me

this 23rd day of June, 1995

Kimberly Jo Brown
Notary Public of New Jersey

KIMBERLY JO BROWN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires April 21, 1998

My Commission expires on _____

ATTACHMENT I - VIOLATIONS

VIOLATION A

Technical Specification 3.7.6 for Salem Unit 2 requires that control room emergency air conditioning shall be operable in all modes with at least two operable isolation dampers in each outside air intake duct. The Technical Specification 1.18 definition of OPERABILITY requires that, in order for a component to be considered capable of performing its intended function, all auxiliary equipment that is required for the component to perform its function is also capable of performing its related support function. The design of the control room emergency air conditioning dampers requires that either radiation monitor 2R1A or 2R1B be capable of initiating isolation of the dampers on high radiation in the control room emergency air conditioning ventilation intake duct. With no operable dampers, the licensee shall meet the requirements of Technical Specification 3.0.3, which requires that the licensee shall, within 1 hour, take actions to place the unit in at least hot standby within the next 6 hours, at least hot shutdown within the following 6 hours, and at least cold shutdown within the subsequent 24 hours.

Contrary to the above, from 9:20 a.m. on April 4, 1995, to 3:24 a.m. on April 5, 1995, with Salem Unit 2 in mode 1, the licensee blocked actuation of both 2R1A and 2R1B on high radiation in the control room air conditioning ventilation intake duct rendering the isolation dampers incapable of isolating on high radiation, and failed to take the actions required by Technical Specification 3.0.3.

THE REASON FOR THE VIOLATION

PSE&G does not dispute the violation.

DISCUSSION OF CIRCUMSTANCES

At 9:20 a.m. on April 4, 1995, technicians blocked the output of the control room area radiation monitor (2R1A) to conduct a scheduled surveillance. Each of the Salem units is equipped with two complementary control room radiation monitoring instruments which ensure that habitability is maintained. The R1A instrument monitors control room area radiation levels, the R1B instrument monitors control room ventilation intake duct process radiation levels. The R1A and R1B instruments function to realign Control Room ventilation to the appropriate operating mode when a high

radiation condition is detected by either instrument.

On January 27, 1995, operators blocked 2R1B due to voltage spiking which was causing spurious actuations. Maintenance completed repairs to 2R1B in March, 1995, but operators maintained it blocked to avoid further spurious actuations.

Subsequent blocking of 2R1A on April 4, rendered the control room emergency ventilation system inoperable since it would not automatically realign on a valid high radiation signal if required. (The ventilation system function to realign on other valid signals (e.g, automatic Safety Injection or manual actuation) remained unaffected.) At 3:24 a.m. on April 5, when operators recognized that both monitors (2R1A/2R1B) were in the blocked condition, they placed control room air in the recirculation mode and, by 1:00 p.m. on April 6, unblocked both radiation monitors.

As a result of the extended out-of-service time for 2R1B, and since procedures did not require technicians to insure that 2R1B was unblocked prior to beginning work on 2R1A, plant staff failed to maintain at least one OPERABLE radiation monitor as an input to the control room emergency air conditioning system. This was a violation of the requirements of Tech Spec (TS) 3.7.6 for operability of the control room emergency air conditioning system.

The root cause of this event has been attributed to:

- Personnel error (Nuclear Shift Supervisor and Nuclear Control Operator). Operations personnel failed to properly verify redundant channel operability and failed to adequately maintain administrative control of inoperable control room instrumentation.

Contributing factors include:

- Lack of information availability and understanding of the control room emergency air conditioning system design bases.

- Failure to properly restore a channel to an operable status upon retest completion.

- Lack of procedural guidance on operability requirements for RMS channels R1A and R1B.

- Inadequate Tech Spec and Tech Spec Interpretation guidance for inoperable control room RMS channels.

- Lack of management focus on returning the RMS channel to service in a timely manner which allowed 2R1B to remain inoperable for an excessive amount of time.

After this occurrence was recognized, PSE&G performed an Engineering Evaluation of these radiation monitoring instruments. For the majority of design basis accidents for which ventilation realignment is required, the ventilation system would have automatically realigned as intended (e.g., due to automatic Safety Injection actuation on an accident signal in unit 1 or unit 2, or due to a valid high radiation signal sensed by unit 1's equivalent radiation monitoring instruments (1R1A/1R1B)). Throughout the time that 2R1A/2R1B channels were blocked, the unit 1 instruments (1R1A/1R1B) remained OPERABLE.

For the remaining credible design basis radiological occurrences which would not result in automatic system realignment, operator action would be required. Crediting operator action for these instances is not unreasonable in that: 1) sufficient indications are available to ensure ready recognition of the event; and 2) mitigative actions could be completed in a timeframe commensurate with the anticipated progress of the event.

Based on the above, PSE&G concludes that the circumstances of this violation did not create the potential for a significant safety hazard.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

The personnel involved in blocking the second radiation monitoring channel (2R1A) have been appropriately disciplined in accordance with company personnel practices.

