

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

August 12, 1982

8211290510 821116  
PDR ADOCK 05000293  
Q PDR

## TABLE OF CONTENTS

	<u>Page</u>
I. Introduction	2
II. Summary of Results	5
III. Criteria	6
IV. Performance Analysis	
1. Plant Operations	7
2. Radiological Controls	11
3. Maintenance	14
4. Surveillance	15
5. Fire Protection	16
6. Emergency Preparedness	18
7. Security and Safeguards	19
8. Refueling	20
9. Licensing Activities	22
V. Supporting Data and Summaries	
1. Licensee Event Report Tabulation and Causal Analysis	24
2. Investigation Activities	24
3. Escalated Enforcement Actions	25
4. Management Conferences During the Assessment Period	26

### TABLES

Table 1 - Tabular Listing of LERs by Functional Area	27
Table 2 - LER Synopsis	28
Table 3 - Inspection Hours Summary	31
Table 4 - Inspection Activities	32
Table 5 - Violations: Severity Levels and Functional Areas	35

## I. INTRODUCTION

### a. Purpose and Overview

The Systematic Assessment of Licensee Performance (SALP) is an integrated NRC staff effort to collect the available observations on an annual basis and evaluate licensee performance based on those observations with the objectives of improving the NRC Regulatory Program and Licensee performance.

The assessment period is September 1, 1981 through June 30, 1982. This assessment, however, contains pertinent observations and NRC and licensee activities through July, 1982. Future assessment periods will be adjusted to provide more timely NRC assessment and reporting.

The prior SALP assessment period was January 1, 1980 - December 31, 1980. Additionally, an interim evaluation was performed using a SALP assessment period of September 1, 1980 - August 31, 1981. Significant findings of those assessments and the period between the last assessment and this assessment, are provided in the applicable Performance Analysis Functional Areas (Section IV).

Evaluation criteria used during this assessment are discussed in Section III below. Each criterion was applied using the "Attributes for Assessment of Licensee Performance" contained in NRC Manual Chapter 0516.

- b. SALP Attendees:
- R. W. Starostecki, Director, Division of Project and Resident Programs
  - E. G. Greenman, Acting Chief, Facility Radiation Section, Division of Engineering and Technical Programs
  - E. J. Brunner, Chief, Reactor Projects Branch No. 1, Division of Project and Resident Programs
  - T. C. Elsasser, Chief, Reactor Projects Section No. 1B, Division of Project and Resident Programs
  - V. Rooney, Acting Licensing Project Manager, Operating Reactors Branch No. 2, NRR
  - J. R. Johnson, Sr. Resident Inspector, Pilgrim Nuclear Power Station

Other NRC Attendees:

- H. Eichenholz, Resident Inspector, Pilgrim Nuclear Power Station
- R. R. Keimig, Chief, Reactor Projects Branch No. 2, Division of Project and Resident Programs

## c. Background

### (1) Licensee Activities

For 6 months of this 10 month assessment period, the plant was shutdown for a refueling/maintenance/modification outage which was extended because of reasons described below (Outage) and in Section IV.8.

#### (Pre Outage)

At the beginning of the assessment period the facility was operating at 97% power. During September, 1981, power had to be reduced about 8 times to 50% to backwash the main condenser because of mussel fouling. On September 17, 1981, the unit began a power "coast down" and shutdown on September 26, 1981 for a routine scheduled refueling outage. During the reactor coolant system cooldown on September 26, 1981, reactor vessel level oscillations were experienced due to reference leg flashing. This event triggered detailed reviews by the licensee and the NRC concerning long term operation of the drywell at elevated temperatures.

#### (Outage)

Major activities during the 6 month outage included routine surveillance and maintenance, local leak rate testing, torus modification and repairs, refueling, TMI TAP modifications, drywell equipment inspection/repair, refurbishment of the salt service water system, masonry wall repairs, an integrated leak rate test, and main turbine overhaul.

#### (Startup Activities)

Following initial criticality on the refueled core on March 26, 1982, several independent problems were experienced. The safety-relief valve tail pipe temperatures were high indicating leakage. This was due to improper installation of the solenoid valves. Diverging reactor vessel water level instrumentation was observed during several startups from the cold condition. Although a specific cause for the anomaly was not determined, the instrumentation has been demonstrated to be operable. On April 1, 1982, the main turbine was tripped due to the identification of a blank flange left in a lube oil line. Later the same day, the reactor scrambled due to operational problems controlling reactor vessel level. On April 8, 1982, a high pressure scram resulted from an error in the method of testing main turbine control/stop/ and bypass valves. On April 9, 1982, the main turbine tripped due to a faulty

moisture separator high level dump valve controller. Between April 16 - 19, 1982, the main turbine was taken out of service to repair a generator hydrogen seal.

(Routine Operations)

Routine operations were resumed except for periodic power reductions to correct main condenser temperature, condensate demineralizer pressure drops, main turbine pressure regulation, fouling of intake screens and to conduct control rod pattern exchanges, and main condenser backwashing.

On May 12, 1982, an ATWS trip occurred from 98% power due to an undetected relay failure during surveillance testing. During startup on May 13, 1982 a second ATWS trip occurred due to a technician error while getting nameplate data from the wrong module. On May 19, 1982, a high power scram occurred following a turbine runback due to stator cooling temperature problems. Between May 23, 1982 and June 13, 1982 power was limited to 75% due to the failure of 'B' condensate pump. Routine full power reactor operations were continued throughout the remainder of the month of June, 1982 with the following two significant events occurring: 1) on June 3, 1982, an Emergency Alert was initiated due to a stuck TIP drive outside its shield. The Alert was terminated the same day; and 2) on June 11, 1982 small amounts of spent resins were observed on the roofs of several buildings and on grounds within the protected area. No off-site release was identified. The source of resin was identified to be the condensate demineralizer and has been corrected by hardware and administrative changes.

(2) Inspection Activities

Two NRC resident inspectors were assigned onsite for the entire appraisal period.

Total NRC Inspection Hours: 3735 (Resident and region based).  
Distribution of inspection hours is shown on Table 3.

A tabulation of inspection activities is shown in Table 4, and a tabulation of violations is shown in Table 5.

II. SUMMARY OF RESULTS

PILGRIM NUCLEAR POWER STATION

FUNCTIONAL AREAS

CATEGORY    CATEGORY    CATEGORY  
1            2            3

1. Plant Operations			X
2. Radiological Controls o Radiation Protection o Radioactive Waste Management o Transportation o Effluent Control and Monitoring		X	
3. Maintenance		X	
4. Surveillance (Including Inservice and Preoperational Testing)		X	
5. Fire Protection and Housekeeping			X
6. Emergency Preparedness	X		
7. Security & Safeguards		X	
8. Refueling		X	
9. Licensing Activities		X	

### III. CRITERIA

The following evaluation criteria were applied to each functional area:

1. Management involvement in assuring quality.
2. Approach to resolution of technical issues from a safety standpoint.
3. Responsiveness to NRC initiatives.
4. Enforcement history.
5. Reporting and analysis of reportable events.
6. Staffing (including management).
7. Training effectiveness and qualification.

To provide consistent evaluation of licensee performance, attributes associated with each criterion and describing the characteristics applicable to Category 1, 2, and 3 performance were applied as discussed in NRC Manual Chapter 0516, Part II and Table 1.

