

ATTACHMENT 1

U.S. NUCLEAR REGULATORY COMMISSION
REGION I
SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE
(INSPECTION REPORT 50-354/84-26)
PUBLIC SERVICE ELECTRIC AND GAS COMPANY

HOPE CREEK GENERATING STATION
ASSESSMENT PERIOD: AUGUST 1, 1983 - OCTOBER 31, 1984
BOARD MEETING DATE: December 21, 1984

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I. INTRODUCTION

A. Purpose and Overview

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

The assessment period covered in this report is August 1, 1983 through October 31, 1984. The prior assessment period was August 1, 1982 through July 31, 1983. Significant findings from prior assessments are discussed in the applicable Performance Analysis (Section III) functional areas.

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

B. SALP Review Board and Attendees

SALP Review Board Members

R. Starostecki
H. Kister
J. Strosnider
W. Bateman
S. Ebneter
D. Wagner

Other Attendees

R. Blough
E. Kelly
R. Urban

C. Background

1. Licensee Activities

This assessment period marked the end of many construction activities and the beginning of the turnover process and preoperational testing at Hope Creek. Major pieces of equipment were installed, e.g., the recirculation, core spray, and RHR pumps and motors. Construction emphasis shifted from a bulk quantity installation mode to a system completion mode to support the preoperational test program. The craft work force held steady at about 3100 people and the total site population averaged about 5500 people. Hope Creek Operations continued to staff up and 294 of 345 positions have been filled. In addition,

Operations procedure development and approval effort was 46% completed and Operations commenced 24 hours per day manning of the control room on December 16, 1983. Construction completion increased by 20% from 72% to 92%. (This compares to an 18% increase during the preceding SALP evaluation period which was shorter in duration.) The licensee's target fuel load date remained at January 1986. The Hope Creek Safety Evaluation Report was issued by NRR in October 1984 as NUREG-1048.

A major milestone was achieved when the control room complex was turned over to the licensee in December 1983. Because of some unique problems associated with the Bailey control room complex, one in particular being an induced voltage problem, the completion of the first safety-related preoperational test was delayed beyond the end of this assessment period. Of 196 scheduled turnovers, 55 were accepted by the licensee and of 134 preoperational tests, 7 nonsafety related tests were completed. Work on installation of the Hope Creek simulator continued and scheduled for completion in February 1985.

The licensee undertook several initiatives of note during this assessment period:

- A transition plan was established and implemented to coordinate orderly transfer of the Hope Creek project from the construction phase to operations. Implementation of the plan began in August 1984.
- A documentation and record turnover (DART) team was established to identify all records and schedule their turnover, format, and location (storage). The DART team is tied in with the Bechtel documentation system and the project transition plan. The team contacted other utilities in an attempt to learn from their experience and factored this information into their program.
- A program was established and implemented to upgrade the morale of the Hope Creek work forces. It is called the PRIDE Program and its major thrust was to improve communications. Particular attributes include a suggestion program, problem solving and work methods improvement teams, newsletter, electronic billboards, employee recognition program, and general site surveys of employee attitudes and concerns. The program has improved communications and morale.
- A third lane was added to the access road which alleviated the traffic problems that were the source of much discontent.

- Bechtel QA undertook a review of all past 10 CFR 21 reports to determine if any were applicable to Hope Creek. Bechtel obtained a 10 CFR 21 printout from the Public Document Room and reviewed all items for applicability to Hope Creek. Seventy potential items were identified and forwarded to Bechtel project engineering for evaluation.
- The Response Coordination Team (RCT) was established to coordinate closure of NRC Bulletins, Circulars, and Information Notices. It is chaired by a single individual who is assigned full time. RCT efforts have significantly improved the quality of and turnaround time for responses. The RCT has also undertaken to investigate and resolve NRC Generic Letters, GE SIL's and TIL's, and INPO identified items.
- Licensee QA established a program to verify that corrective actions taken to correct past violations are still in effect. This involved identification of appropriate violations and implementation of a surveillance program. This initiative was taken in response to a NRC concern.
- The licensee established an independent program to receive and evaluate safety concerns of any site employee - either past or present. This initiative is intended to surface and resolve safety concerns at an early date.
- Based on lessons learned at other sites, the licensee and Bechtel modified field engineering's participation in the construction completion process. In particular, field engineering was made responsible for inspection of completed safety-related items prior to turnover to QC for inspection. This specific assignment of responsibility has resulted in low QC reject rates.