An Operability Determination has been completed which addresses the operability of the Control Area Air Conditioning system/Emergency Air Conditioning system at Salem Generating Station with one of the four (two per unit) Control Room Radiation Monitors out of service.

Procedural enhancements have been initiated as follows:

- An I&C channel calibration procedure revision request was generated to verify complementary/redundant channel operability when performing R1A/B calibrations. (I&C procedures that involve other RMS channels will be reviewed for similar changes, as described below.)

- The control room console logs have been revised to add channels 1R1A/B (2R1A/B) to verify operability for all modes (1 through 6).

- The Control Room Action Statement log has been revised to require logging of "tracking" action statements for inoperable equipment/instruments that have Tech Specs associated with them.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

- Instrumentation & Control (I&C) procedures that involve other RMS channels (which provide input signals to Tech Spec systems/components) will be reviewed to identify any revisions needed to ensure that redundant/complementary channel functionality is verified.

- Operations procedures which control the removal of multiple-channel components from service will be reviewed to identify any revisions needed to ensure that redundant/complementary component functionality is verified.

- The Control Room Emergency Air Conditioning system Tech Spec is under review for appropriate changes to incorporate RMS specifications as well as other equipment requirements to further clarify system operability requirements.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.

VIOLATION B

Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented and maintained covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33 requires that maintenance that can affect the performance of safety related equipment be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. Licensee Procedure NC.NA-AP.ZZ-0009, step 5.1.1.a requires procedures to control safety related activities and maintenance on security equipment, and step 5.7.1 requires that individuals perform work in accordance with the established work package; and procedure NC.NA-AP.ZZ-0023, **Scaffolding and Transient Loads Control**, provides instructions for controlling the erection and storage of scaffolding in safety related areas and requires that scaffolding in safety related areas have adequate clearances, cross-braces, restraints, and variance approval, and be removed in a timely manner following completion of maintenance.

Contrary to the above:

On April 26, 1995, plant staff performed hot spot flushing which affected the safety-related Refueling Water Storage Tank (RWST) and safety injection system without a procedure to control the activity;

On May 4, 1995, plant staff performed work on the safety-related no. 23 service water pump without a procedure or a work package;

On April 18, a security guard corrected a malfunctioning security door without a procedure or a work package;

On April 26, scaffolding installed in the vicinity of the no. 11 auxiliary feedwater pump (AFP) and the room cooler for the Salem unit 1 motor-driven AFP's did not have the required clearance, cross-bracing, restraints, or variance approval; and,

On May 1, scaffolding around the Salem Unit 2 containment fan cooler unit service water piping was not removed in a timely manner following completion of the work on January 25, 1995.

THE REASON FOR THE VIOLATION

PSE&G does not dispute the violation. Each of the five examples given in the violation are discussed separately below.

EXAMPLE 1 - HOT SPOT FLUSHING

DISCUSSION OF CIRCUMSTANCES

On April 28, 1995, a multi-disciplinary team was assembled to address the Auxiliary Building dose rates on Salem Unit 1. Initially, the team consisted of representatives from Operations, Radiation Protection, Station Planning, and System Engineering. After identifying radiation "hot spots," the team developed a plan which would attempt to flush these "hot spots," thus reducing local radiation levels. This plan included flushing two points located near drain elbows 1SJ177 & 1SJ179 in the safety-related Safety Injection (SI) system. These drain valves are situated downstream of the SJ45's (Residual Heat Removal (RHR) to SI system stop valve) and are on the suction side of the SI pumps.

The team discussed the use of a troubleshooting procedure and determined that the scope of work did not meet the criteria for using that type of procedure. The team chose to utilize a work standard to perform the task and referred to the work standard as a procedure. The work standard used to control the flushing evolution was developed by the Station Planning department.

The Team Leader directed water to be drained from the Unit 1 Refueling Water Storage Tank (RWST) to a floor drain in accordance with the work standard. The flush involved opening the drain valve 1SJ177 connection, located on the common suction header for the two SI pumps and downstream of the SJ45's. The activity was supervised by the Team Leader (a Salem licensed Reactor Operator (RO) representing the Operations department). The on-duty shift was aware of the task and authorized the work.

The flush evolution was controlled using a step-by-step work standard which required surveys by Radiation Protection. Though detailed, the work standard did not satisfy the criteria of an approved procedure to control work affecting a safety-related system. The work standard did not receive the required level of review to evaluate the impact that the flush could have had on the operability of the RWST or the SI system/pumps.

The decision to use a work standard was influenced by an error in judgement on the part of the Team Leader. The Team Leader considered the flushing evolution from the aspect of its effect on RWST level only. After discussions with System Engineering, it was determined that the maximum achievable flowrate during flushing could not exceed 20 to 25 gallons per minute and, as such, would not create a significant increase in RWST depletion rate. Also, the Team Leader considered the possible failure modes for the valves involved in the flush evolution. The Team Leader believed that only a drain valve failing to close would be of any concern. The work standard performed the draining with only one valve open at a time. It was recognized that subsequent isolation of a failed drain valve would render, at most, one SI train INOPERABLE. The work standard was written so as to permit the operators to terminate the flush evolution at any time they felt it necessary.

