April 9, 1999

Mr. Harold W. Keiser
President and Chief Nuclear Officer
Nuclear Business Unit
Public Service Electric and Gas Company
P.O. Box 236
Hancocks Bridge, New Jersey 08038

SUBJECT: PLANT PERFORMANCE REVIEW - SALEM

On February 10, 1999, the NRC staff completed a Plant Performance Review (PPR) of the Salem Generating Station. The staff conducts these reviews for all operating nuclear power plants to develop an integrated understanding of safety performance. The results are used by NRC management to facilitate planning and allocation of inspection resources. PPRs examine information since the last assessment of licensee performance to evaluate long term trends, but emphasize the last six months to ensure that the assessments reflect current performance. PPRs also provide NRC management with a current summary of licensee performance and serve as inputs to the NRC's senior management meeting (SMM) reviews. The PPR for Salem involved the participation of all technical divisions in a detailed evaluation of inspection results and safety performance information for the period of April 1998 through January 1999. The NRC's most recent summary of licensee performance was provided in a letter of September 15, 1998, and was discussed in a public meeting with you on September 30, 1998.

As discussed in the NRC's Administrative Letter 98-07 of October 2, 1998, the PPR provides an assessment of licensee performance during an interim period that the NRC has suspended its Systematic Assessment of Licensee Performance (SALP) program. The NRC suspended its SALP program to complete a review of its processes for assessing performance at nuclear power plants. At the end of the review period, the NRC will decide whether to resume the SALP program or terminate it in favor of another process. The NRC plans to maintain direct communication with you on assessed plant performance on a minimum frequency of two years. This will include a meeting open to public observation to be scheduled by my staff. Additionally, your facility was selected to be a pilot plant for the new reactor oversight process. We will notify you of any associated changes to planned inspections by separate correspondence in the near future. Discussed below please find an operational history summary from this assessment period followed by our assessment of plant performance derived from the PPR process.

During this assessment period, Salem Unit 1 restarted in April 1998 from an extended shutdown and operated continuously until February 28, 1999, when the inadvertent draining of turbine lube oil led to a reactor trip. Salem Unit 2 had three forced outages, totaling four weeks, to address emergent equipment problems related to service water, pressurizer safety valves, and a reactor coolant pump seal. Salem Unit 2 had no reactor trips.

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Overall performance at the Salem station was acceptable. Given the significant challenges PSE&G faced in recovering both units from extended shutdowns, operational results were sound, and management demonstrated that high standards were in place. However, a number of operational events resulted from personnel errors, including two declared Unusual Events involving a reactor coolant system leak and a loss of control room annunciators. Some work execution problems occurred that adversely impacted equipment operability, further highlighting human performance inconsistencies. Material condition of the plant was generally good. Although the number of items in the corrective maintenance work backlog declined somewhat, it remained large and continued to be an area of active management involvement. Engineering supported day-to-day operations effectively. Management oversight was strong and included critical review of ongoing plant activities. Plant problems were promptly identified and corrected, and the corrective action program continued to be effective. Self-assessment activities were thorough and self-critical.

Overall, the plants were operated well, with one reactor trip between the two plants. Operating personnel exhibited high operational standards and a sound safety ethic, including conservative decision making, generally effective command of control room activities, and good teamwork. Control room deficiencies and operator workarounds were appropriately tracked to resolution with the overall number at a reasonably low level. Following the extended outages, operators performed well returning the units to normal operation and during subsequent routine and transient operations. However, in December 1998 a reactor coolant system leak developed during a startup from a Unit 2 forced outage as a result of weak control room supervision, an inadequate procedure and an operator error. Also, a Unit 1 reactor trip resulted from improper draining of turbine lube oil due to unfamiliarity with operation of an isolation valve. Because Salem is one of the voluntary pilot plants for the NRC's new assessment program, the associated baseline inspection program (being developed) will affect inspections beginning in June 1999. Until then, we plan to perform the normal NRC core inspection with emphasis on your corrective actions to prevent personnel errors.

Maintenance activities continued to be performed acceptably. The material condition of the plant was good, as evidenced by generally uneventful plant operation. Maintenance Rule implementation was appropriate and risk assessments for on-line work were sound. However, the backlog of corrective maintenance activities remained large. On occasion, equipment operability was impacted by work execution problems. While this is a continuing issue, the errors did not typically result in plant transients (e.g., the loss of control room overhead annunciators). The organization, however, remained challenged by problems in the maintenance work control process, by the large backlog of corrective maintenance activities, and by frequent unplanned equipment outages resulting in technical specification action statement entries. We plan to perform the normal NRC core inspection with additional emphasis on work control. The new baseline inspection program will affect inspections beginning in June 1999.

Strong oversight of station engineering activities was evident with notable improvements in the implementation of engineering programs. Engineering support of plant operations was good, and the performance of maintenance and system engineering functions also improved. Design engineering activities were performed acceptably, although some problems were found involving

design evaluations. Resolutions associated with identified problems were generally appropriate, though a longstanding fire wrap issue was still being addressed. Backlog reduction efforts continued. We plan to perform the normal NRC core inspection with emphasis on backlog reduction. In addition, an initiative inspection is planned to review progress on the fire wrap issue. The baseline inspection program also will affect inspections beginning in June 1999.

Performance in the plant support areas continued to be good. Radiological protection programs were strong, including control of high radiation areas, training and radwaste transportation. PSE&G maintained and implemented the radiological environmental monitoring program well, though minor procedural deficiencies existed in sample collection processes. Plant security programs continued to be appropriately implemented and maintained. Station performance in emergency preparedness was generally good, though the emergency classification of the December 1998 Unusual Event was not timely. We plan to perform the normal NRC core inspection. The baseline inspection program will affect inspections beginning in June 1999.

Enclosure 1 contains a historical listing of plant issues, referred to as the Plant Issues Matrix (PIM), that were considered during this PPR process to arrive at an integrated view of performance trends. You will find that the PIM is in two different formats due to a program change that was effective on October 1, 1998. The PIM includes only items from inspection reports or other docketed correspondence between the NRC and Public Service Electric and Gas Company. The NRC does not attempt to document all aspects of licensee programs and performance that may be functioning appropriately. Rather, the NRC only documents issues that the NRC believes warrant management attention or represent noteworthy aspects of performance. In addition, the PPR may also have considered some predecisional and draft material that does not appear in the attached PIM, including observations from events and inspections that have occurred since the last NRC inspection report was issued, but had not yet received full NRC review and consideration. This material will be placed in the PDR as part of the normal issuance of NRC inspection reports and our other correspondence.