These initiatives demonstrate that the licensee is dedicated to ensuring Hope Creek is a quality project.

2. Inspection Activities

Twenty-four inspections were conducted: nine by the resident, fourteen by region-based inspectors, and one by a regional based construction team. One management meeting was held to discuss NRC inspection activities during the preoperational and startup phases and to update Region I management on the Hope Creek project status.

A second NRC inspector was assigned to Hope Creek to monitor the preoperational, startup, and operational phases. His assignment was effective November 4, 1984.

Total inspection time was 2156 hours by resident and region-based inspectors including 707 hours attributable to the Regional Construction Team Inspection (CTI). The distribution of inspector hours is shown in Table 1. Enforcement Data and inspection activities are summarized in Tables 2 and 3, respectively. Table 4 summarizes the status of construction deficiency reports during the assessment period.

II. 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 events and construction deficiencies.
6. Staffing (including management).
7. Training effectiveness and qualification.

To evaluate licensee performance consistently, attributes of Category 1, 2, and 3 performance were applied as discussed in NRC Manual Chapter 0516, Part II and Table I. The categories are defined 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 construction performance 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 construction performance 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 construction performance is being achieved.

The SALP Board also categorized the licensee's performance trend during this assessment period. That categorization describes the general or prevailing tendency (the performance gradient), and is defined as follows:

Improved: Performance generally improved during this SALP period.

Consistent: Performance remained essentially constant during this SALP period.

Declined: Performance generally declined during this SALP period.

III. SUMMARY OF RESULTS

A. Overall Facility Evaluation

The applicant's performance was satisfactory. Initiatives to improve site communications were effective and improvements in craft and supervisor training were apparent. There were no major construction problems and corrective actions were generally prompt and effective. The CTI identified both strengths and weaknesses in the project's activities and the applicant aggressively pursued resolution of the weaknesses.

Construction management by both the applicant and Bechtel provided effective control of the work. Corrective action was generally complete, thorough, and adequate to prevent recurrence of problems. In some cases management was insufficiently active in identification of generic problems although the improved NCR trending and field engineering accountability program have improved this condition.

The construction of the project remained on schedule and close to budget due in large part to good communications within and between the applicant and Bechtel. Bechtel also transferred many people with experience from recently completed nuclear projects to Hope Creek to build a solid experience base. Performance throughout this SALP period generally improved with the addition of more experienced personnel to the Bechtel site organization.

NRC inspection of the applicant's performance of preoperational tests and preparations for plant operation were not conducted during this assessment period.

HOPE CREEK GENERATING STATION

<u>FUNCTIONAL AREAS</u>	<u>CATEGORY LAST PERIOD</u>	<u>CATEGORY THIS PERIOD</u>	<u>TREND</u>
A. Containment and Other Safety-Related Structures	2	1	Consistent
B. Piping Systems and Supports (Includes Welding, NDE and Preservice Inspection)	2	2	Improved
C. Safety-Related Components (Includes Vessel, Internals, and Pumps)	1	1	Consistent
D. Support Systems (Includes HVAC & Fire Protection)	2	1	Improved
E. Electrical Power Supply and Distribution	No Basis	2	Consistent
F. Instrumentation and Control Systems	2	2	Consistent
G. Preoperational Testing	Not Evaluated	2	Consistent
H. QA/QC	Not Evaluated	1	Improved
I. Licensing Activities	2	2	Consistent

IV. PERFORMANCE ANALYSIS

A. Containment and Other Safety-Related Structures (11%)*

1. Analysis

Activity continued in this area throughout the assessment period. The drywell has become extremely cramped in many areas. This fact will make maintenance activities during the operations phase difficult. The area was included in eleven NRC inspections with no violations identified. The construction deficiency report (CDR) involving grout intrusion into the drywell air gap was closed after NRC request and applicant action to clarify the as-built configuration in the FSAR. A second CDR involving the potential for overpressurization of the annular space between the reactor vessel and the biological shield was closed after addition of a flow diverter in the bioshield. A third CDR involving seismic analysis of the auxiliary building was closed based on the applicant's prompt, sound, and thorough technical analysis involving state of the art soil/structure interaction time history analysis.