The SALP Board conclusions were categorized as follows:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appeared strained or not effectively used such that minimally satisfactory performance with respect to operational safety and construction is being achieved.

#### IV. PERFORMANCE ANALYSIS

##### 1. Plant Operations

The licensee's management has become increasingly aware of the need to conduct plant operations with a consistently high degree of quality. However, because of the need to respond to a large number of previously identified deficiencies, the involvement of both station and corporate management personnel has in many instances been reactive, rather than preventive, in nature.

This has led to a perceived weakness in the capability to aggressively monitor routine activities and a strength in response to significant events, operational transients, and NRC mandated actions.

Some examples of activities that have required a large amount of management time and attention include the following: 1) involvement and response to correcting deficiencies noted during NRC inspection and investigation relating to 10 CFR 50.44; correcting problems persisting from 1979-1981, 2) implementation of a large number of plant design changes during the refueling outage, 3) engineering design and response to NRC's NUREG 0737, 4) correction of previous design and construction deficiencies regarding masonry block walls, 5) review, evaluation, and submittal of information to the NRC regarding fire protection (App.R.) and equipment qualification (IEB 79-01B), 6) upgrading facilities, revising procedures and training personnel in recent Emergency Planning requirements, 7) repair/testing/evaluation of drywell equipment following past operation for long periods of time at elevated temperatures, and 8) staffing a large number of license/T.S. changes regarding issues such as degraded grid voltage, safety relief valves, high drywell temperature, core thermal limit changes, correction of Amendment 42 errors, suppression chamber level limits and combustible gas control system specifications.

Weakness in monitoring routine activities is evident by a lack of attention to detail and thoroughness and incomplete or untimely responses to identified deficiencies. Some examples are listed below:

- isolation of a ground in the 125v d.c. system was not thorough enough to detect the disabling of containment isolation valves
- scheduling of a battery bank removal was not thorough enough to detect possible system operability violations during refueling
- operators hanging red tags did not recognize that two orders required a breaker to be open and closed at the same time.
- several hours and a shift change elapsed before it was noticed that an RHR pump was running without a suction path



- a procedure was approved which provided no discharge path for an energized core spray pump.
- Plans were approved for conducting a hydrostatic test without meeting T.S. requirements for torus submergence
- operations personnel did not realize that the T.S. required ATWS equipment operable while in the SHUTDOWN mode
- Plans were approved for conducting the PCILRT without realizing the effects that inoperable masonry walls had on T.S. requirements for secondary containment integrity
- during startup testing, a blank was left in a lube oil line damaging a main turbine bearing.
- reviews of a vendor proposed turbine test were not thorough and as a result a reactor scram occurred
- reviews of T.S. requirements and logic diagrams were not thorough and as a result a violation of RPS instrumentation requirements occurred.
- Committee reviews of a proposed test were not thorough and failed to recognize the detrimental aspects of taking safety related reactor vessel water level instrumentation out of service during an operating mode.
- Committee reviews of procedure changes were not thorough enough to detect conflicts with original design criteria (i.e. valve positions).
- review of the T.S. was not thorough enough to realize that a leak rate test was required upon identification of an inoperable vacuum breaker alarm system.
- committee (or subcommittee) reviews of design and T.S. changes are sometimes not detailed enough to ensure that operational and surveillance procedure changes are recognized and implemented.

Corrective actions in response to NRC identified violations and licensee commitments have not always been thoroughly completed in a timely manner indicating a need for more management attention to commitment follow systems. Because management has been somewhat slow in directing corrective actions, working level/implementing personnel do not always take the initiative to initiate trouble reports and recommend corrective actions.

As an example, engineering analysis is not always provided in a timely manner to support the resolution of problems at the station. This has resulted in a reluctance to submit some further requests for assistance and possibly delaying the resolution of problems.

- a procedure was approved which provided no discharge path for an energized core spray pump.
- Plans were approved for conducting a hydrostatic test without meeting T.S. requirements for torus submergence
- operations personnel did not realize that the T.S. required ATWS equipment operable while in the SHUTDOWN mode
- Plans were approved for conducting the PCILRT without realizing the effects that inoperable masonry walls had on T.S. requirements for secondary containment integrity
- reviews of a vendor proposed turbine test were not thorough and as a result a reactor scram occurred
- reviews of T.S. requirements and logic diagrams were not thorough and as a result a violation of RPS instrumentation requirements occurred.
- Committee reviews of a proposed test were not thorough and failed to recognize the detrimental aspects of taking safety related reactor vessel water level instrumentation out of service during an operating mode.
- Committee reviews of procedure changes were not thorough enough to detect conflicts with original design criteria (i.e. valve positions).
- review of the T.S. was not thorough enough to realize that a leak rate test was required upon identification of an inoperable vacuum breaker alarm system.
- committee (or subcommittee) reviews of design and T.S. changes are sometimes not detailed enough to ensure that operational and surveillance procedure changes are recognized and implemented.

Corrective actions in response to NRC identified violations and licensee commitments have not always been thoroughly completed in a timely manner indicating a need for more management attention to commitment follow systems. Because management has been somewhat slow in directing corrective actions, working level/implementing personnel do not always take the initiative to initiate trouble reports and recommend corrective actions.

As an example, engineering analysis is not always provided in a timely manner to support the resolution of problems at the station. This has resulted in a reluctance to submit some further requests for assistance and possibly delaying the resolution of problems.

Notwithstanding the above, the licensee's management and staff have been able to produce technically sound and timely responses to significant operational events/transients, and other abnormal conditions (reactor scrams, turbine trips, load rejects, Anticipated Transient Without Scram (ATWS) recirculation pump trips (RPT) and Alternate Rod Insertions (ARI) trips, containment isolations, a stuck Traversing Incore Probe (TIP), and a release of spent resin onto roof tops within the protected area).

When mandated by the NRC to resolve Technical issues, the licensee has responded with indepth, sound, and thorough evaluations, reports, and corrective actions. The resolution of problems associated with long term operation of the drywell at elevated temperatures was well organized and managed at both the station and corporate levels. There is a need, however, to continue emphasis on licensee initiated indepth and timely analysis of abnormal conditions. Several Licensee Event Report (LER's) remain "open" pending completion of a station requested engineering analysis and the submittal of an "updated report." Additional attention is required to ensure timely resolution of these "open" LER's.

The NRC enforcement history during this period indicates the need for increased attention to and support for routine activities, especially procedure and T.S. adherence and follow-up of commitments (i.e. failure to perform a safety evaluation prior to disabling the minimum flow protection of an RHR pump, violation of a T.S. LCO for reactor protection system water level instrumentation, and failure to complete a shielding study modification as committed).

The position of Chief Operating Engineer has been left vacant for an extended period of time (January, 1981 - present). Although several personnel have been acting in this position they have had added duties and shared roles. The licensee has plans to make a permanent assignment in the near future. Significant turnover in project management has taken place; continuity in this function needs continued attention to ensure quality and thorough submittals of engineering analysis and resolution of technical issues.

Marked improvement in senior management support for correcting some of the above problems has been observed:

- A station management group was assigned to track proper completion of modifications made during the six month outage.
- Corporate management has taken an active role in properly correcting and reporting problems. A Corporate onsite representative has been assigned.