This letter advises you of our planned inspection effort resulting from the PPR. It is provided to minimize the resource impact on your staff and to allow for scheduling conflicts and personnel availability to be resolved in advance of inspector arrival onsite. Enclosure 2 details our inspection plan for the next few months, beyond which the pilot program will address. The rationale or basis for each inspection outside the core inspection program is provided so that you are aware of the reason for emphasis in these program areas. Resident inspections are not listed due to their ongoing and continuous nature.

We will inform you of any changes to the inspection plan. If you have any questions, please contact Mr. Glenn Meyer at (610) 337- 5211.

Sincerely,

Original Signed By:

A. Randolph Blough, Director
Reactor Projects Branch 3
Division of Reactor Projects

Docket No. 50-354
License No. NPF-57

Enclosures: Plant Issues Matrix
Inspection Plan

cc w/encl:
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E. Simpson, Senior Vice President - Nuclear Engineering
E. Salowitz, Director - Nuclear Business Support
A. F. Kirby, III, External Operations - Nuclear, Delmarva Power & Light Co.
D.Garchow, Acting General Manager - Salem Operations
J. McMahon, Director - QA/Nuclear Training/Emergency Preparedness
D. Powell, Director, Licensing, Regulation and Fuels
R. Kankus, Joint Owner Affairs
A. Tapert, Program Administrator
J. J. Keenan, Esquire
M. J. Wetterhahn, Esquire
J. A. Isabella, Manager, Joint Generation
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NAME	LHarrison		GMeyer		ARBlough					
DATE	04/08/99		04/8/99		04/9/99		04/ /99		04/ /99	

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United States Nuclear Regulatory Commission

PLANT ISSUE MATRIX

By Primary Functional Area

Date: 04/06/1999
Time: 08:24:47

Region I
SALEM

Date	Source	Functional Area	ID	Type	Template Codes	Item Description
12/21/1998	1998011	Pri: OPS Sec:	NRC	POS	Pri: 1A Sec: 3A Ter:	Observed operator performance was generally good. Operators responded promptly and appropriately to the unplanned trip of a Unit 2 steam generator feed pump. Additionally, Unit 2 shutdown activities to make repairs to the No. 21 reactor coolant pump seal were well controlled.
12/21/1998	1998011	Pri: OPS Sec:	NRC	POS	Pri: 5B Sec: Ter:	Operational Experience department personnel reviewed the selected NRC and industry communications in a timely manner, and thoroughly communicated the information to the appropriate station departments. PSE&G's actions for selected risk-significant NRC communications were effective.
11/19/1998	1998009	Pri: OPS Sec:	NRC	NEG	Pri: 2B Sec: Ter:	Inadequate procedure guidance resulted in the inadvertent actuation of engineered safety features equipment during surveillance testing. PSE&G's corrective actions to address this event were adequate. (Reference LER 50-311/98-11)
11/19/1998	1998009	Pri: OPS Sec:	NRC	NEG	Pri: 2B Sec: 5A Ter:	The main coolant system leak air particulate monitor was not functional for about five days, which was not known by PSE&G personnel. Although the monitor is not safety-related, this event demonstrated weak control of important to safety equipment status.
11/19/1998	1998009	Pri: OPS Sec:	NRC	NEG	Pri: 3B Sec: 2B Ter:	Operator misinterpretation of procedural guidance resulted in an inoperable control room emergency air conditioning system train. PSE&G's immediate and planned corrective actions for this event were adequate. (Reference LER 50-272/98-13)
11/19/1998	1998009	Pri: OPS Sec:	NRC	POS	Pri: 1A Sec: 3A Ter: 3B	Observed operator performance was generally good. The decision to isolate the Unit 1 and 2 positive displacement pumps during an evaluation of emergency core cooling system leakage outside containment was conservative. The detection of the No. 23 steam generator tube leak showed good attention to detail, and PSE&G's actions in response to the leak were reasonable.
11/19/1998	1998009	Pri: OPS Sec:	NRC	POS	Pri: 5B Sec: 5C Ter:	The Station Operations Review Committee continued to provide effective oversight of Salem operations and the Corrective Action Review Board appropriately challenged the quality of corrective actions for previously identified issues. There was a need to provide expectations to board presenters to ensure all necessary information was available for discussion.
10/05/1998	1998008	Pri: OPS Sec:	NRC	NEG	Pri: 3A Sec: Ter:	Control room operators were slow to identify improperly established control rod insertion limit monitor setpoints. PSE&G's corrective actions to address this self-identified issue were adequate.
10/05/1998	1998008	Pri: OPS Sec:	NRC	POS	Pri: 1A Sec: 2A Ter: 3A	Operator performance during routine control room observations and plant tours was generally good. Plant equipment responded as designed during two unplanned events, specifically a loss of the 2A 4160 VAC vital bus and the trip of the no. 12 steam generator feed pump.

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10/05/1998	1998008	Pri: OPS Sec:	NRC	POS	Pri: 2B Sec: 1C Ter: 4B	Operators properly implemented PSE&G's technical specification required "Primary Coolant Sources Outside Containment" program and promptly initiated corrective actions when conditions were identified which challenged the acceptable leakage limits established therein. The program itself was adequate with only one minor issue involving program implementation identified. An operability determination developed to account for plant leakage determined to be in excess of program requirements had a sound basis. (Ref: LER 50-311/98-10)
10/05/1998	1998008	Pri: OPS Sec:	NRC	POS	Pri: 3B Sec: Ter:	Operators demonstrated good performance during the conduct of a periodic requalification exam scenario in the control room simulator. Examiners were objective and completed a critical assessment of individual and crew performance.
12/21/1998	1998011-01	Pri: MAINT Sec:	NRC	VIO IV	Pri: 3A Sec: 3B Ter:	PSE&G personnel failed to evaluate the potential impact of connecting non-safety-related test equipment on all four operable channels of the reactor protection system, thereby potentially compromising the system's design bases. Corrective actions for previous issues identified by the NRC involving the similar connections of temporary equipment to operable safety-related systems were ineffective in preventing the occurrence of the event described in the subject licensee event report. PSE&G's root cause evaluation thoroughly examined the issues. As a result, PSE&G personnel developed extensive corrective actions. A violation of 10 CFR 50, Appendix B, Crit. XVI, Corrective Action resulted. (Ref. LER 50-272/98-15)
11/19/1998	1998009	Pri: MAINT Sec:	NRC	NEG	Pri: 1C Sec: 3A Ter: 3C	The multiple leak repairs performed on feedwater containment isolation valve 12BF22 demonstrated poor planning and communications between departments, and weak management oversight. Additionally, overall communication with the NRC was weak considering the relative importance of the valve.
11/19/1998	1998009	Pri: MAINT Sec:	NRC	NEG	Pri: 2B Sec: Ter:	The 1A1 125 volt DC battery charger was found to be inoperable due to an incorrect setting of the high voltage shutdown relay, resulting in an unplanned entry into a seven-day technical specification action statement. The other two Unit 1 chargers and one Unit 2 charger were also set incorrectly. This event was self-revealing, but had no safety consequence, and corrective actions were adequate.
11/19/1998	1998009	Pri: MAINT Sec:	NRC	NEG	Pri: 3A Sec: Ter:	Inspectors noted several weaknesses in preventive maintenance activities performed on the 13 auxiliary feedwater (AFW) pump. PSE&G documented these issues in action requests and immediate corrective actions were adequate. The 13 AFW pump surveillance test was adequate to test pump discharge pressure, and showed satisfactory results.
11/19/1998	1998009	Pri: MAINT Sec:	NRC	NEG	Pri: 3C Sec: 5B Ter: 5C	The inspectors found that the backlog of outstanding corrective maintenance activities remained high and no significant improvement had been made in reducing it. The inspectors concluded that the program has been slowly evolving and required additional management oversight to ensure improvement. Performance indicators were useful and the Salem Planning and Scheduling department had established an effective self-assessment program.
11/19/1998	1998009-03	Pri: MAINT Sec:	NRC	VIO IV	Pri: 3A Sec: Ter:	PSE&G implemented reasonable corrective actions for a self-revealing event involving a failure by maintenance technicians to restore the 22 auxiliary feed water pump discharge pressure transmitter to service following a calibration. However, largely because of the repetitive nature of this issue, this failure resulted in a violation of technical specification 6.8.1 for failure to implement procedures. (Reference LER 50-311/98-12)