Inspection activities directed toward welding, material control, and QC inspection of the torus modification work by CB&I determined that all quality commitments were adhered to. Additionally, it was observed that both Bechtel and the applicant were effectively implementing their subcontractor surveillance programs. An NRC question involving CB&I methods of handling E8018 welding electrodes was promptly resolved. An additional NRC question involving pressure retest requirements of the torus following torus modification was resolved when the applicant agreed inspections would be performed during the integrated leak rate test required by Appendix J of 10 CFR 50. Shortly after completion of the torus modifications, work commenced by O. B. Cannon to prepare and coat the torus internal surfaces. This work activity was also closely monitored by Bechtel and the applicant's QA/QC subcontractor surveillance programs. NRC inspections of this activity determined that the subcontractor had a strong QA/QC program and all quality commitments were adhered to.

Cuts through the drywell shell and core borings through the reinforced concrete shield wall were made to accommodate NUREG 0737 requirements for additional reactor vessel water level indication. This activity was closely inspected by Bechtel, the applicant, and the NRC with no discrepancies identified. As part of this activity and other core boring activities, an inspection was made to determine control of cut rebar. This inspection determined a complete set of as-built cut rebar.

*Number in parentheses is the percentage of total NRC inspection hours during this period devoted to the subject area.

drawings exists and is updated daily to provide a sound basis for authorizing or denying cutting of rebar either during core boring or expansion anchor bolt (EAB) installation. Heave/settlement data for the power block was evaluated and all values were found to be within predicted limits.

The EAB minimum edge distance concern discussed in the previous SALP continues to remain open. Bechtel has established new edge distance criteria but violations of this criteria that resulted prior to establishment of the criteria remain to be resolved. Timeliness of corrective action has not improved during this assessment period but generally remains acceptable. This item is somewhat unique in that a large quantity of EAB's required reinspection and evaluation. The problem is receiving adequate attention and should be thoroughly resolved.

In summary work activity in this area has remained consistent throughout the assessment period.

2. Conclusion

Category 1 - Consistent - No further inspection activities are anticipated based on completion of construction activities in this area.

3. Board Recommendation

NRC

None

Applicant

None

B. Piping Systems and Supports (27%)

1. Analysis

Installation and inspection of large and small bore piping and supports was a major construction activity. Piping system walkdowns, hydrostatic tests, and turnovers to the Public Service Startup Group (PSSUG) commenced as well as Preservice and Inservice Inspection (PSI and ISI) activities. Eight potential construction deficiency reports (CDR's) were reported. The applicant replaced Reactor Controls, Inc., who had the contract for installation of the control rod drive hydraulic piping, because of contractual problems. This was considered a positive step based on problems with this contractor at other nuclear sites. Substantial NRC inspection activity, including the CTI, was directed in this area.

Areas of concern from the previous SALP regarding heavy fittings and Dravo pipe spools were investigated and the heavy fittings issued was closed. The NRC Office of Investigations interviewed the key individual in the questionable MT of certain Dravo pipe spools but no conclusions were reached by the end of this evaluation period. Similarly, the previously discussed issue involving ISI of clad recirculation system pipe weld joints was worked but a solution remained forthcoming. The training of craft and their supervisors appeared to improve as the result of a better organized and more ambitious Bechtel training program. Field engineering accountability was implemented and appeared to have a positive impact on the finished product as evidenced by the decrease in QC reject rates.

Pipe welding activities were reviewed in several NRC inspections including the CTI. During these inspections it was observed that welding activities were thoroughly inspected and audited by qualified personnel, filler metal procurement and distribution control was in conformance with procedure requirements, and an adequate staff of experienced field welding engineers was available for control of welding. It was also observed that the welder training program is weak but that this weakness does not appear to contribute significantly to weld defect problems. The welding activities at the offsite fab shop were observed to be well controlled which contributed to the offsite fab shop being considered a strength in the CTI. In an effort to improve the weld reject rate, a welder recognition program was instituted. Only minimal improvement resulted.