- The station has voluntarily reduced reactor coolant system operating pressure in order to increase safety relief valve simmer margin and to improve valve reliability. This has resulted in a slight (1 or 2%) reduction in power level.
- Plans are being made for dredging the intake structure in order to improve equipment cooling capability.
- A voluntary test was performed to evaluate coverage of the prompt notification system.
- A new training facility has been approved.
- The long term maintenance contract has been assigned to the original A/E.
- Reorganization has resulted in the assignment of a Sr. Vice President, and a second Vice President for Operations (reported on August 1, 1982).
- More detailed notes are being taken and put on a computerized list to track commitments, and
- additional support personnel have been assigned to track and respond to QA deficiency reports in a timely manner.

Many other improvements are in progress or planned for completion in conjunction with the licensee's response to a January, 1982 Order for Modification of License. However, while these changes in organization and policies are being made, management should ensure that all personnel conduct routine activities with more attention to detail and thoroughness. In addition, these personnel must be held accountable for activities under their control. This may enable the licensee to more consistently act in a preventive, rather than reactive, role.

Conclusion: Category 3

Board Recommendations: Maintain current resident inspector staffing and continue to monitor Performance Improvement Program progress.

## 2. Radiological Controls

During the previous period, three violations were identified. Confirmatory Action Letters were issued in February 1981 (spent resin spill from resin addition hopper) and in July 1981 (TMI Health Physics Category 'A' items). An enforcement conference was held in July 1981 in connection with the TMI items. Inspections in August, September and October 1981 identified incomplete and inadequate actions in relation to these letters. The licensee re-committed to complete the remaining items.

During the current period, one special and two routine inspections of the Radiological Controls were conducted by Region I Radiation Specialists. The special inspection involved the June 1982 release of spent resin from the plant vent. One transportation inspection at a burial site by a State Inspector was reviewed by Region I Health Physics Inspectors. One routine radwaste transportation inspection was performed by a region based specialist. The Resident Inspectors conducted monthly reviews of selected program areas and supplemented the region based program.

A Confirmatory Action Letter was issued on June 16, 1982 for the resin release from the plant vent. Five Radiation Protection violations were identified during this assessment period including two Severity Level IV violations involving: posting, adherence to radiation protection procedures, and control of high radiation areas and three Severity Level V violations involving not following radiation protection procedures and posting of notices to workers. A Severity Level III violation in radwaste transportation and burial was identified by a State Inspector. A Notice of Deviation was also issued regarding training and retraining commitments in radioactive waste generation, handling, and shipping.

### Radiation Protection

Although inspections during this assessment period, found that the licensee has not yet fully established and implemented an ALARA Program, a major outage was completed midway through this period with a reduction of personnel exposure. This reduction was due in part, to the use of significant pre-planning and the use of temporary shielding. Total man-rem exposure for 1981 (1836 man-rem) was fifty percent of the 1980 value. This is a notable achievement in light of the extended outage and nature of work performed. However, past operating experiences have resulted in the need to pursue an aggressive and extensive program of reducing sources of radiation throughout the plant.

The licensee's radiation protection organization activities during the spent resin release from the plant vent indicated that adequate radiological controls were established. The licensee cleaned up the spent resin in an expedient manner.

The resident inspector's review during the stuck traversing incore probe (TIP) event indicated that although proper notifications were made, the licensee failed to adequately control access to the high radiation area caused by the exposed TIP; however, the licensee's overall handling of the stuck TIP indicated a sound approach to this plant problem.

Excluding retraining of radiation protection personnel, which was found to be deficient, licensee implementation of corrective actions for Health Physics Appraisal findings were found acceptable. The retraining of Radiation Protection personnel was not detailed in procedures. Rather, retraining was at the discretion of the Chief Radiological Engineer. At the time of the inspection (September 1981), the licensee took no action to detail the retraining program in procedures.

#### Radioactive Waste

A special radiation specialist inspection of the release of spent resin via the plant ventilation system was conducted during the assessment period. The inspectors found that resin contamination of ventilation duct work had been a recurring problem and that a thorough investigation into its cause and completion of appropriate corrective action had not been taken. The inspectors also found that the licensee had not established a surveillance and preventative maintenance program for contaminated ventilation exhaust systems to ensure exhaust filter integrity. The resin was found to have been released through defective ventilation exhaust filters. As a result of the findings, a CAL was issued to confirm the licensee's plans for determining the source of the resin, preventing recurrence and establishment of a contaminated ventilation exhaust system surveillance and maintenance program, and other related items.

During a Radiation Protection inspection in September 1981 to review licensee implementation of commitments documented in a February 10, 1981 Confirmatory Action Letter dealing with a spill of spent resin from a resin addition hopper, it was found that two commitments were not implemented. A September 1, 1981 commitment to walk-down the condensate demineralizer system piping to identify anomalies between the as built system and system piping drawings was completed on September 11, 1981 after the licensee was notified by the inspector on September 4, 1981. The second commitment involved revision of piping diagrams if any anomalies were identified during the walk-down. The review of the licensee's actions on October 1, 1981 indicated two anomalies were discovered during the walk-down and appropriate drawing changes were made on October 2, 1981 when brought to the licensee's attention.

Notwithstanding the problems noted above, the licensee has shown improved attention to the area of radwaste operations. Extensive corrective actions have recently been taken to correct a problem with reactor water cleanup filter demineralizer sludge operations.

### Transportation

A single violation, identified by a State Inspector at a burial site, involved free-standing liquid in barrels. The violation was evidently an isolated instance and is not indicative of programmatic breakdown.

A routine radiation specialist inspection in February 1982, determined that the licensee had not established a formal training and periodic retraining program for those personnel involved in transfer, packaging, and transport of radioactive material as required by IE Bulletin 79-19.

This finding was included with the deviation which is discussed above (IE Bulletin 79-19).

### Effluent Control and Monitoring

Events are reported and analyzed in a timely manner.

A routine independent measurements inspection in July, 1981 (just prior to this period), determined that the licensee had a well documented and technically adequate program for routine effluent control and monitoring.

The review of the licensee's implementation of corrective actions for post accident sampling procedures, as described in a Confirmatory Action Letter, identified procedure deficiencies which could preclude the licensee from completely quantifying post accident releases. As an example, post accident sample counting procedures did not detail what action would be taken to analyze samples if the sample counting system dead time became too high, thereby resulting in the inability to completely quantify releases. The identified procedures have been revised and are currently being reviewed by the NRC.

Conclusion: Category 2

### Board Recommendations

NRC regional staff should complete the review of the open Health Physics Appraisal findings.

### 3. Maintenance

#### Analysis:

During this assessment period, routine observations were made by resident inspectors and two specialist inspections of specific maintenance activities. Four violations were identified: 1) failure to follow a station procedure for foreign material control during overhaul of MSIV's 2) failure to establish a program for housekeeping and cleaning of systems to meet industry standards committed to in the QA manual, 3) three examples of safety related work performed without ORC approved procedures (the licensee has disagreed with this finding and submitted a response to the NRC which is under review), and 4) performing maintenance on a valve with a red tag attached.

The licensee identified during startup testing that the solenoid valves for all four Safety-Relief Valves were installed 180° out of position. The vendor technical manual and installation instructions/ drawings did not clearly indicate this possible problem and the solenoid valves had no flow/orientation marking. The licensee's corrective actions were deemed appropriate.