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Region I
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12/21/1998	1998011-02	Pri: ENG Sec:	NRC	NCV	Pri: 2B Sec: Ter:	Following self-identification, PSE&G appropriately documented and corrected a deficiency involving the use of a non-safety-related spring charging motor in a safety-related circuit breaker, which resulted in a non-cited violation.
11/19/1998	1998009	Pri: ENG Sec:	NRC	NEG	Pri: 5C Sec: Ter:	The licensee's response to a question associated with the potential for age-related seal failures of CO2 valves was weak. The licensee was slow in addressing this issue, which was first identified at Hope Creek in September 1997. When the licensee confirmed the applicability of this failure to Salem, the licensee did not assure that the CO2 valves would perform as designed. Subsequent to NRC questioning, the licensee developed an analysis that provided the bases for assuring that the valves would perform as designed. The licensee indicated that steps had been initiated to expedite replacement and examination of additional valves during the next work week window. Although this action appeared reasonable, this issue was left unresolved pending NRC review of the results of the licensee's examination of these valves.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 2A Sec: Ter:	PSE&G personnel were adequately monitoring EDG reliability under the requirements of 10 CFR 50.65.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 3A Sec: 2B Ter:	Current system engineering procedures contained sufficient guidance for the proper implementation of the system engineering monitoring program. System engineers continued to operate partly in a reactive mode, despite the establishment of a maintenance engineering group. However, clear areas of responsibility had been established and the system engineers were assuming system responsibility. Also, a system engineering master plan was underway to further strengthen the role of the system engineer and to better manage work activities. Communications with maintenance engineering and operations were good.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 3B Sec: 4B Ter:	The Salem system engineering staff included a nucleus of knowledgeable system engineers with several years of nuclear experience. System experience was limited at times, but engineers indicated strong willingness to seek guidance from more experienced personnel. Individual system training was acceptable. The system performance review meetings were good management tools to evaluate individual knowledge of the systems and to impart integrated insights on the systems.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 3C Sec: Ter:	Improved management oversight of the corrective action program was evident. Engineering self-assessments and quality assurance reviews provided valuable insights.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 5C Sec: Ter:	PSE&G was actively engaged in the resolution of concerns raised by the NRC regarding spent fuel pool cooling design and decay heat load management, and has implemented a reasonable approach to completing these activities prior to the next core off-load.
11/19/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 5C Sec: 5B Ter:	The licensee continued to experience reliability and availability problems with radiation monitors at both Salem Units. However, appropriate steps were being taken to address the instrument failures. The root cause analysis multi-disciplinary team showed good understanding of the issues involved. Good management support of the effort was also evident.

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Region I
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10/05/1998	1998008	Pri: ENG Sec:	NRC	MISC	Pri: 4C Sec: Ter:	PSE&G had a reasonable Year 2000 program in place with a dedicated manager and appropriate senior management involvement.
10/05/1998	1998008	Pri: ENG Sec:	NRC	POS	Pri: 2B Sec: 4C Ter:	Periodic system manager development of maintenance rule category a(1) system health reports was a good initiative to provide an overall assessment of system performance and to evaluate the effectiveness of performance improvement initiatives for station management. However, the quality of the individual reports varied widely.
10/05/1998	1998008	Pri: ENG Sec:	NRC	POS	Pri: 4A Sec: 3A Ter:	PSE&G adequately justified the installation of a design change which removed packing gland leak-off lines from several pressurizer spray and relief system valves. Installation work in the field was good and post-installation testing was acceptable. This modification effectively reduced reactor coolant system identified leakage into the pressurizer relief tank.
12/21/1998	1998011	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	An effective radiation protection program has been established for controlling high, locked high and very high radiation areas, and planning and maintaining occupational exposures ALARA. Appropriate controls were implemented in radiation protection to support forced outage work in the Unit 2 containment.
11/19/1998	1998009	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	PSE&G's emergency operations facility and Salem's technical support center were properly maintained. All necessary emergency equipment and procedures were adequately controlled.
10/05/1998	1998008	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	PSE&G maintained effective radioactive liquid and gaseous effluent control programs in that: (1) the technical specification (TS) and offsite dose calculation manual (ODCM) requirements for reporting effluent releases and projected doses to the public were effectively implemented; and, (2) the ODCM contained sufficient specification, information, and instruction to acceptably implement and maintain the radioactive liquid and gaseous effluent control programs.
10/05/1998	1998008	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 5A Ter:	PSE&G had generally established, implemented, and maintained an adequate radiation monitoring system program with respect to electronic calibrations, radiological calibrations, system reliability, and tracking and trending.
10/05/1998	1998008	Pri: PLTSUP Sec:	NRC	POS	Pri: 5B Sec: 5A Ter:	PSE&G implemented an effective quality control program to validate measurement results for radioactive effluent samples. PSE&G established and implemented an effective quality assurance audit of the radioactive effluent control program.
10/05/1998	1998008	Pri: PLTSUP Sec:	NRC	POS	Pri: 5C Sec: Ter:	Fire protection impairments were properly identified and effectively managed to ensure timely resolution of the various degraded conditions. The backlog of impairment items was large, but was being aggressively reduced.