NRC inspectors performed walkdown inspections of portions of completed piping systems to determine conformance to drawings and documented changes. During these walkdowns it was observed that welders and pipefitters demonstrated an understanding of work rules and documentation requirements, including interaction with QC inspectors. As the result of responses to questions raised during these walkdowns, it was observed that the applicant's QA activities result in periodic reports to site and corporate management. The status of problems, welding quality, NRC items, NCR's, corrective actions, and a summary of audit results are covered in these QA reports. One discrepancy between as-built conditions and the design documents was identified and involved application of ASME Code Case 1745. This Code Case, which is committed to in the FSAR, is applicable to ASME III Class 1 piping supplied by Bechtel and specifies requirements for location of hanger lugs on Class 1 pipe. An example of failure to comply with the Code Case requirements was identified. Subsequent discussions on this matter revealed that the pipe stress analysis computer program, based on inputs from actual as-built conditions and Code Case constraints, would generate an error statement if Code Case constraints were not met. This would result in the use of a different stress analysis that would not utilize Code Case 1745. Because the Code Case constraints were not factored into design drawings, the validity of the stress analysis for Class 1 pipe is highly dependent upon a detailed walkdown of each piping system and input of the results of this walkdown into the computer program. This is considered a potential problem area. A concern regarding pipe clearance problems was also noted. Upon investigation, it was determined that the applicant was aware of this problem and had directed Bechtel to take appropriate action. It was concluded that more effort will be required in the area of pipe clearance problem identification and resolution. It was also observed that some minor problems existed with exposure of internal components/mechanisms to construction generated particulates. This problem was not considered significant based on the small number of discrepancies and the subsequent flushing program.

Quality Control inspection records, vendor documentation, NCR trending, and surveillance inspection records were generally found to be in compliance with program requirements. A situation arose wherein an ANI presented a concern to Bechtel regarding falsification of records and drug abuse at Hope Creek. The applicant informed the NRC of this concern, whereupon the resident inspector commenced an investigation. The investigation determined that Bechtel and the ANI's organization had followed up this concern and properly resolved it.

The preservice inspection program and procedures were reviewed and it was observed that experienced and qualified personnel filled key positions in the PSI and inservice inspection organization, including the applicant's QA surveillance group. Observations of surface examinations in progress demonstrated conformance to procedure requirements. Review of plant construction and PSI schedules indicated the majority of volumetric examination will occur during February - May 1985.

One concern regarding hydrostatic testing activities of safety-related piping systems was identified. It involved application of ASME Code Case N-240. This Code Case states it is not necessary to hydrostatically test pipe welds that are unisolable from atmospheric sources of water, e.g., lakes, reservoirs, and tanks. An example of stretching the application of this Code Case was identified by the NRC. To resolve this concern, Bechtel promptly initiated a directive clarifying the application of N-240 and that the basic Code requirement is to hydrostatically test all welds.

Three violations involving pipe supports were identified. The first concerned conditionally accepted field changes. The specifications presently permit conditional acceptance of approximately twenty types of nonconforming conditions, and although this is an obvious attempt to control changes required by field conditions without a work delay, it appears to be difficult to control, as indicated by failure to issue FCNs properly. The applicant should ensure that conditionally accepted field changes are incorporated into the tracking system. The second violation involved unauthorized removal of a QC accepted pipe support. The licensee had previously identified a generic problem in this area and had taken corrective action. The case identified by the NRC would eventually have been identified by Bechtel QC. The third violation involved improper weld joint preparation and QC inspection of skewed tee-joint fillet welds in pipe support members. A similar violation had been previously identified and closed. The corrective action to close the previous violation had failed to identify approximately 500 pipe supports that were in storage and in transit from the offsite fab shop. This concern was identified by the NRC resident inspector. This example of incomplete corrective action appeared to be isolated, and the QA program implemented to avoid these occurrences was generally effective.

NRC inspection activity also focused on installation and protection of mechanical and hydraulic shock arrestors (snubbers). Concerns regarding the snubber protection

program took several iterations to resolve and may again arise during the preoperational testing phase. A CDR involving defective capstan springs in mechanical snubbers was identified and also took several iterations to resolve. This highlighted a need for greater effort by the applicant to better understand the full scope of problems identified and ensure a thorough resolution before presentation to the NRC for closure.

In summary, most of the piping and supports are installed. Field engineering accountability efforts have resulted in keeping down the QC reject rates, although some minor problems exist with differing inspection criteria between field engineering and QC. Performance during this assessment period has improved.

2. Conclusion

Category 2 - Improved

3. Board Recommendations
NRC

- (1) Verify that the as-built conditions of piping systems are being appropriately used to perform piping stress analyses and that the stress analyses conform to code requirements.

Applicant

- (1) Aggressively address the area of identification and resolution of pipe clearance problems.
- (2) Ensure that the conditionally accepted field change program is implemented in accordance with procedure requirements.
- (3) Ensure responses to NRC concerns are comprehensive prior to presenting them to NRC for closure.