Increased coordination has been observed between the maintenance and QC departments in an attempt to improve the quality of work.

The licensee's response to NSSS and NRC supplied information concerning missing jumpers on MOV open torque switches at other plants was not acted on until an inoperable HPCI injection valve triggered the review and subsequent corrective actions. Notwithstanding this, recent station management attention to implementing other NSSS supplied information (General Electric SIL's) for improving the reliability of safety related systems has been observed.

Inadequacies in the licensee's preventive maintenance program have received management attention and support. Consulting services have been procured to develop a master equipment list. The mechanical equipment portion is complete and a finalized list is expected by November, 1982. Milestones for implementation are being tracked by senior management and are part of the licensee's Performance Improvement Program.

Notwithstanding the above problems the licensee's overall maintenance program has made significant improvement during this evaluation period. A substantial maintenance workload was effectively completed during the recent refueling outage. In addition, recent NRC inspection has shown increased licensee management support in the maintenance area and has resulted in a reduction of the maintenance request backlog. Maintenance priorities appear to be well directed to the repair of equipment contributing to both the safe and efficient operation of the plant.

Conclusion: Category 2

Board Recommendation: None



#### 4. Surveillance

##### Analysis:

During this assessment period the following reviews of surveillance testing were made: 1) routine observation by resident inspectors, 2) one specialist inspection of inservice testing (IST)/primary containment integrated leak rate test (PCILRT) preparation, 3) one specialist inspection of previous core physics tests, 4) one specialist inspection of snubber testing, 5) one specialist inspection of the surveillance program, 6) one specialist inspection of calibration and test equipment, 7) one specialist inspection of local leak rate test, 8) one specialist inspection of the PCILRT, and 9) one inspection of core physics startup testing.

Several violations were identified that indicate inadequacies in program establishment and implementation, such as, 1) inadequate monitoring of drywell temperatures, 2) master surveillance schedule not established, 3) uncalibrated brush recorders used in RPS testing, 4) instrumentation control loops not calibrated at required frequencies, 5) failure to follow procedures for local leak rate testing, and 6) unauthorized maintenance performed to fix a leak during the PCILRT.

The licensee has had a poor history of completing required testing in selected areas. Corrective actions relating to past missed surveillances (SGTS charcoal filters, ATWS equipment, eleven once-per-cycle I&C surveillances) have been to strengthen the scheduling and tracking systems through the use of consultants, and computerization. However, during this period, several LER's indicate continued problems with completing/reviewing required tests in a timely manner.

Following a specialist inspection of the IST program, the licensee was not fully responsive to deficiencies pointed out in the area of prompt analysis of test data required by ASME Section XI pump and valve testing. Improvements have been recently noted in this area by observation of revised procedure implementation.

The unauthorized tightening of boundary leakage during the last PCILRT was a repetitive violation. The cause was determined to be ineffective communications between workers and supervisors, but suggests a need for closer first line supervision during this test.

Inspections of reactor engineering and core physics surveillance testing consistently indicate the existence of a well established and implemented program. Minor deficiencies are promptly corrected.

Conclusion: Category 2

Board Recommendation: None

5. Fire Protection and Housekeeping

Analysis:

During this assessment period, routine observations were made by the resident inspectors with one regional inspection of fire program implementation, and one regional inspection of the housekeeping program.

Six Level V violations were identified which indicate inadequate management attention to program establishment and implementation: 1) combustibles not removed near hot work, 2) improper storage of gas cylinders, 3) unacceptable levels of scrap and debris in safety-related areas, 4) improper storage of oil, 5) inadequate housekeeping programmatic procedures which did not meet requirements of the QA program industry standard commitments, and 6) inadequate supply of self contained breathing apparatus bottles for fire fighting.

Corrective actions by intermediate supervision to control gas cylinders were ineffective as evidenced by recurring problems. However, when senior corporate management was informed by the NRC, adequate and timely resolutions occurred.

Fire prevention and housekeeping standards during the refueling outage were lax, but, is contrasted with a significant effort to clean the plant prior to restart. Increased management attention and support since March 1982 has resulted in a noticeable improvement in general plant cleanliness in readily accessible areas. However, continued attention is needed in all other areas of the plant.

Internal Quality Assurance audits in the area of fire protection have been thorough and detailed. However, implementation of the licensee's corrective actions have been slow.

Minor violations are repetitive and indicate adequate care and attention are not being applied to fire barriers, instrumentation and equipment. In addition to the violations discussed above, the licensee has had a poor history of maintaining fire barriers operable or taking required measures (fire watches, patrols) upon identification of inoperable equipment. During this period 5 LER's are attributed to personnel error in not properly controlling or monitoring equipment. Resident observations between June and July, 1982 (Report 82-19 not issued yet) indicate continued repetitive violations of the control of fire barriers.

Additional training is deemed necessary to ensure implementing level personnel are fully aware of their duties and responsibilities;

- General Employee Training emphasizing adherence to posting on fire doors

- Operator Training emphasizing the T.S. and procedural requirements for fire barriers and instrumentation
- First line supervisor training to reemphasize the prohibitions of unauthorized or uncontrolled disabling or fire protection barriers
- Security force fire brigade member training on plant orientation/familiarization in infrequently entered areas

The licensee's management has supported selected needs in the fire protection area. A fire truck with pumping capability was procured in order to provide mobile protection for administrative trailers, including the Emergency Operations Facility, which are located away from the installed process building fire protection systems. The licensee has trained and qualified additional fire brigade members to help alleviate scheduling problems and shift assignments and a station operator has been assigned to assist the fire protection engineer with program implementation.

Increased management attention is needed to expedite procurement and implementation of a planned Halon system to replace the disabled carbon dioxide system for the cable spreading room and the two vital switchgear rooms. The licensee has been using fire patrols in these areas as compensatory measures to satisfy T.S. requirements for almost a year.

Fire protection/prevention program administration is assigned principally to a Fire Prevention Engineer with one assistant. However, implementation of testing and monitoring is performed principally by the Operations and Security staffs. Miscommunication and varying priorities have caused some of the deficiencies noted above. It is evident that either a restructuring of resources or better station management coordination is needed to ensure timely and thorough implementation of fire protection/prevention requirements.

Conclusion: Category 3

Recommendations: None

6. Emergency Preparedness

Analysis:

During this assessment period there were three inspections conducted: 1) resident observation of a September 1981 drill, 2) a team inspection of a full-scale exercise on March 3, 1982, and 3) resident observation during a declared Alert with a stuck Traversing In Core Probe within the reactor building.

As Emergency Preparedness Implementation Appraisal (EPIA) was conducted prior to this assessment period during July, 1981. No items requiring immediate corrective action were identified; however, 20 significant findings and 36 improvement items were identified. The licensee has responded to these findings and requested/held a meeting on August 5, 1982 to pursue prompt resolution of them with the regional staff.

A violation was issued by NRC headquarters for failure to install a prompt notification system (PNS) by February 1, 1982. Following resolution of problems relating to equipment placement on personnel property at various locations, the licensee's installation was complete on February 26, 1982 and was notified by the NRC that no further action was proposed concerning this violation. In June, 1982 on its own initiative, the licensee conducted a test for coverage of the PNS. This test was performed in anticipation of acceptance criteria being established by FEMA, and has resulted in the licensee's planned implementation of improvements.