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Date	Source	Functional Area	ID	Type	Template Codes	Item Description
10/05/1998	1998008-11	Pri: PLTSUP Sec:	NRC	VIO IV	Pri: 2B Sec: Ter:	A violation was identified pertaining to a failure to calibrate Unit 1 R-18 liquid effluent monitor in accordance with established procedures. PSE&G's response to this problem was timely and appropriate.

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
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Legend

Type Codes:

BU	Bulletin
CDR	Construction
DEV	Deviation
EEI	Escalated Enforcement Item
IFI	Inspector follow-up item
LER	Licensee Event Report
LIC	Licensing Issue
MISC	Miscellaneous
MV	Minor Violation
NCV	NonCited Violation
NEG	Negative
NOED	Notice of Enforcement Discretion
NON	Notice of Non-Conformance
P21	Part 21
POS	Positive
SGI	Safeguard Event Report
STR	Strength
URI	Unresolved item
VIO	Violation
WK	Weakness

Template Codes:

1A	Normal Operations
1B	Operations During Transients
1C	Programs and Processes
2A	Equipment Condition
2B	Programs and Processes
3A	Work Performance
3B	KSA
3C	Work Environment
4A	Design
4B	Engineering Support
4C	Programs and Processes
5A	Identification
5B	Analysis
5C	Resolution

ID Codes:

NRC	NRC
Self	Self-Revealed
Licensee	Licensee

Functional Areas:

OPS	Operations
MAINT	Maintenance
ENG	Engineering
PLTSUP	Plant Support
OTHER	Other

EEIs are apparent violations of NRC Requirements that are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action" (Enforcement Policy), NUREG-1600. However, the NRC has not reached its final enforcement decision on the issues identified by the EEIs and the PIM entries may be modified when the final decisions are made.