The root cause of this event has been attributed to:

- Personnel involved in the planning and performance of this activity did not realize that performing maintenance/tasks involving activities affecting structures, systems, and components (SSC's) designated as safety-related requires a procedure as recommended in Appendix "A" of Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation).

Contributing factors include:

- This work standard did not receive the same level of 10CFR50.59 applicability review as is normally applied to procedures.

- The team leader for the flushing process believed that RWST level was the only issue which potentially impacted operability of the affected safety-related systems.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

All other subsequent scheduled flushes associated with 1SJ177/179, using a work standard, have been cancelled.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

Procedure SC.OP-DD.ZZ-OD15(Q) "Use of Procedures" will be revised. The procedure will contain a step for personnel to evaluate/question task requirements which meet the criteria for using an implementing procedure.

Training will be provided on this event to Operations department personnel during both initial and requalification training (for licensed and non-licensed operators). This training will be in a "Lessons Learned" format and will emphasize management's expectations regarding NAP-1 requirements on the use of procedures for activities affecting safety-related systems, structures and components.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.

EXAMPLE 2 - 23 Service Water Pump Maintenance

PSE&G does not dispute that this example constitutes a violation. The following information is provided for clarification.

DISCUSSION OF CIRCUMSTANCES

During the NRC inspection, technicians were observed to be in the field working on a safety-related component (23 Service Water Pump) without proper written instructions. Specifically, the approved work package for the removal/reinstallation of the Service Water Pump motor was not at the jobsite during the field-fit work described below.

Nuclear Business Unit (NBU) procedures require both that written instructions be followed during work on safety-related equipment and that those instructions be at the jobsite to which they apply. This guidance is reinforced in NC-NA-AP.ZZ-0001(Q) "Nuclear Department Procedure System" and the NBU Work Standards Handbook, Section III.A.1.

During reinstallation of the 23 Service Water pump motor after corrective maintenance, technicians were assigned to install a modified motor lead junction box. This activity arose for two reasons. First, one of the motor leads had a damaged cable lug which was replaced. This slightly shortened the motor lead. Second, the original motor leads junction box was insufficiently sized to accommodate the repaired motor electrical lead lugs, such that there was inadequate space for re-terminating leads.

Under the existing work order to remove/reinstall the motor, a junction box (different from the original) was drawn from spares and was, at the direction of the cognizant Engineer, test-fit against the motor to determine if its use would be acceptable. Use of a different junction box required that a Design Change Package (DCP) be developed for the change to plant configuration.

To properly prepare the DCP, it was necessary that the new junction box (which was both heavier and larger than the original) be evaluated for use in a seismically qualified application. The technician assigned to replace the junction box determined that it was appropriate to test-fit the box, and then, after determining its suitability for the application, remove it so that any modifications (such as bolt hole placement, etc.) could be performed. The unit would then be weighed to provide the information needed for the seismic evaluation required to complete the DCP and permit installation.

As witnessed by an independent technician, only the top bolts of the junction box were threaded in (hand-tight) and the bottom bolts were loose. After the field fit was complete, the junction box was removed, pending issue of an approved DCP.

At the time of this field fit, the technician violated administrative procedures in that the approved Work Order package was not at the jobsite. Investigation by the Maintenance Senior Supervisor after the fact determined that the Work Order was with the job supervisor at the time the technician left the shop to obtain the replacement junction box. The job supervisor held the work package to continue DCP development with the System Engineer. The job supervisor then returned the Work Order package to the technician's work desk. At this time the technician proceeded to the job site for a field fit without the Work Order package.

The technician understood the expectation that the proper work instructions are required to be at the jobsite. However, it was believed that having the Work Order package was not required as this was only a field-fitting of the box, an activity which the technician considered a "field walkdown" of work to be performed and within the skill of the craft. The technician incorrectly believed that this was permitted within the guidelines of the Work Standards Handbook.

It should be noted that, throughout all the above described activities, the Service Water pump was considered INOPERABLE by the Operations department.

PSE&G attributes this violation of administrative requirements to the following:

- Inadequate communication between the technician and the job supervisor.

- Technical personnel were overly aggressive in trying to complete work in an expeditious fashion.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

Appropriate levels of discipline (consistent with company personnel policies) were provided to the technician and the supervisor for not completing work in accordance with the Work Standards Handbook.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

Training on this event will be provided to appropriate NBU personnel in a "Lessons Learned" format. The training will discuss the occurrence and will emphasize management's expectations regarding procedure compliance and adherence to the guidelines given in the Work Standards Handbook.

EXAMPLE 3 - SECURITY PERSONNEL CORRECTED A MALFUNCTIONING DOOR

PSE&G does not agree that the circumstances described below constitute a violation:

DISCUSSION OF CIRCUMSTANCES

On April 18, 1995, Security Door 331 experienced a door latch problem as a result of normal use. A security force supervisor responded to a reported problem with Door 331.