The NRC evaluation of the March 3, 1982 exercise determined that the licensee demonstrated the capability to implement their Emergency Preparedness Program in a manner to adequately protect the health and safety of the public.

When the traversing incore probe stuck outside its shield in the reactor building in June, 1982, the licensee promptly analyzed and reported the event. Although no real threat to the public existed, the licensee acted conservatively in accordance with its procedures to implement the Emergency Plan and declared a station Alert.

Key positions are maintained filled on a priority basis. Two dedicated individuals have been assigned to maintain continued corporate involvement and to ensure that decision making is at a level that receives adequate review.

Although deficiencies were identified during the EPIA as noted above, the licensee has been responsive to NRC initiatives and has provided acceptable resolution in a timely, viable manner. Aggressive management attention and support in all aspects of Emergency Planning has been observed.

Conclusion: Category 1

Board Recommendation: None

7. Security and Safeguards

Analysis

Inspections during the assessment period included routine observations by resident inspectors, one region based reactor inspector's review of vital areas controls, one routine and one special regional security inspection, and one routine regional material control and accounting inspection. Two level III violations were identified - one involving improper control of card keys at radiation control clothing areas, and one involving improper control of vital area portals during computer inoperability.

Although the licensee was generally effective in maintaining the security program during the assessment period, management attention to specifics of the program need improvement. The manning of vital area portals during security computer outages was not always timely. Staffing limitations forced significant use of overtime. Coordination between security shift staff and operation shift staff was not always effective. Written procedures for the storage and control of Safeguards information and for implementation of the physical security program require more detail.

Problems identified by either internal or NRC inspections were usually quickly corrected with actions to prevent recurrence generally adequate. However a problem with shift assignments and conflicts between security posts and fire brigade membership persisted for an extended period of time and necessitated NRC resident inspector involvement and an increase of the licensee's security staff to effectively resolve the collateral duty assignments.

Because the security force personnel have assigned fire protection responsibilities management attention is needed to more closely monitor the assignments; duties and responsibilities of security personnel.

Conclusion: Category 2

Board Recommendations: None

## 8. Refueling

### Analysis:

Resident Inspectors routinely reviewed activities during the six month refueling/modification outage. One specialist inspection of fuel movement was conducted and several other regional specialist inspections were performed which reviewed related activities (testing, modification, radiological controls, and startup physics testing). One minor violation was identified relating to a station procedure for membership at a pre-refueling meeting, and a weakness in the QA program requirements for borrowed control rod blade guides was identified.

Although the licensee had assigned licensed operators to assist the planning and scheduling group several errors were identified by the Resident Inspectors in the sequence of maintenance and testing activities which could have led to violations of T. S. Limiting Conditions for Operation (vital battery bank removal, masonry block wall inoperability and the affect on safety system operability during refueling, hydrostatic testing, and the PCILRT). These examples are evidence of lack of attention to detail and thoroughness during the scheduling and planning of complex outage tasks.

A number of factors contributed to the lengthy shutdown: 1) large number of outage tasks, 2) heavy reliance on contractor labor and supervision that strained licensee ability to monitor these activities, 3) contractor labor disputes and job actions culminating in a court injunction to prevent picket line disruption.

Considering the large number of plant design changes implemented during this outage, the licensee's startup management group provided a marked improvement in tracking of essential elements of plant modifications (post work testing, procedure and drawing changes, training, and licensing changes).

Fuel receipt, inspection, and movement were conducted essentially incident free. Corrective action following errors made during the 1980 outage (civil penalty for moving fuel without secondary containment integrity, dropped fuel, and inadvertant lift of spent fuel) were effective as evidenced by lack of repetition during followup inspections. Management attention to training and staffing for fuel movement contributed to these improvements. Three shift technical advisors were trained and qualified to be refueling SRO's and, with the use of a training instructor (SRO qualified), allowed the normal shift SRO complement to more closely monitor routine activities. Moreover, special training programs were held prior to refueling for all personnel involved (technicians, maintenance, operations, supervisors) to review past incidents and review procedures and prerequisites for the upcoming activities. In addition the licensee trained and made use of there own personnel for fuel activities as opposed to relying heavily on contractor personnel in the past.

Considering the large amount of maintenance and modification work involving radiation work permits in high radiation areas and contamination control areas, radiological safety was effectively controlled.

Fire protection and housekeeping were not maintained at acceptable levels throughout the entire outage. Specific violations are described in that functional area (5) but indicates an insufficient level of management attention to routine monitoring of ongoing activities.

The licensee's senior management has recognized many of the inadequacies in outage scope, scheduling, and supervision and has made plans to prevent recurrence: 1) the Startup Management group will become more formalized, 2) a senior licensee manager is planned to be in charge of outage scheduling and planning on a continuing basis. This manager may report to the Senior Vice President level, 3) the long term maintenance/modification contractor has already been changed to the Bechtel Corporation, and 4) closer coordination between licensee project management and the NRC:NRR in planning and scheduling NRC required modifications.

Conclusion: Category 2

Board Recommendation: None

9. Licensing Activities

Analysis

Evaluation and monitoring of licensing activities included resident inspections during a six month refueling outage (license changes resulting from modifications) a specialist inspection of controlled copies of the T.S., and routine contact between the NRC and BECO's licensing staff.

Prior to January, 1982, the licensee did not appear to effectively plan and prioritize work assignments. In addition, little evidence existed that corporate management was frequently involved in site activities and serious breakdowns in design control and technical reviews were apparent. The licensee assigned the Nuclear Operation Support Department Manager to lead a "Startup Management" group of planners and engineers to assist in tracking licensing commitments and modifications through to completion prior to restart from the refueling outage. While several errors in the tracking of these licensing issues were identified by the NRC, there was marked improvement over past practices.

In January, 1982 the NRC issued two level III violations and a large civil penalty following the review of the combustible gas control system (10 CFR 50.44) and a material false statement made to the NRC concerning its operability. Events contributing to these violations occurred between 1979 and 1981 and are described in the civil penalty and notice of violations described above.

Since the imposition of the civil penalty and order requiring improvement in management practices, involvement of management in controlling and assuring quality has improved substantially. BECO has appointed a Senior Vice President (with cooperation and support from the company Board of Directors) who has taken measures to assure quality and reverse the trend in performance.

Since March, 1982, the licensee has made an effort to improve the timeliness, thoroughness, and acceptability of responses to technical issues. Previously, considerable NRC effort and/or repeated licensee submittals were needed to obtain acceptable resolutions and extensions of time were frequently required. A specialist NRC inspection pointed out the result of past practice of submitting vague and general responses to NUREG 0737 requests. A frequent past practice was to inform the NRC that BECO had met the "intent" of the requirement. The licensee initiated a detailed review of previous submittals and provided the NRC with a more thorough description of actions taken to date.

Many regulatory issues remain outstanding although the licensee has begun to focus on resolution of these issues in a more thorough and timely basis.



Low staffing levels at the licensing, project management and engineering levels has led to a backlog of licensee regulatory requirement implementation. Considerable effort is usually required by the NRC to obtain acceptable and complete responses, further adding to the workload. Further delays are experienced due to the large turnover of corporate support personnel. The utility is making efforts to resolve these problems through aggressive recruitment and reorganizational efforts.