URIs are unresolved items about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. A URI may also be a potential violation that is not likely to be considered for escalated enforcement action. However, the NRC has not reached its final conclusions on the issues, and the PIM entries may be modified when the final conclusions are made.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
8/21/98	Positive	IR 98-06	N	OPS	5B 3C	PSE&G's independent review groups, including the quality assurance department and the station operations review committee, continued to provide effective oversight of Salem operations. The corrective action review board sufficiently challenged the quality of completed corrective actions for previous issues and events.
8/21/98	Negative	IR 98-06	N	OPS	2B 3A	The timeliness of a 125 volt DC system operability determination that was not consistent with the system's safety significance. Required audits of active operability determinations, were inconsistently performed, indicating a weakness in the implementation of program guidance.
8/21/98	Positive	IR 98-06	N	OPS	2B	Equipment operability determinations were of good quality, and generally performed in accordance with procedural guidance.
8/21/98	Positive	IR 98-06	N	OPS	1A	Operators performed well during a Unit 2 controlled shutdown and cooldown for a mid-cycle outage. An appropriate focus was maintained on shutdown cooling system status once Mode 5 conditions were achieved.
8/21/98	Positive	IR 98-06	N	OPS	5A	PSE&G demonstrated good initiative in recent efforts to identify and minimize primary plant operational leakage sources.
8/21/98	Negative	IR 98-06	N	OPS	3A	Two instances of operator errors contributed to a reverse-power trip of a diesel generator output breaker and the overflow of a liquid waste collection tank.
8/21/98	Positive	IR 98-06	N	OPS	3A	Operations department performance was generally focused on safety-conscious plant operation.
7/10/98	Positive	IR 98-05	N	OPS	1A 3A	PSE&G personnel completed advanced digital feedwater control system testing during Salem Unit 1 startup in a well controlled and deliberate manner. Control room operators and test engineers maintained formal communications and demonstrated good coordination.
7/10/98	Positive	IR 98-05	N	OPS	2A 5A	PSE&G operators and maintenance technicians promptly identified an unexpected increase in pressurizer relief tank inleakage and implemented effective actions to identify, quantify, and minimize the source of the reactor coolant system leak.
7/10/98	Positive	IR 98-05	N	OPS	2A 5C	The decision to declare both solid state protection system trains inoperable following the discovery of a failed steam generator feed pump trip coil was reasonable and conservative. Corrective actions taken in response to this event were prompt and effective.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
7/10/98	Negative	IR 98-05	N	OPS	2B 3A 4A	Premature degradation of safety related chiller control valves, resulting from the use of valves of a weak design for their application, led to multiple chiller corrective maintenance outages to effect repairs. Inattention to detail resulted in an inadvertent start of a safety-related chiller during troubleshooting efforts. Maintenance personnel performed repairs in a safe manner, however, operations personnel declared a chiller operable without performing an appropriate post-maintenance retest. Overall coordination between the operations, maintenance, and engineering departments was good.
7/10/98	Negative	IR 98-05	N	OPS	1A 5C	On two occasions, PSE&G operators inadvertently failed to restore the 11 component cooling water loop to an operable status following manual operation of the associated heat exchanger flow controller, indicating weaknesses in safety-related equipment configuration control and corrective action effectiveness.
7/10/98	NCV LER	IR 98-05 LER 272/ 98-007 NCV 98-05-01	L	OPS	5C	Inadequate control of a steam generator level instrument vent valve resulted in the conduct of Unit 1 core alterations and subsequent operational mode four operation without containment integrity being established. PSE&G's response and corrective actions to this self-identified event were good, resulting in a Non-Cited Violation.
5/3/98	Positive	LER 98-002 IR 98-03	L	OPS	5C	This LER described an adverse condition where an auxiliary building ventilation excess flow damper was found wired open with spring removed. Corrective actions were reasonable and complete. The safety significance evaluation performed for this event, documented in LER Supplement 1, was also acceptable.
5/3/98	Positive	IR 98-03	N	OPS	5C 1B	PSE&G's actions to address and correct the cause of missing service water (SW) strainer filter disks and cracked filter disk retaining rings were appropriate and promptly implemented. Unit 2 control operators responded promptly to the clogging of two SW pump discharge strainers in the SW same loop. PSE&G management's decision to take Salem unit 2 off-line for strainer repairs was appropriate, and corrective actions were adequate.
5/3/98	Positive	IR 98-03	N	OPS	2A	The 125 volt DC electrical distribution system was properly aligned for existing plant conditions at Unit 1 and 2. Material condition and housekeeping were acceptable. Adequate surveillance test procedures were implemented to verify system operability.
5/3/98	Positive	IR 98-03	N	OPS	1B	Operators responded promptly and effectively to an unexpected loss of the 21 steam generator feed pump while a 100% power. All plant equipment functioned as designed during the transient.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
5/3/98	Positive	IR 98-03	N	OPS	1A 3A	Overall, Salem plant management and staff controlled the Unit 1 reactor startup and power ascension test activities well. The operating crews were attentive, used excellent communication skills, and responded appropriately to planned and emergent events and issues. Reactor engineering and chemistry department support, as well as pre-evolution briefings, were usually of good quality although some deficiencies were observed during low power physics testing. Strong management and quality assurance oversight was indicated by continuous on-site management presence during restart activities and the willingness to halt further plant evolutions following the identification of emergent issues. Good self-assessment capability was evident during hold point release discussions with the NRC Salem Assessment Panel.
3/15/98	Negative	IR 98-01	N	OPS	3A 5C	The licensee's corrective actions to address the reasons for an apparently fatigued licensed control room supervisor were acceptable. However, there were some weaknesses identified in licensee management oversight of individual employee work hours which the licensee has initiated actions to address.
1/30/98	Positive	IR 98-02	N	OPS	3B	The candidates demonstrated very good communications during the simulator exercises, both during routine and emergency portions of the exercise. Briefings were conducted by the control room supervisor candidates on a routine basis. The briefings were well controlled and ensured that all personnel knew the plant (simulator) status.
1/30/98	Positive	IR 98-02	N	OPS	3B	The examiners overall observed very good self and peer checking prior to reactivity manipulations during the simulator scenarios and generally good self checking during the other operational portions of the exam. Peer checks prior to reactivity changes was considered a strength by the examiners.
1/30/98	Positive	IR 98-02	N	OPS	3B	Overall, candidate performance during the operating tests was determined to be good. There were no significant generic weaknesses identified.
3/15/98	Negative	IR 98-01	N	OPS	1A 3A	Licensed operators' inadequate monitoring of plant parameters and maintenance of steam generator levels, combined with inadequate communications and crew teamwork resulted in an inadvertent automatic start of the auxiliary feedwater pumps when the 14 steam generator level decreased to 9%. The reactor operator did not follow procedure requirements to maintain the steam generator levels within the required band.
3/15/98	Positive	IR 98-01	N	OPS	1A 1B	In general, the conduct of operations was professional and safety-conscious. Activities associated with the shutdown of Unit 2 on February 11 and the heatup of Unit 1 on February 18, were performed in a deliberate manner with clear communications.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
8/21/98	Negative	IR 98-06	N	MAINT	5A	PSE&G personnel appropriately monitored containment fan cooler units (CFCUs) in accordance with maintenance rule requirements. Weaknesses in system functional failure identification and classification were noted for the CFCUs.
8/21/98	Negative	IR 98-06	N	MAINT	2A 3A	PSE&G maintenance technicians failed to restore an auxiliary feed water (AFW) pump discharge pressure transmitter to an operable condition following an instrument calibration, resulting in the undetected inoperability of the 22 AFW pump for eighteen days.
8/21/98	Positive	IR 98-06	N	MAINT	2B	All technical specification action statement requirements were satisfied and the affected diesels were returned to service in a timely manner. Maintenance rule accounting for system unavailability time was proper.
8/21/98	Negative	IR 98-06	N	MAINT	5C	Corrective actions from earlier emergency diesel generator fuel oil leaks were narrowly focused.
8/21/98	Positive	IR 98-06	N	MAINT	2B	PSE&G's immediate corrective actions for two unrelated emergency diesel generator fuel oil leaks were appropriate.
8/21/98	NCV	IR 98-06 NCV 98-06-02	N	MAINT	2B	Continued deficiencies associated with safety tagging program implementation were also evident. [i.e. improper release of tagging boundary while maintenance activities were still being conducted, failure to apply a blocking tag to the proper component, failure to sign-on to a taggout prior to conducting work, and failure of a maintenance supervisor to verify that appropriate tagging boundaries were established prior to authorizing technicians to begin work]