During an interview, the security supervisor indicated that she "turned the inside door knob a few times and pushed in the latch a couple of times." As part of her evaluation, the security supervisor did not remove or disassemble any components, nor did she use any tools. After trying to identify the source of the problem, Site Services/Site Protection was called to work on the door. In the meantime, the latch had stopped sticking and the problem could not be replicated.

PSE&G's policy is that Security Force personnel are not authorized to perform maintenance. However, we have determined that it is a basic patrol duty to confirm the operation and reliability of mechanical door components. This activity enables security personnel to make a preliminary assessment of potential problems. The observations by patrol personnel become the basis for writing System Failure Reports in accordance with Security Procedure SP12, "Security System Testing & Maintenance." This same procedure also requires locksets of vital area doors to be unlocked and re-locked weekly as a method to verify the continued functionality of these components.

The PSE&G Security Supervisor reviews System Failure Reports and submits Action Requests (AR's) under the provisions of NC.NA-AP.ZZ-0009(Q), "Work Control Process." As a result of the problem reported with Door 331, and the followup investigation into its operation, a priority Action Request (AR) was initiated to repair the lockset.

In response to the AR, the door latch was replaced later that evening. Investigative disassembly identified that parts were worn. The Site Services machinist who performed the maintenance on the door reported to the Security System Engineer that the latch manipulations described above did not impair the cause determination for the sticking lockset.

This example was characterized as a "safety-related maintenance" activity. As a point of further clarification, the security system itself is not classified as a safety-related plant system in accordance with Regulatory Guide 1.33, Appendix A.

PSE&G recognizes that this door satisfies a safety-related function. Specifically, it is a ventilation boundary for the Control complex ventilation envelope. However, as documented in an Engineering memo (REF: Salem Technical Engineering Memo # 95-093, dated April 12, 1995), the safety-related function of the door is unaffected by the functioning of the door latch. This conclusion was based on the combined effect of the door's orientation in conjunction with the Control complex being maintained at a positive pressure. PSE&G concludes that activities associated with the investigation and/or repair of the door latch mechanism did not constitute work on safety-related equipment.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

PSE&G recognizes the importance of precluding both the perception of and/or any actions of a Security Force member performing maintenance on <u>any</u> equipment. Therefore, the Security Force has been informed that performing maintenance upon or inappropriately manipulating any component of the security system is strictly prohibited.

Management has emphasized that equipment problems are to be reported through a System Failure Report, as a mechanism to prompt submittal of an AR. Diagnostic troubleshooting and maintenance are to be performed by the person assigned to work the AR.

In summary, to provide continued assurance regarding the operation of security doors, PSE&G's policy is that Security force personnel should be permitted to routinely check and assess the operation and reliability of mechanical door components.

EXAMPLE 4 - SCAFFOLDING NOT BUILT TO PROCEDURE STANDARDS

REASON FOR THE VIOLATION

PSE&G does not dispute the violation.

DISCUSSION OF CIRCUMSTANCES

On April 26, 1995, several nuclear workers erected a scaffold on the 84' elevation in the immediate vicinity of the Salem Unit 1 #11 Auxiliary Feed Pump (AFP). During a routine NRC resident inspection, this scaffold was found to be in violation of the construction standards given in NC.NA-AP.ZZ-0023(Q) "Scaffolding and Transient Loads Control" (NAP-23).

This scaffold had been built late in the afternoon on April 26th to facilitate work on Air Handling Unit 1VHE34 (a safety-related component). At the time of the NRC resident's inspection, the scaffold in question had not yet been inspected by the initiating supervisor nor was it accepted on the scaffold permit. Acceptance by the initiating supervisor is a prerequisite to scaffold use in accordance with NAP-23 and, as such, the scaffold was not authorized for use. The supervisor inspected the scaffold promptly after learning of the non-compliance issue and confirmed that the "as-built" scaffold was unsatisfactory.

During the supervisor's inspection, several violations of procedural requirements were found. These discrepancies were documented in Performance Review (PR) Process document #950426266. As soon as the discrepancies were identified, the initiating supervisor directed that the scaffold be disassembled and removed from the safety-related equipment area.

The next morning, after talking to the work crew which had built the scaffolding, it became clear that they did not have a thorough understanding of the requirements of NAP-23. The supervisor discovered that the nuclear workers had been trained in scaffold building, but not in the specifications of the governing administrative procedure. The supervisor spoke with several of the scaffold crews and found that they all thought they had been complying with the NAP-23 requirements.

PSE&G attributes this violation to the following:

- A programmatic weakness which placed excessive reliance on first-line supervisors to inspect, recognize and catch sub-standard scaffold construction. This process is inconsistent with PSE&G's "Four Barriers of Defense" model which relies on the implementing technical personnel as the first barrier to deficient quality performance.

- Inadequate training and qualification of scaffold construction workers with regard to procedural standards for construction and positioning of scaffolds in safety-related equipment areas.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

Immediate Actions - Short-Term Applicability

A single point of contact has been established in the Maintenance Department who is responsible for scaffolds used in the Salem station. He has control of scaffolds built at Salem by both PSE&G scaffold builders as well as being responsible for inspecting those built at Salem by contractor personnel. This point of contact will remain in place until PSE&G is satisfied that the Immediate Long-Term and future actions provided below are fully implemented and have effected the expected improvement in scaffold control.