Since early in 1982 the utility has shown substantial improvements in performance and appears committed to maintaining the high level.

Conclusion - Category 2

Board Recommendation: None

V. SUPPORTING DATA AND SUMMARIES

1. Licensee Event Reports

Tabular Listing

Type of Events:

A. Personnel Error	12
B. Design/Main./Constr./Install.	5
C. External Cause	1
D. Defective Procedure	2
E. Component Failure	12
X. Other	6
Total	<u>38</u>

Licensee Event Reports Reviewed:

Report No. 81-49/01T through 82-21/03L

Causal Analysis

Five sets of common mode event chains were identified:

- a. LERs 81-56, 82-01, 82-14, 82-15, and 82-21 involve improper operation of fire protection equipment or failure to perform required compensatory actions upon identification of inoperable fire protection equipment.
- b. LERs 82-04, 82-07, 82-10, 82-15, 82-16, and 82-17 involve missed surveillance tests or an inadequate testing program.
- c. LERs 81-50, 81-56, 82-11, and 82-17 involved exceeding limiting conditions for operation through operator error, lack of attention to detail, or lack of familiarity with T.S. requirements.
- d. LERs 81-55, 81-64, and 82-19 involve events caused by lack of timely corrective actions, inadequate safety committee reviews, or management support.
- e. LERs 82-09 and 82-13 involve inoperable HPCI high temperature switches.

2. Investigation Activities

An investigation was conducted between November 24, 1981 and January 7, 1982, of the circumstances surrounding the material false statement contained in the BECo letter to the NRC dated October 19, 1979 regarding compliance with 10 CFR 50.44 and to determine why the NRC was not promptly notified. It was determined that the false statement was not deliberately made, that the contrary information subsequently developed by the BECo staff was not intentionally withheld and that these items resulted from a lack of effective management.

### 3. Escalated Enforcement Actions

#### a. Civil Penalties

A civil penalty of \$550,000 was assessed on January 18, 1982 for:

- 1) Failure to comply with the requirements of 10 CFR 50.44 (breakdown in control of design, modification, maintenance, procedure development and drawing control) (\$250,000)
- 2) submittal of false information to the NRC and subsequent delay of notification to the NRC of known inaccurate information (\$250,000), and
- 3) failure to comply with the T.S. limiting conditions for operation for the RCIC containment isolation valves (\$50,000).

#### b. Orders

Order Modifying License dated January 18, 1982 requiring the submittal within 30 days of a comprehensive plan of action to yield an independent appraisal of site and corporate management, recommendations for improvements in management controls and oversight, and a review of previous compliance with NRC requirements.

Order Modifying License dated January 19, 1982, extending the date for completion of Mark I torus modifications.

Order Modifying License dated February 16, 1982, extending the date for submittal of the performance improvement plan be extended to March 19, 1982.

#### c. Confirmatory Action Letters

CAL 82-05 dated February 18, 1982 confirming actions to be taken prior to plant restart from the current refueling outage regarding 1) licensing issues, 2) system modifications, 3) verification of plant status, 4) audit deficiencies, and 5) prompt notification system.

CAL 82-17 dated May 12, 1982 confirming actions to be taken regarding the correction of deficiencies identified with the prompt notification system.

CAL 82-19 dated June 16, 1982 confirming actions to be taken regarding the identification of spent resin on roof tops and pavement within the protected area.

4. Management Conferences Held During the Assessment Period

Management Meeting at the Region I office on October 15, 1981, to discuss management controls of safety related activities including violations identified during Inspections 81-18 and 81-22, PAB results, and an interim SALP review. (Meeting No. 50-293/81-29).

Management Meeting at NRC headquarters on January 28, 1982 to provide a status report of implementing requirements of the NOV/Proposed Civil Penalty and Order Modifying License regarding an independent appraisal of BECo management practices.

Management Meeting at the Region I office on May 25, 1982, regarding the status of the Performance Improvement Plan.

TABLE 1  
TABULAR LISTING OF LERs BY FUNCTIONAL AREA  
PILGRIM NUCLEAR POWER STATION

<u>Area</u>	<u>Number/Cause Code</u>	<u>Total</u>
1. Plant Operations	2/A, 2/B, 6/E, 3/X	13
2. Radiological Controls	1/X	1
3. Maintenance	2/A, 1/B, 2/E, 1/X	6
4. Surveillance	3/A, 1/B, 2/D, 3/E, 1/X	10
5. Fire Protection	5/A, 1/B, 1/C, 1/E	8
6. Emergency Preparedness	None	
7. Security and Safeguards	None	
8. Refueling	None	
9. Licensing Activities	None	
	Total	38

Cause Codes:

- A - Personnel Error
- B - Design, Manufacturing, Construction, or Installation Error
- C - External Cause
- D - Defective Procedures
- E - Component Failure
- X - Other

TABLE 2  
PILGRIM NUCLEAR POWER STATION  
LER SYNOPSIS  
September 1, 1981 - June 30, 1982

<u>LER Number</u> (Type)	<u>Summary Description</u>
81-49/01T (24 hour)	RBCCW heat exchanger salt water side bypass flow due to deformation of the pass partition plates.
81-50/01T (24 hour)	RCIC isolation valves open and inoperable due to deenergization of dc power to control logic.
81-51/01T (24 hour)	Broken 1 inch test connection on RHR minimum flow line.
81-52/03L (30 day)	Torus temperature limit exceeded.
81-53/03L (30 day)	Valve seat leakage failures during LLRT.
81-54/01T (24 hours)	Engineering analysis per IEB 80-11 revealed masonry block walls that would not withstand design loading.
81-55/01T (24 hour)	High drywell temperature - vessel level oscillations.
81-56/01T (24 hour)	Fire watch not posted while CO <sub>2</sub> system disabled.
81-57/03L	Loose and sheared hold down bolts on RHR valve operators.
81-58/01T (24 hour)	CO <sub>2</sub> system discharge test failed.
81-59/03L (30 day)	Secondary Containment leak rate test failure.
81-60/03L (30 day)	APRM/IRM bypass switch allows min. instrumentation for rod block function to be violated.
81-61/01T (24 hour)	Gouges identified in torus shell during inspection.

TABLE 2 (Continued)

<u>LER Number</u> (Type)	<u>Summary Description</u>
81-62/01T (24 hour)	Safety Relief Valves failed to actuate at required setpoint.
81-63/04T (10 day)	Anomalous measurement: CS-137 in cranberries.
81-64/03L (30 day)	RHR pump operation without a suction path due to corroded contacts in pump trip logic.
81-65/03L (30 day)	LLRT failure of MSIV due to lack of locking plates on hold down bolts.
82-01/03L (30 day)	Sliding fire door inoperable.
82-02/03L (30 day)	Frozen pressure switch sensing line for diesel fire pump.
82-03/99L (30 day)	Corporate organization change.
82-04/01T (24 hour)	Flanges not included in Type 'B' LLRT program.
82-05/01T (24 hour)	Missing or loose pipe supports on CRD system.
82-06/01T (24 hour)	Broken set screws on HPCI stop valve main disc flange.
82-07/01T (24 hour)	Nonconservative setpoints for HPCI/RCIC/RWCU high flow isolation function.
82-08/01T (24 hour)	Missing jumper on HPCI injection valve open torque switch.
82-09/03L (30 day)	Setpoint drift of HPCI high steam line temperature switches.
82-10/03L (30 day)	Late review of surveillance test acceptance criteria.