8/21/98	Positive	IR 98-06	N	MAINT	5B 5A	Plant risk was appropriately managed during the performance of scheduled and emergent work activities. PSE&G self-identified weak performance with respect to recognition and implementation of compensatory measures associated with maintenance on service water supply and return valves for two containment fan cooler units.
8/21/98	Positive	IR 98-06	N	MAINT	3A 3C	The Salem plant staff completed observed maintenance and surveillance test activities effectively and in accordance with governing procedures. Maintenance support of operations was prompt and appropriate. The Unit 2 safety valve replacement effort was well planned and executed.
7/10/98	Positive	IR 98-05	N	MAINT	2B	Observed maintenance and surveillance activities were properly scheduled and completed in accordance with PSE&G program guidelines and technical specification requirements.
7/10/98	Positive	IR 98-05	N	MAINT	2B	Following an inservice test failure, PSE&G personnel properly repaired and tested the 13 auxiliary feed water pump turbine steam supply check valve in accordance with maintenance procedures and American Society of Mechanical Engineers code requirements.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
7/10/98	NCV	IR 98-05 NCV 98-05-02	L	MAINT	1B 3A	Inadequate implementation of a maintenance procedure involving work on in-core detector guide tubes in August 1996 led to a later unplanned personnel radiation exposure incident. Specifically, the detector guide tubing separated during in-core system operation allowing an irradiated in-core detector to remain unshielded in close proximity to nearby maintenance work site. Corrective actions were prompt and effective, resulting in a Non-Cited Violation.
7/10/98	Negative	IR 98-05 VIO 98-05-03 LER 98-011	N	MAINT	2A 3A 4B	Failure to perform adequate 10 CFR 50.59 applicability reviews for revisions to an inservice single cell battery charging procedure resulted in the operation of the 1A 125 volt DC (VDC) battery system in a nonconforming condition. Additionally, poor control of this charging activity was evident. Specifically, control room operators were unaware of the in-progress 125 VDC single cell battery charge, which was completed using an uncalibrated and improperly restrained non-safety related charger. Further, inadequate monitoring and trending of 125 VDC battery system performance allowed a degraded individual cell voltage to trend below a maintenance rule goal without being promptly identified. The subsequent cell replacement evolution was adequately controlled, but a discrepancy in the retest procedures acceptance criteria was identified.
7/10/98	NCV LER	IR 98-05 NCV 98-05-04 LER 96-035	L	MAINT	2B	PSE&G appropriately reported and corrected a self-identified issue involving a failure to establish adequate surveillance procedures for vital bus load shed testing, resulting in a Non-Cited Violation.
7/10/98	NCV LER	IR 98-05 NCV 98-05-05 LER 272/ 97-011	L	MAINT	2B 3B 4C	An inadequate review of system design during associated system test procedure development resulted in the failure to perform testing of the automatic isolation of steam generator blowdown and sampling valves upon an actuation of the auxiliary feedwater system. Corrective actions to address this self-identified issue were timely and effective, resulting in a Non-Cited Violation.
7/10/98	NCV LER	IR 98-05 NCV 98-05-06 LER 97-012	L	MAINT	2B 5A	PSE&G appropriately reported and corrected two self-identified issues involving failures to complete technical specification required channel check surveillances.
7/10/98	LER	IR 98-05 LER 97-09	L	MAINT	2B 5A	PSE&G appropriately reported and corrected a self-identified issue involving a failure to cycle containment spray pump discharge valves after pump operation to alleviate the potential for valve pressure-locking.
7/10/98	NCV LER	IR 98-05 NCV 98-05-07 LER 311/97-011	L	MAINT	2B 5A	Improper scheduling of solid state protection and auxiliary feedwater system testing resulted in the failure to perform technical specification surveillance testing within specified time periods. PSE&G's root cause analysis and corrective actions were adequate, leading to a Non-Cited Violation.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
	NCV LER	IR 98-05 NCV 98-05-08 LER 311/97-018	L	MAINT	2B 5A	PSE&G appropriately corrected a self-identified issue involving a failure to test the main steam isolation valve hydraulic actuator override feature. This led to a Non-Cited Violation.
7/10/98	NCV LER	IR 98-05 NCV 98-05-09 LER 311/98-02	L	MAINT	3B 4A 5A	Following self-identification of the issue, PSE&G appropriately reported the Channel 23 OTdT setpoint inoperability. Initial actions to address this condition were both timely and appropriate. PSE&G's documented assessment of the consequences of this issue was weak because it did not adequately describe acceptable levels of protection for a slow Rod Withdrawal Accident at Power. The remaining aspects of the licensee event report were acceptable. This issue resulted in a Non-Cited Violation.
7/10/98	LER	IR 98-05 LER 311/98-006	L	MAINT	5A	PSE&G appropriately reported and evaluated a self-identified turbine first stage pressure instrument scaling error. Corrective actions to address this error were both timely and appropriate.
5/3/98	Positive	LER 97-013 IR 98-03	L	MAINT	5C	On July 2, 1997, following surveillance testing, the 2A emergency diesel generator (EDG) was inappropriately declared operable with electrical test equipment still installed in the EDG control cabinet. After this issue was identified, a follow-up surveillance test was performed satisfactorily, and the test equipment was removed. PSE&G attributed the cause of this event to human error. Corrective actions taken to address the deficiencies identified following the improper restoration of a Unit 2 emergency diesel generator were adequate. Associated design calculations and safety evaluations were thorough.
5/3/98	Positive	IR 98-03	N	MAINT	5C 4A	PSE&G implemented appropriate corrective actions to repair degraded auxiliary feedwater piping revealed by a through-wall leak on a pump minimum-flow orifice line. Technical specification and ASME code class 3 requirements were satisfied. However, this event revealed a weakness in scope of the flow-accelerated corrosion program in that only the steam-driven pumps were included for monitoring.
5/3/98	Negative	IR 98-03	N	MAINT	1C 3C	PSE&G determined that the lack of clear ownership for and coordination of recent emergency diesel generator (EDG) on-line maintenance outages resulted in unnecessary delays in work completion, extending the overall equipment unavailability time. Inadequate tagging controls during the 2B EDG outage resulted in an electrical breaker blocking tag being released while personnel were actively working on equipment supplied by that breaker.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
3/15/98	VIO	IR 98-01	N	MAINT	3C 3B	Poor planning and inadequate maintenance practices resulted in an incorrect control switch being installed on the 12 Diesel Fuel Oil Transfer Pump (DFOTP), which rendered the pump inoperable. The licensee ascended to Mode 4 on Unit 1 with less than the required DFOTPs operable, which was a Technical Specification violation. The licensee's immediate corrective actions for this event were weak, including an untimely operability determination for the wrong part being installed on the 21 DFOTP, and untimely verification of correct part numbers for similar control switches on the four DFOTP electrical panels.
3/15/98	VIO	IR 98-01 VIO 98-01-04	N	MAINT	3A 2B 1C	Procedural adherence for the 2A Emergency Diesel Generator (EDG) post-maintenance testing was poor. Numerous procedural violations by maintenance and operations personnel resulted in the improper operation of the diesel. There was little safety significance to these violations as the diesel was out of service for maintenance. However, they showed a lack of questioning attitude and attention to detail by numerous personnel. Additionally, the engineering action plan utilized for the maintenance effort was not sufficiently detailed to promote smooth transition between the maintenance and operations procedures used.
3/15/98	Positive	IR 98-01	N	MAINT	2C 4C	The licensee adequately implemented their Technical Specification Surveillance Improvement Program to support Unit 1 restart.
3/15/98	Negative	IR 98-01	N	MAINT	3B 3C	The licensee met all Technical Specification requirements for the 2C EDG outage and the crankcase alarm on the 2B EDG. The operator correctly followed the alarm response procedure for the 2B alarm. The operability determination for the 2B EDG after the cause of the alarm was determined was adequate, but the decision to run the 2B EDG during the 16-hour 2C EDG outage was not appropriate.
3/15/98	Positive	IR 98-01	N	MAINT	2B 5B	On February 11, 1998, the 2A EDG turbocharger failed during a post maintenance test. The licensee formed a team to get the relevant facts, find the cause of the failure, evaluate its significance to the operability of the other EDGs, and establish corrective actions. The NRC concluded that the preliminary root cause evaluation of the failed turbocharger blade was thorough, detailed, and accurate. The inspector also concluded that the licensee had properly responded to the EDG turbocharger failure by initiating a thorough evaluation.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
8/4/98	Positive	IR 98-07	N	ENG	5C	The actions taken to address the Votes testing deficiencies and the missed testing of a containment electrical penetration breaker were acceptable.