Immediate Actions - Long-Term Applicability

The Operating Experience Feedback (OEF) training module was revised to include the NAP-23 procedural requirements relative to scaffold construction.

The supervisor spoke to the scaffold crews on the importance of building scaffolds that are not only safe but which conform to NAP-23 requirements.

Training will be provided to Operations department personnel on NAP-23 requirements for scaffold construction. This training will emphasize management's expectations for field personnel to routinely assess installed scaffolding for its potential to affect plant equipment.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The NAP-23 procedural requirements will be incorporated into the Scaffold training module.

The work order generation process will be modified as follows:

For work orders which require scaffolding, the work order package will contain a summary of the acceptance criteria given in NAP-23. This will be used by scaffold construction personnel, while work is in progress, to ensure compliance with the NAP-23 requirements.

EXAMPLE 5 - Scaffolding Not Removed in a Timely Fashion

REASON FOR THE VIOLATION

PSE&G does not dispute the violation.

DISCUSSION OF CIRCUMSTANCES

Scaffolding was erected in Salem Unit 2 Auxiliary Building (Room 25439 - 78' elevation) in the vicinity of the Service Water supply piping to the Containment Fan Cooling Units (safety-related equipment). This scaffolding was built to support work being conducted by the "Pressure Resistant Barrier Review Project Team." This group's work included a review of numerous pressure resistant barriers in this room. This work was conducted under a single work order which was comprised of multiple work activities.

During a routine NRC Resident inspection, conducted on May 1, 1995, it was observed that this scaffolding remained in place after the work for which it had apparently been installed was completed (the work activity in question was completed on January 25, 1995). This observation, though accurate, does not encompass all data relative to the scaffolding of concern.

On January 31, 1995, the penetration seal work completed under this activity was accepted by Station Quality Assurance (QA). On February 1, 1995, the project team recognized the need to remove the scaffolding but other work priorities resulted in removal being delayed. On February 10, 1995, the project team identified that the same scaffolding, if modified, could be used to conduct additional work in the room, specifically, to inspect and install seals in that room's north wall. Thus, a determination was made that the scaffolding would remain in place pending the start of additional work activities. The additional inspection and installation work was subsequently delayed by other work priorities. As such, the scaffolding modifications needed to support the work on the north wall were not accomplished until May 4, 1995 (after the NRC inspection). Work on the room's north wall was completed and the scaffolding was removed on May 15, 1995.

The NRC inspection of May 1, 1995 identified two concerns. These were: 1) that scaffolding in safety-related areas be removed in a timely manner; and 2) that the required variance form was not properly completed to document the acceptability of the "as-built" scaffolding.

PSE&G acknowledges that, during the time the scaffolding was installed, responsible personnel failed to conduct and document monthly inspections of scaffolding in this safety-related area, as required by NAP-23. PSE&G also agrees that the scaffolding in this instance should have, upon work completion, either been removed and reinstalled at a later date, consistent with work prioritization and available resources, or it should have been subjected to routine inspections which confirmed the continued need for and acceptability of the scaffolding in that location.

However, PSE&G does not agree that the variance form was not properly completed. The Civil Engineer responsible for inspecting the scaffold signed and accepted the variance form, as required by NAP-23. PSE&G attributes this violation to a lack of attention to detail and incorrect interpretation of NAP-23 requirements.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

All identified deficiencies with this scaffold were resolved by May 3, 1995.

This event was discussed and reinforced with Projects personnel at various project meetings.

The Project Daily Turnover was modified to inspect and sign-off on all scaffolding monthly.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The Scaffolding Coordinator will be notified prior to erection or removal of scaffolding.

Scaffolding which is expected to be installed for extended periods will have a reason noted on the Job Information Tag. This information will be shared with Work Control.

PSE&G recognizes that the procedure does not provide specific direction regarding the documentation of variances. As such, different Engineers apply their own standards as to what they include on the variance form. Some Engineers identify each variance, some identify only that all variances are accepted, and others simply sign the form, providing tacit acceptance of the variances. The Civil Engineering Supervisor will issue a

clarification statement regarding the policy and expectations relative to completion of the Scaffolding Variation Request Form. This policy will be issued to engineers authorized to accept scaffold variances. It will emphasize that specific deviations need not be itemized on the form, but that the form must contain a statement indicating that the cognizant engineer has accepted the variations.

Input from Maintenance Services personnel will be solicited during work schedule development and approval to ensure maximum use of installed scaffolding and to prevent similar occurrences.

Training on this event will be provided to appropriate NBU personnel in a "Lessons Learned" format. The training will discuss the occurrence and will emphasize management's expectations regarding procedure compliance.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.

VIOLATION C

10 CFR 50.59 requires that changes to the plant, as described in the Updated Final Safety Analysis Report (UFSAR), be evaluated to determine that they do not constitute an Unreviewed Safety Question (USQ), and that records of changes must include a written safety evaluation which provides the bases for the determination that the change does not involve an USQ.