TABLE 2 (Continued)

<u>LER Number</u> (Type)	<u>Summary Description</u>
82-11/01T (24 hour)	T.S. actions not followed for inoperable reactor water level instrumentation.
82-12/03L (30 day)	'A' Diesel Generator inoperable due to faulty tachometer unit.
82-13/03L (30 day)	HPCI high temperature switch failed to operate.
82-14/01T (24 hour)	Sliding fire door inoperable.
82-15/03L (30 day)	Missed fire protection surveillance test.
82-16/03L (30 day)	Missed surveillance test on APRM system.
82-17/03L (30 day)	Missed surveillance test required by T.S. LCO for failed torus-drywell vacuum breaker alarm.
82-18/03L (30 day)	Inoperable fire alarm panel reset switch.
82-19/03L (30 day)	'A' SGTS filter plugged with resin beads from condensate demineralizer operations.
82-20/03L (30 day)	Setpoint drift of jet pump riser d/p switches.
82-21/03L (30 day)	Fire door blocked open.



TABLE 3  
INSPECTION HOURS SUMMARY (9/1/81 - 6/30/82)  
PILGRIM NUCLEAR POWER STATION

	<u>HOURS</u>	<u>% OF TIME</u>
1. Plant Operations	1172	32
2. Radiological Controls	409	11
3. Maintenance	318	9
4. Surveillance	499	13
5. Fire Protection/Housekeeping	245	7
6. Emergency Preparedness	227	6
7. Security and Safeguards	261	7
8. Refueling	280	7
9. Licensing Activities	158	4
Other	<u>166*</u>	<u>4</u>
	<u>3735</u>	<u>100</u>

\*\*Total

\* 166 hours of region based investigation in response to material false statement involving 10 CFR 50.44.

\*\* Allocations of inspection hours vs. Functional Areas are approximations based on inspection report data. Does not include 528 hrs. for the Emergency Preparedness Appraisal which ended 8/14/81, just prior to the beginning of this assessment period.

TABLE 4  
INSPECTION REPORT ACTIVITIES  
PILGRIM NUCLEAR POWER STATION

<u>REPORT NUMBER</u> <u>INSPECTOR(S)</u>	<u>AREAS INSPECTED</u>
81-18 (Resident/Specialist)	Special inspection of implementation of 10 CFR 50.44
81-19 (Resident)	Routine, operations, surveillance, maintenance, PAB followup, Event followup, and Emergency drill
81-20 (Specialist-PAB)	PAB team inspection of committee activities, QA audits, design changes, maintenance, operations, corrective action systems, training, and procurement
81-21 (Specialist)	Radiation Protection, IAL followup, HP Appraisal followup
81-22 (Resident)	Special inspection of primary containment isolation valve inoperability
81-23	N/A number not used
81-24 (Resident)	Routine operations, refueling, maintenance, housekeeping, fire protection, event followup, PAB followup
81-25 (Specialist)	Refueling
81-26 (State of South Carolina)	Burial site inspection - Regional office review of report
81-27 (Specialist)	Security
81-28 (RI Management)	Management Meeting NUREG 0737 Post Accident Sampling
81-29 (RI Management)	Enforcement conference 10 CFR 50.44, containment isolation, interim SALP, IAL's

TABLE 4 (continued)

<u>REPORT NUMBER</u> <u>INSPECTOR(S)</u>	<u>AREAS INSPECTED</u>
81-30 (Specialist)	Inservice Testing, PCILRT preps, high drywell temperature
81-31 (Resident)	Routine operations, refueling, surveillance, maintenance, IEB followup
81-32 (Specialist)	Startup physics testing
81-33	N/A Number not used
81-34 (Specialist)	Pipe supports - snubber testing
81-35 (Resident)	Routine operations, refueling, maintenance, IEB followup
81-36 (Specialist)	PAB followup, surveillance, housekeeping
81-37 (Investigation)	Special investigation surrounding information submitted to the NRC pertaining to 10 CFR 50.44
82-01 (Resident/Specialist)	Routine operations, surveillance, maintenance, IEB followup, fire protection, startup testing, TMI TAP followup
82-02 (Specialist)	Calibration, surveillance, test and measuring equipment, security
82-03 (Specialist)	Special followup on security violations
82-04 (Specialist)	Plant modifications, LLRT
82-05 (Specialist)	QA Audit implementation, surveillance, modifications
82-06 (Specialist)	Radwaste/Transportation
82-07 (Specialist)	IEB 80-11, Masonary walls
--- (NRC Headquarters)	Special report regarding Prompt Notification System (sirens)

TABLE 4 (continued)

<u>REPORT NUMBER</u> <u>INSPECTOR(S)</u>	<u>AREAS INSPECTED</u>
82-08 (Specialist)	Fire Protection
82-09 (Specialist/Resident)	Observation of Emergency Drill
82-10 (Resident/Specialist)	Routine operations, IAL followup of startup preparation, surveillance, maintenance, event followup, radiation exposure, TMI TAP followup
82-11 (Specialist)	PCILRT observation
82-12 (Resident)	Routine operations, surveillance, maintenance, plant trips, Performance Improvement Program
82-13 (Specialist)	Modifications, Design control
82-14 (Specialist)	Routine radiation protection followup of open items
82-15 (Specialist)	Material Control and Accountability
82-16 (Resident/Specialist)	Routine operations, surveillance, maintenance, IEB/IEC followup, Performance Improvement Program
82-17 (Specialist)	Training
82-18 (Specialist)	Startup physics testing, followup of TIP machine testing
*82-19 (Resident)	Routine operations, event followup, fire protection, surveillance, maintenance, IEB followup
*82-20 (Specialist)	Special inspection of radiation protection and followup of spent resin release

\* Reports not issued yet.

TABLE 5  
VIOLATIONS (9/1/81 - 6/30/82)  
PILGRIM NUCLEAR POWER STATION

A. Number and Severity Level of Violations

a. Interim NRC Policy Severity Level (September 1, 1981 - March 9, 1982)

Severity Level I	0
Severity Level II	0
Severity Level III	6
Severity Level IV	5
Severity Level V	17
Severity Level VI	2
Deviation	1

b. NRC Policy Severity Levels (March 10, 1982 - June 30, 1982\*)

Severity Level I	0
Severity Level II	0
Severity Level III	1
Severity Level IV	4
Severity Level V	3
Deviation	1

Total Violations                      38                      Total Deviations                      2

B. Violations Vs. Functional Area

(1) September 1, 1981 - March 9, 1982

FUNCTIONAL AREAS	<u>Severity Levels</u>							DEV
	I	II	III	IV	V	VI		
1. Plant Operations	0	0	3	3	5	0	0	
2. Radiological Controls	0	0	1	1	3	0	1	
3. Maintenance	0	0	0	0	2	0	0	
4. Surveillance	0	0	0	1	1	1	0	
5. Fire Protection	0	0	0	0	5	0	0	
6. Emergency Preparedness	0	0	1	0	0	0	0	
7. Security & Safeguards	0	0	1	0	0	0	0	
8. Refueling	0	0	0	0	1	0	0	
9. Licensing Activities	0	0	0	0	0	1	0	
Totals	0	0	6	5	17	2	1	