8/4/98	Negative	IR 98-07	N	ENG	4A	The proposed change to the surveillance procedure did not adequately address the TS requirement regarding periodic verification of the ability of CREACS to remove the assumed heat load. However, the procedure had not yet been revised, no violation of NRC requirements occurred.
8/4/98	Positive	IR 98-07	N	ENG	4B 5B	The calculations and associated engineering evaluations for the component cooling flow acceptance criteria, for the verification of computer generated results and for establishing operator required time to complete the switchover of the ECCS pump suction from the RWST to the containment sump were comprehensive and technically sound.
8/4/98	Positive	IR 98-07	N	ENG	4B 5C	Acceptable actions were taken to address the MOV design-basis setpoint configuration control, and to validate the RHR pump curves for the required flow and NPSH in the recirculation mode of operation.
8/21/98	Positive	IR 98-06	N	ENG	2B 3B	PSE&G implemented and maintained a satisfactory inservice inspection program at Salem. The bases for selected ASME code relief requests were valid and accurate. Non-destructive examination personnel were properly trained in accordance with industry standards.
8/21/98	Positive	IR 98-06	N	ENG	4B 4A	Timely and appropriate engineering support of operations and maintenance was indicated by active participation in daily station interface meetings, as well as effective development of minor design changes and completion of several safety evaluations.
8/4/98	Positive	IR 98-07	N	ENG	4C 5C	The inspectors found that licensee actions taken to address eighteen of the nineteen previously identified issues were acceptable. Those issues and two additional fire protection-related items reviewed by the NRC were closed. Another item pertaining to periodic verification that each control room emergency air conditioning system train has the capability to remove the assumed heat loads, as required by the Salem Technical Specification, could not be closed because the corrective actions were incomplete.
8/4/98	Positive	IR 98-07	N	ENG	4A 5C	The calculations and associated engineering evaluations for the component cooling flow acceptance criteria, for the verification of computer generated results and for establishing operator required time to complete the switchover of the ECCS pump suction from the RWST to the containment sump were comprehensive and technically sound.
7/10/98	Positive	IR 98-05	N	ENG	5C	Following several unplanned technical specification action statement entries, PSE&G implemented appropriate corrective actions to resolve control room air intake radiation monitor channel check surveillance test failures.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
7/10/98	LER	IR 98-05 LER 272/96-032	L	ENG	5C	Initial corrective actions for a failed diesel service water inlet valve were not fully effective in preventing a subsequent similar failure, indicating a weakness in PSE&G's ability to develop and implement lasting corrective measures for this safety-related valve.
7/10/98	Positive	IR 98-05	N	ENG	4C	PSE&G maintained adequate controls for temporary modifications. Minor weaknesses involving the timeliness of modification package closure and the accuracy of control tags were identified.
7/10/98	NCV LER	IR 98-05 NCV 98-05-10 LER 272/96-038	L	ENG	5A 5C	PSE&G appropriately reported and corrected self-identified design deficiencies associated with the switchgear penetration area ventilation system, resulting in a Non-Cited Violation.
7/10/98	NCV LER	IR 98-05 NCV 98-05-11 LER 272/96-040	L	ENG	4A 4B	Inadequate review of design information resulted in the failure to include all necessary engineered safeguard features actuation system relays in technical specifications surveillance test procedures. PSE&G's corrective actions for this self-identified issue were adequate, resulting in a Non-Cited Violation.
5/3/98	Positive	IR 98-03	N	ENG	2B	PSE&G restored the 22 steam generator steam flow channels II and III to an operable status in a slow and deliberate manner, meeting all technical specification requirements during the process.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	The licensee's resolution of the NRC observations regarding the requirements traceability matrix was acceptable.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	The licensee appropriately addressed the NRC concerns regarding signing off of test procedure prerequisites.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	The actions to address the control room ventilation test procedure inadequacies were acceptable.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	The licensee's review and resolution of test discrepancies regarding component cooling water flow balance were acceptable and the engineering documents resulting from this review were also acceptable.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	PSE&G maintained acceptable controls over the conduct of the Unit 1 power ascension tests and the integrated test program remained acceptable. Tests were being conducted in an acceptable manner by a knowledgeable technical staff.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
4/1/98	Negative	IR 98-04	N	ENG	4B 2A	Although the control loop tuning acceptance criteria were incorrect, no violation of NRC requirements occurred. However, a better understanding by engineering of the process dynamics, might have resulted in a better definition of the acceptance criteria and avoided test delays.
4/1/98	Positive	IR 98-04	N	ENG	4B 2A	The licensee properly addressed the inadequate surveillance test procedure pertaining to the turbine trip logic testing.
3/15/98	VIO	IR 98-01 VIO 98-01-10 LER 96-34	N	ENG	2A 2B	Elevated grass levels in the Delaware River combined with degraded service water strainers and lack of service water reliability program oversight resulted in accelerated rates of service water biofouling. Weak management attention allowed biofouling to occur at unpredictable rates. Several instances of biofouling occurred in plant components before strainer degradation was identified and effective corrective actions were taken. In one instance, the biofouling contributed to the inoperability of a Unit 2 safety related chiller. Salem staff failed to take prompt corrective actions to determine and correct the cause of service water biofouling problems. System Engineering and Operations interfaces were weak during the analysis of those problems. The licensee did not adequately evaluate the extent of condition at both Salem Units.
3/15/98	Negative	IR 98-01	N	ENG	5C	The licensee continued to adequately pursue resolution of issues related to the control area ventilation system (CAVS). However, long term corrective actions are still necessary to eliminate the need for maintenance mode, a time-consuming, resource-intensive work around which ensures adequate differential pressure margin between the control room and the adjacent spaces. When this mode is employed, then any circumstance which necessitates accident pressurized mode, such as an inoperable CAVS radiation monitor, would require a unit shutdown to Mode 5 so that the control room emergency air conditioning system intake could be lined up to a non-operating unit.
3/15/98	Positive	IR 98-01	N	ENG	4A 4C	The licensee had adequately demonstrated design basis capability for Salem Unit 1 MOVs to support restart. Justifications for key program assumptions and the applied valve factors were adequate.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
8/21/98	Positive	IR 98-06	N	PS	3C	Salem radioactive waste processing and radioactive material shipping procedures were of good quality and effectively implemented regulatory requirements.
8/21/98	Positive	IR 98-06	N	PS	3A	PSE&G effectively limited the amount of stored contaminated equipment and radioactive wastes.
8/21/98	Positive	IR 98-06	N	PS	3C	Salem solid radioactive wastes were effectively sampled, packaged, and dewatered in accordance with requirements.
7/10/98	Positive	IR 98-05	N	PS	1C	PSE&G management demonstrated good self-assessment capability during the development of a detailed action plan to correct long-standing out-of-specification water chemistry parameters. This plan also addressed the basic causes for these deficiencies which remained uncorrected for an extended period of time.
7/10/98	Negative	IR 98-05 VIO 98-05-12	N	PS	1C	PSE&G effectively maintained and implemented the Radiological Environmental Monitoring Program. However, the failure to establish written procedures to collect drinking water, fish, and invertebrate samples required by technical specifications resulted in a violation.
7/10/98	Positive	IR 98-05	N	PS	1C	A Quality Assurance department audit of the implementation of the Radioactive Effluent Monitoring Program was of sufficient scope and depth to effectively assess program performance.
7/10/98	Positive	IR 98-05	N	PS	1C	The contractor laboratory implemented effective Quality Assurance and Quality Control programs for the Radiological Environmental Monitoring Program, and provided effective validation of analytical results. These programs were capable of ensuring independent checks on the precision and accuracy of the measurements of radioactive material in environmental media.
7/10/98	NCV LER	IR 98-05 NCV 98-05-14 LER 272/96-033	L	PS	1C	Following self-identification, PSE&G appropriately reported and corrected procedure deficiencies involving the use of inadequate sample line purge times prior to collection and analysis of technical specification required chemistry samples. The circumstances of this issue resulted in a Non-Cited Violation.
7/10/98	Positive	IR 98-05	N	PS	1C	The annual Quality Assurance review of the station security program was effective in that PSE&G auditors identified several quality issues, and promptly raised them to station management to initiate cause determinations and corrective actions. PSE&G auditors identified several quality issues, and promptly raised them to station management to initiate cause determinations and corrective actions.