Contrary to the above:

A 10 CFR 50.59 applicability review, dated April 7, 1995, failed to provide an adequate basis for the determination that a degraded 1A-125VDC battery cell (no. 35) post seal did not constitute an Unresolved Safety Question;

A Safety Evaluation, dated April 3, 1995, failed to provide the basis for the determination that use of a Service Water Intake area exhaust fan motor, used to replace a fan motor in the no. 22 RHR room cooler unit did not constitute an Unreviewed Safety Question.

THE REASON FOR THE VIOLATION

PSE&G does not dispute the violation. Each of the examples given in the violation are discussed separately below.

EXAMPLE 1 - BATTERY POST SEAL DEGRADATION

DISCUSSION OF CIRCUMSTANCES

On April 5, 1995, a System Manager routine battery system health walkdown identified an approximately 3/4" piece of apparently foreign material inside cell #35 of the subject battery bank. It was determined to be a small piece of the positive post "seal" material (initially thought to be lead, later determined to be rubber), used to ensure that interior cell acid does not affect the exterior current-carrying post. That same day, information on cell construction, internal details, and manufacturing expertise were also obtained from the battery manufacturer. This information was requested to assist in PSE&G's determination of the potential impact of the finding on the battery's ability to perform its design function.

Initial review with the Original Equipment Manufacturer (O.E.M.) determined that the material did not pose any operating limitations on the cell's ability to perform its design function. This was based on the fact that this material was only a small

section of the existing seal, enough of the seal remained to protect the post, and the seal material inside the cell did not affect the electrical or chemical properties of the cell. The manufacturer further explained that the seal material could have become loosened as a result of manufacturing stresses, shipment vibration, or installation and testing movement, and dislodged during routine maintenance.

In light of the above information, the initial 10CFR50.59 Applicability Review was performed and issued on April 7, 1995. This review concluded that the condition did not represent a degradation outside the design intent and continued use of the cell was acceptable with routine monitoring. The Applicability Review also determined that the cell post seal degradation was not a change to the facility as described in the UFSAR.

The violation manifests itself in the description, discussion, and consequent conclusion contained in the subject Applicability Review. PSE&G agrees (as clarified below) that the text therein does not independently or adequately demonstrate the stated conclusion.

The root cause of this event has been attributed to individual and management inattention to detail in the preparation and approval of the Applicability Review. Interviews with individuals in the preparation, review, and approval cycle of the subject 10CFR50.59 Applicability Review revealed that technical discussions, interactions between qualified individuals, and a proper questioning thought process, did, in fact, occur during the preparation of the document. However, due possibly to the fact that this was considered to be a relatively routine condition for a lead calcium battery possessing some years of service, further compounded by O.E.M. expertise, the proper documentation of this thought process, its questions, and their answers did not occur.

PSE&G does not dispute the violation and recognizes the need for improved quality and documentation in the review process. However, we have reconfirmed that the conclusion in the original Applicability Review was sound. A revision to the Applicability Review to improve its quality and further demonstrate its conclusions is discussed in the Corrective Actions below.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

The 10CFR50.59 Applicability Review for the original finding has been revised. This revision did not alter the conclusion of the original, but did, in fact, further demonstrate and substantiate the conclusion that the condition being evaluated "did not change the facility as described in the SAR." This analysis was independently validated by an augmented engineering and quality

team, specifically established to assess the quality of these documents.

The individual cell has since been removed from service and replaced with a new cell. The old cell will be destructively inspected at the O.E.M. shop, for a further understanding of the post seal, and its potential for future impact.

All cells in this and other safety-related batteries have been visually examined by PSE&G's System Manager with support from the O.E.M. field service representative. This was completed on April 12, 1995. No further post seal deterioration was discovered.

The individuals involved in the preparation and approval of the original Applicability Review have been counselled regarding the need for improved quality in this area.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

Training will be provided to appropriate personnel on this Applicability Review, its weaknesses, and its areas requiring improvement. This training will be in a "Lessons Learned" format and will emphasize management's expectations regarding the documentation required to support changes to plant configuration. This will provide an improved general understanding and a basis for overall improvement in the quality of Applicability Reviews and Safety Evaluations.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.

EXAMPLE 2 - RHR ROOM COOLER MOTOR REPLACEMENT

DISCUSSION OF CIRCUMSTANCES

Two weaknesses were identified relative to the "No USQ" determination in the 10CFR50.59 Safety Evaluation for Deficiency Report (DR) # 950314167. This DR was written to address the installation/replacement of the 22 Residual Heat Removal (RHR) Room Cooling fan motor. The weaknesses identified were: 1) the Safety Evaluation did not "clearly address" the differences between the motors (original and replacement) with respect to seismic and environmental issues; and 2) the Safety Evaluation placed improper reliance on redundant trains of safety-related equipment for determination of "no increase in consequences of an accident previously identified in the UFSAR." In addition, the Notice of Violation cited the process by which the motor was changed out without performing a safety evaluation.