TABLE 5 (Continued)

B. Violations Vs. Functional Area

(2) March 10, 1982 - June 30, 1982\*

FUNCTIONAL AREAS	<u>Severity Levels</u>					
	I	II	III	IV	V	DEV
1. Plant Operations	0	0	0	1	1	1
2. Radiological Controls*	0	0	0	1	0	0
3. Maintenance	0	0	0	1	0	0
4. Surveillance	0	0	0	0	2	0
5. Fire Protection*	0	0	0	0	0	0
6. Emergency Preparedness	0	0	0	0	0	0
7. Security & Safeguards	0	0	1	0	0	0
8. Refueling	0	0	0	1	0	0
9. Licensing Activities	0	0	0	1	0	0
Totals	0	0	1	4	3	1

Total Violations = 38  
Total Deviations = 2

\* Does not include the following reports, not yet issued:

- 82-19 - Resident Inspector
- 82-20 - Special Health Physics

TABLE 5 (Continued)

C. Summary

Inspection No.	Inspection Date	Subject	Req.	Sev.	Area
81-18	June 15 - Sept. 30	Failure to have an operable combustible gas control system (multiple examples of design errors, procedural and drawing errors, and inadequate safety reviews)	10 CFR 50.44	III	1 (9)*
81-18	June 15 - Sept. 30	Failure to inform the NRC of the erroneous statement that an installed system met the requirements of 10 CFR 50.44 - Material False Statement	T.S.	III	1 (9)*
81-19	August 18 - Sept. 30	Failure to follow station procedure	T.S.	V	1
81-19	August 18 - Sept. 30	Failure to perform a safety evaluation prior to disabling protection for an RHR pump	10 CFR 50.59	IV	1
81-21	August 31 - Oct. 2	Failure to post a high radiation area	T.S.	IV	2
81-21	August 31 - Oct. 2	Failure to adhere to radiation protection procedures for radiation work permits.	T.S.	V	2
81-21	August 31 - Oct. 2	Failure to post copies of NOV's involving radiation protection	10 CFR 19	V	2
81-22	Sept. 16 - Sept. 17	RCIC containment isolation valves were left open when their control instrumentation was inoperable	T.S.	III	1
81-24	Dec. 1, 1981- Jan. 18, 1982	Operation at drywell temperatures above FSAR description without adequate safety evaluations	10 CFR 50.59	IV	1
81-24	Dec. 1, 1981- Jan. 18, 1982	Failure to adequately prepare and implement procedures for coping with high drywell temperatures	T.S.	V	1(4)*

TABLE 5 (Continued)

C. Summary

Inspection No.	Inspection Date	Subject	Req.	Sev.	Area
81-24	Dec. 1, 1981- Jan. 18, 1982	Failure to promptly evaluate and correct conditions adverse to quality	10 CFR 50 App B	V	1
81-24	Dec. 1, 1981- Jan. 18, 1982	Security access card keys not properly controlled	Security Plan	III	7
81-24	Dec. 1, 1981- Jan. 18, 1982	Combustibles were not removed from area near hot work	T.S.	V	5
81-24	Dec. 1, 1981- Jan. 18, 1982	Improper equipment tagging	T.S.	V	1 (3)*
81-25	Oct. 15 - Oct. 18, 1981	Failure to have all O&C members present at a pre-refueling meeting	T.S.	V	8
81-26	July 20, 1981	Transported radioactive materials with liquid in drums	10 CFR 30.41	III	2
81-35	Nov. 1 - Nov. 30	Control/Storage of combustible gas cylinders was not in accordance with station procedures	T.S.	V	5
81-35	Nov. 1 - Nov. 30	Failure to establish and implement procedures for the control of combustible scrap, waste, debris	T.S.	V	5
81-35	Nov. 1 - Nov. 30	Failure to establish and implement procedures for the control of combustible oil	T.S.	V	5
81-35	Nov. 1 - Nov. 30	Control of foreign material during repairs to MSIV's was not in accordance with procedure	T.S.	V	3
81-36	Nov. 30, 1981- Dec. 4, 1981	A master surveillance schedule was not established	T.S.	VI	4
81-36	Nov. 30, 1981- Dec. 4, 1981	T.S. Amendments were not properly entered into controlled volumes	T.S.	VI	9 (1)*



TABLE 5 (Continued)

C. Summary

Inspection No.	Inspection Date	Subject	Req.	Sev.	Area
81-36	Nov. 30, 1981- Dec. 4, 1981	Program and procedures were not established for housekeeping and system cleaning that meet the standards stated in the QA Manual	10 CFR 50 App B QAM	V	3 (5) *
82-01	Jan. 18, 1982- Feb. 28, 1982	Workers were not properly instructed of the storage and transfer of radioactive resins	10 CFR 19.12	V	2
82-01	Jan. 18, 1982- Feb. 28, 1982	Procedures were not adequately established and implemented to provide required numbers of SCBA units for fighting fires	T.S.	V	5
82-02	Jan. 1 - Jan. 15, 1982	Uncalibrated brush recorders were used during RPS surveillance	10 CFR 50 App B	V	4
82-02	Jan. 1 - Jan. 15, 1982	Maintenance activities were performed without using approved procedures	T.S.	IV	3
82-02	Jan. 1 - Jan. 15, 1982	Instrumentation was not calibrated at frequency specified in station procedures	T.S.	V	4
82-02	Jan. 1 - Jan. 15, 1982	Improper control of access to Vital Areas	Security III Plan		7
82-04	Jan. 25 - Jan. 29, 1982	Failure to implement procedures for LLRT and drawing change revisions	T.S.	V	4 (1) *
82-04	Jan. 25 - Jan. 29, 1982	Drawings and procedures did not identify the as-built condition of valves in piping systems	10 CFR 50 App B	IV	1
82-05	Feb. 1 - Feb. 5, 1982	Untimely corrective action to internal QA Audit Deficiency Reports	10 CFR 50 App B	V	1
82-06	Feb. 10 - Feb. 12, 1982	Training and requal. program for personnel who operate and process radioactive waste not implemented as committed	Commitment IEB 79-19	DEV	2

TABLE 5 (Continued)

C. Summary

Inspection No.	Inspection Date	Subject	Req.	Sev.	Area
N/A	Feb. 12, 1982	Prompt Notification System (sirens) not installed by February 1, 1982	10 CFR 50.54	III	6
82-10	March 1 - April 4, 1982	Performed maintenance on valve with red tag attached	T.S.	V	1 (3) *
82-10	March 1 - April 4, 1982	Plant shielding study mod. (truck lock door panel) not completed as stated in response to NRR	NUREG 0737	DEV	6
82-11	Feb. 25 - Feb. 28, 1982	An unauthorized adjustment was made to a leaking flange during the conduct of the PCILRT	10 CFR 50 App J	IV	4
82-12	April 5 - May 9, 1982	Failure to follow actions required by T.S. with inoperable reactor vessel water level instrumentation	T.S.	IV	1
82-13	April 12 - April 16, 1982	Inadequate design control, for interfaces and verification	10 CFR 50 App B	IV	9 (5) *
82-16	May 10 - June 13, 1982	Failure to lock or control access to a high radiation area (stuck TIP drive)	T.S.	IV	2

( ) \* secondary area involved