SALEM 1 & 2 PLANT ISSUES MATRIX

Date	Type	Source	ID	SFA	Code	Item Description
7/10/98	LER	IR 98-05 LER 311/97-016 & 97-18	L	PS	1C	PSE&G's corrective actions for an event involving inadequate control of fire protection system water supply valves were acceptable.
5/3/98	Positive	IR 98-03	N	PS	1C	Quality Assurance audits of the emergency preparedness (EP) program were thorough and the reports were useful to PSE&G management in assessing the effectiveness of the EP program and providing enhancement recommendations. This area was assessed as excellent.
5/3/98	Positive	IR 98-03	N	PS	1C	The department reorganization and hiring of a manager with extensive EP experience enhanced the EP program. The inspectors concluded that the positive findings during this inspection were an indication that the program had significantly improved since the last inspection.
5/3/98	Positive	IR 98-03	N	PS	1C	PSE&G conducted emergency response training and drills as required. Based upon overall good performance during the drills and the March 1998 biennial full-participation emergency exercise, the inspectors concluded that training for the ERO was effective.
5/3/98	Positive	IR 98-03	N	PS	1C	PSE&G emergency plan changes were adequately reviewed in accordance with 10 CFR 50.54(q). PSE&G planned to review, evaluate/rewrite the emergency plan implementing procedures for conformance to other station procedures and to improve the review process. The inspectors also concluded that letters of agreement with offsite agencies were in place.
5/3/98	Positive	IR 98-03	N	PS	1C	The emergency response facilities and equipment were in a good state of operational readiness. Surveillance tests and inventories were performed as required and discrepancies were resolved in a timely manner. Expenditure of resources to improve equipment and facilities demonstrated PSE&G's commitment to support and maintain the emergency preparedness program. Overall, the inspectors considered this area to be very good.
5/3/98	Positive	IR 98-03	N	PS	1C	Based upon a review of selected items and procedures, the inspectors concluded that PSE&G's method for tracking Emergency Preparedness corrective actions was very good and that the self-assessment program provided good feedback to the staff. The timeliness of resolving some identified issues was weak.

ABBREVIATIONS USED IN PIM TABLE

CAVS	control area ventilation system
DFOTP	diesel fuel oil transfer pump
ECCS	emergency core cooling system
EDG	emergency diesel generator
IST	inservice test program
LCO	limiting condition for operation
LEFM	leading edge flow meter
MR	maintenance rule
PM	preventive maintenance
POPS	pressurizer overpressure protection system
PORV	power-operated relief valve
PSE&G	Public Service Electric & Gas Company
RP	radiation protection
SSC	structure, system, or component
TS	technical specification
TSSIP	technical specification surveillance improvement project
UFSAR	updated final safety analysis report
VOTES	valve operation test and evaluation system

GENERAL DESCRIPTION OF PIM TABLE COLUMNS

Date	The actual date of an event or significant issue for those items that have a clear date of occurrence (mainly **LERs**), the date the source of the information was issued (such as for **EALs**), or the last date of the inspection period (for **IRs**).
Type	The categorization of the item or finding - see the Type / Findings Type Code table, below.
Source	The document that describes the findings: **LER** for Licensee Event Reports, **EAL** for Enforcement Action Letters, or **IR** for NRC Inspection Reports.
ID	Identification of who discovered issue: **N** for NRC; **L** for Licensee; or **S** for Self Identifying (events).
SFA	SALP Functional Area Codes: **OPS** for Operations; **MAINT** for Maintenance; **ENG** for Engineering; and **PS** for Plant Support.
Code	Template Code - see table below.
Item Description	Details of NRC findings on LERs that have safety significance (as stated in IRs), findings described in IR Executive Summaries, and amplifying information contained in EALs.

TYPE / FINDINGS CODES

ED	Enforcement Discretion - No Civil Penalty
Strength	Overall Strong Licensee Performance
Weakness	Overall Weak Licensee Performance
EEI *	Escalated Enforcement Item - Waiting Final NRC Action
VIO	Violation Level I, II, III, or IV
NCV	Non-Cited Violation
DEV	Deviation from Licensee Commitment to NRC
Positive	Individual Good Inspection Finding
Negative	Individual Poor Inspection Finding
LER	Licensee Event Report to the NRC
URI **	Unresolved Item from Inspection Report
Licensing	Licensing Issue from NRR
MISC	Miscellaneous - Emergency Preparedness Finding (EP), Declared Emergency, Nonconformance Issue, etc. The type of all MISC findings are to be put in the item Description column.

TEMPLATE CODES

1	Operational Performance: **A** - Normal Operations; **B** - Operations During Transients; and **C** - Programs and Processes
2	Material Condition: **A** - Equipment Condition or **B** - Programs and Processes
3	Human Performance: **A** - Work Performance; **B** - Knowledge, Skills, and Abilities / Training; **C** - Work Environment
4	Engineering/Design: **A** - Design; **B** - Engineering Support; **C** - Programs and Processes
5	Problem Identification and Resolution: **A** - Identification; **B** - Analysis; and **C** - Resolution

NOTES:

* EEIs are apparent violations of NRC requirements that are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action" (Enforcement Policy), NUREG-1600. However, the NRC has not reached its final enforcement decision on the issues identified by the EEIs and the PIM entries may be modified when the final decisions are made. Before the NRC makes its enforcement decision, the licensee will be provided with an opportunity to either (1) respond to the apparent violation or (2) request a predecisional enforcement conference.

** URIs are unresolved items about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. However, the NRC has not reached its final conclusions on the issues, and the PIM entries may be modified when the final conclusions are made.

ENCLOSURE 2

SALEM INSPECTION PLAN*

INSPECTION PROCEDURE	TITLE/ PROGRAM AREA	PLANNED DATES	INSPECTION TYPE
64704	Appendix R Fire Wrap Review	04/12/99	Initiative (DRS)
83750	Occupational Radiation Exposure - Unit 2 Outage	04/19/99	Core (DRS)
73753	Inservice Inspection	04/19/99	Core (DRS)
81700	Physical Security Program	04/19/99	Core (DRS)

***NOTE: Salem is one of the pilot plants for the new performance assessment process. Accordingly, implementation of the baseline inspection program will affect the inspection scope and schedule significantly. Scheduling of the core and regional initiative inspections proposed at the PPR will not be finalized until May 1999.**