PSE&G does not dispute that the actions taken which permitted this motor changeout to occur without a formal safety evaluation did not comply with regulatory requirements, as described below:

In 1989, an Allis-Chalmers motor for the 22 RHR Room Cooling fan was replaced with a Westinghouse spare motor (via Work Order # 890731090). The Westinghouse motor had been procured for use as a Service Water Intake (SWI) area fan motor. Inasmuch as no documentation can be found, an engineering analysis to justify an "equivalent replacement" may not have been performed. Due to the time lapse between when this occurred and the present, the circumstances surrounding this event cannot be accurately determined.

In 1986, a complete walkdown of all EQ components in harsh environments was performed. Subsequently, starting in 1990, the Environmental Qualification (EQ) group conducted additional walkdowns of Salem's EQ components in harsh environments. The subsequent walkdowns were limited only in that they did not include components which were inaccessible, in high radiation, high contamination or high heat stress areas. The components which were checked represent the majority of Salem's safety-related electrical equipment in harsh environments. The walkdown compared nameplate data to the Managed Maintenance Information System (MMIS) data for each application. The walkdown found no instances in which the installed component did not match the MMIS data for that application. This walkdown did not detect the 22 RHR Room Cooler motor anomaly because the motor is enclosed in the cooler assembly (inaccessible).

However, upon learning that the 22 RHR Room Cooler motor was replaced via a maintenance work order, a data search of the work order history system was conducted. This search verified that no other RHR Room Cooler work had been performed during which an inappropriate component installation could have occurred. This data supports PSE&G's conclusion that, with regard to environmentally qualified equipment, there is reasonable assurance that this occurrence was an isolated instance of inadequate configuration control.

PSE&G does not agree, however, with the finding that the 10CFR50.59 Safety Evaluation used to disposition this DR was inadequate with regard to addressing seismic and environmental qualification (EQ) issues, as further described:

The original Safety Evaluation (Rev. 0) was presented to the Station's Safety Operations Review Committee (SORC). In its original form, the Safety Evaluation addressed both the seismic and EQ issues, but did so through "incorporation by reference" to other Engineering documentation. The Safety Evaluation was later revised to include SORC'S comments. That revision also incorporated the evaluation of the seismic and EQ issues explicitly (vice by reference). The following information summarizes the information which was referenced in the original Safety Evaluation regarding Seismic and EQ issues.

Seismic Qualification

Both the original and revised Safety Evaluations provided a conclusion of our seismic evaluation (as noted above) in determining the adequacy of the replaced motor to withstand the postulated acceleration levels in its new application. This was annotated via Reference 11 in the original 10CFR50.59 Safety Evaluation.

The seismic engineer in reaching this conclusion did consider the differences between the motors in terms of size, weight, shape, and method of mounting.

The motor data sheet has confirmed that the Westinghouse motor has a physical outline similar to the Allis-Chalmers motor, since it has the same frame size and horsepower. However, it is 30 lb. heavier. Review of the seismic analysis of the fan assembly, performed by the Vendor, has indicated that the RHR room cooler seismic analysis generically qualified a series of room cooler assemblies with motor weights up to 50 lb. heavier than the original Allis-Chalmers motor. The mounting configuration has not changed. Thus, the heavier Westinghouse motor is bounded by the original assembly analysis and the operability of the assembly during a seismic event is not compromised.

The seismic qualification of the Westinghouse motor is addressed by the vendor. The report qualifies 215T, 5 hp motors to seismic acceleration levels of 2.5 G's horizontally and 0.84 G's vertically which are much higher than the required levels of 0.2G's. The motor is rigidly mounted to the assembly which is also classified as rigid equipment.

Based on the above, we have determined that the Westinghouse motor is adequate to withstand the postulated design bases earthquake.

Environmental Qualification

The Safety Evaluation in section 3.2 indicates that both normal and accident conditions have been considered in determining equipment qualified life. In addition, the two referenced memos in the Safety Evaluation provide adequate details to demonstrate the capability of the replacement motor to withstand a harsh environment (specifically, elevated radiation levels). In determining equipment qualified life, it is required to demonstrate that the equipment is capable of performing its safety function at the end of its qualified life. (References 11 and 12 in the original 10CFR50.59 Safety Evaluation.)

Based on the discussion presented in the safety evaluation, we have determined that the Westinghouse motor is adequate to perform its function when subjected to the postulated normal and accident environments.

Reliance on Redundant Trains of Safety-Related Equipment

The finding that the reliance on redundant trains of safety-related equipment did not form a basis for determining that use of the SWI motor did not increase the consequences of an accident previously identified in the UFSAR was addressed by the issuance of Rev. 1 to the 10CFR50.59 evaluation. PSE&G agrees that this is not proper justification for operability and the statement was deleted. Rev. 1 of the Safety Evaluation was approved without the inappropriate statement.

Conclusion

The 10CFR50.59 Safety Evaluation, Revision 1, adequately justifies the conclusion that a USQ is not involved with the installation of the SWI motor into the 22 RHR Room Cooler for the period of time specified.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

For the equipment which was not included in the above described EQ walkdown (i.e., components which are inaccessible or located in high heat stress, high contamination or high radiation areas), PSE&G will perform a review of work orders since 1989 to ensure that no other work was performed that could have resulted in an inappropriate component installation.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.

ATTACHMENT II - DEVIATION

During an NRC inspection conducted on March 23, 1995 - May 6, 1995, a deviation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the deviation is listed below:

The basis for Salem Unit 1 Technical Specification 3.8.1.1 states that the surveillance requirements for demonstrating operability of the Emergency Diesel Generators (EDG) are based on the recommendations of Regulatory Guide (RG) 1.9, and RG 1.108. RG 1.108 (Rev. 1, August 1977), a licensee commitment, requires nonconcurrent testing of redundant Emergency Diesel Generators during normal plant operation.

Contrary to the above, at least two EDG output breakers were simultaneously closed from 4:19 a.m. until 5:22 a.m. on May 5, 1995, to support concurrent testing of the 1A and 1C Emergency Diesel Generators.

REASON FOR THE DEVIATION

PSE&G does not dispute the deviation.

DISCUSSION OF CIRCUMSTANCES

At approximately 0500 hours on May 4, 1995, 1B EDG was removed from service and cleared and tagged. This was done to support routine preventive maintenance (PM), which included manual barring and replacement of the EDG exciter fuses. The expected duration of this PM was less than four (4) hours. Minor equipment problems encountered during maintenance delayed return of the EDG to service. Further, it was discovered that the EDG exciter cabinet was missing bolts and the EDG local temperature panel fuse had blown upon restoration of the EDG. These problems were resolved and, at approximately 0230 hours on May 5, 1995, the required repairs to 1B EDG were completed.

At approximately 0300 hours (same day) the Operations Nuclear Shift Supervisor (NSS) determined that the repairs to resolve the encountered problems had changed the maintenance performed on 1B EDG to "other than PM" (i.e., it had become "corrective maintenance" (CM)). The determination of CM necessitated operability testing of the remaining EDG's in accordance with Tech Spec requirements. In addition, it was conservatively assumed that the CM had begun from when the EDG was originally removed from service at 0500 hours on May 4.

With one EDG INOPERABLE (for other than preventive maintenance), Technical Specification (TS) 3.8.1.1 requires OPERABILITY testing of the remaining two EDG's within 24 hours. Based upon the determination that the maintenance was "other than PM," the Unit 1 Nuclear Shift Supervisor (NSS) assumed that, by 0500 hours on May 5th, successful OPERABILITY testing of 1A and 1C EDG's was required.

As a consequence of the erroneous assumption of when the ACTION STATEMENT clock started for the 1B EDG (i.e., determining that the 1B EDG had become "INOPERABLE due to other than PM," nearly 22 hours earlier), the Operations shift assumed that the most timely approach to meet the ACTION statement constraints for the required testing was to perform concurrent OPERABILITY testing on the EDG's.

This occurrence is attributed to personnel error. Regulatory Guide (RG) 1.108 is listed in Section 3A of the Updated Final Safety Analysis Report (UFSAR) and is incorporated by reference into the TS 3.8.1.1 Bases. The involved Operations shift was not aware of the RG 1.108 recommendation to independently test the EDG's.

This lack of awareness is attributed to a lack of explicit TS 3.8.1.1 or procedure guidance on the content of the RG 1.108 recommendations. The RG 1.108 incorporation by reference in the Tech Spec Bases only identifies that "Surveillance Requirements for demonstrating . . . OPERABILITY . . . are based upon the recommendations of . . . Regulatory Guide 1.108." This incorporation does not delineate specific actions or prohibited activities with regard to that testing. In addition, there was no procedural prohibition against paralleling more than one EDG at a time. As well, inadequate guidance existed with regard to the 24 hour ACTION statement clock for verifying EDG OPERABILITY beginning at the time it is determined that the maintenance is "other than PM," as well as what constitutes PM and "other than PM."

Based upon the aforementioned, the Operations shift interpreted that OPERABILITY testing of multiple EDG's was required by May 5th to comply with Technical Specifications.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN

Procedure changes have been made to prohibit operation of more than one EDG paralleled to the electrical grid at any one time, consistent with the recommendations of Regulatory Guide 1.108.

Licensed Operations personnel have received guidance to understand what constitutes PM and "other than PM," in order to improve determination of when EDG operability demonstration is required.

Licensed Operations personnel have received guidance to ensure their understanding of TS 3.8.1.1 with regard to action statement requirements for EDG testing if one or more EDG's are inoperable. This included direction on timely initiation of EDG testing.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FURTHER DEVIATIONS

A review will be conducted to verify that other RG 1.108 recommendations are adequately addressed within plant procedures.

This occurrence will be reviewed during upcoming licensed operator training.

Training will be provided on this event to appropriate personnel in a "Lessons Learned" format. Management will emphasize the need to keep Operations personnel informed when work scope or activities differ from that which had been communicated to the Work Control Center (WCC) when the work activity was authorized.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PSE&G is in full compliance.