C. Safety-Related Components (11%)

1. Analysis

Activity in this area included installation of pumps, motors, and tanks and performance of preventive maintenance. NRC inspection included reviews of maintenance activities, evaluations of CDR closures, comparison of equipment design data against FSAR commitments, review of PSI and ISI programs and equipment for the reactor vessel, implementation of procurement and supplier quality programs, and reviews of QA audits addressing equipment handling and installation.

The previous SALP stated it was too soon to evaluate actions taken to address a NRC concern regarding equipment damage during rigging operations. During this evaluation period, corrective actions taken were found to be effective in addressing this concern, as evidenced by a decrease in such incidents. The long standing unresolved item involving the maintenance system bulk listing was resolved.

QA audit programs were closely controlled, check lists were complete and detailed, and audit results were thoroughly documented. Deficiencies identified were generally followed up in a timely manner, although Bechtel's response to several of the applicant's corrective action requests could have been more timely.

The CTI concluded mechanical equipment construction was adequately performed and in conformance with regulatory requirements and that management was adequately involved in ensuring program compliance.

One violation was identified involving failure to reenergize the DG alternator heaters after maintenance activities. Investigation into the cause of this situation indicated that QC had punchlisted this as an open item but that field engineering had not responded in a timely manner. The problem was addressed by setting up a system whereby punchlisted maintenance items would be reviewed, and a time-sensitive priority established. The program was not completely operational prior to the end of the assessment period.

Maintenance of components turned over to the PSSUG became the responsibility of the operations maintenance department. It is too soon to evaluate this transition. Problems did arise, however, with equipment maintenance in the Release For Test (RFT) phase. The RFT program turns

equipment over to PSSUG for testing prior to the official system turnover from construction. During this time period, Bechtel retains responsibility for maintenance, but coordination between Bechtel and PSSUG to perform maintenance has been a problem and has not always been accomplished on schedule. This area requires more applicant attention.

In general, the applicant remains aggressive in identifying problems and taking corrective action. Special attention needs to be given, however, to problems that may arise during the RFT phase. Overall, performance was consistent throughout the assessment period.

2. Conclusion

Category 1 - Consistent

3. Board Recommendation

NRC

None

Applicant

- (1) Be more demanding with regard to timely responses to all corrective action requests.
- (2) Ensure that equipment maintenance requirements are satisfied during the RFT phase.

D. Support Systems (4%)

1. Analysis

Installation of HVAC ductwork and supports and fire protection and radwaste systems continued. Fire protection was not reviewed during this period since a special fire protection inspection is scheduled for June 1985. Specific areas reviewed were HVAC ductwork, supports, and equipment and the seismic II/I program. No violations were identified. One potential CDR was reported and subsequently withdrawn.

Documentation reviews of HVAC related QA audits and related NCR's, FCN's, and FCR's indicated management was aggressive in addressing identified problems. A question was raised involving the design of battery room HVAC in that the design does not meet USNRC Regulatory Guide 1.75 requirements for independence. This question was forwarded to NRC Licensing for review. The resolution of this issue will be coordinated with NRC Licensing. The CTI identified a weakness regarding a lack of Bechtel QC involvement in the HVAC subcontractor's welder qualification program. This weakness was promptly and adequately addressed by the applicant.

The previous SALP discussed corrective action taken at the end of the SALP period to address problems with ductwork support installations. In general these corrective actions were effective. Two concerns, however, were raised during NRC ductwork support inspections. The first involved lack of a requirement in QC procedures to verify satisfactory bolt torquing on reworked supports. This was promptly addressed by modifying the inspection procedure to require a 10% sample inspection. The second involved lack of an effective system to control the inspection status of re-worked supports. This was also promptly and effectively addressed.

The seismic II/I program involves generic and individual identification of non-safety related items that could impact safety-related equipment during a seismic event and QC inspection of these items to ensure correct installation. The scope of the program appeared to meet FSAR commitments and exceed those commitments in that II/I items receive both Field Engineering and QC inspection whereas the FSAR commitment for inspection is either Field Engineering or QC inspection.

It was determined that implementation of the seismic II/I program was not in accordance with procedure commitments. It was also determined that the documents controlling the walkdowns and QC inspections contained inconsistencies and in some cases were not capable of implementation without revision. Since identification of these concerns, the applicant has taken appropriate corrective action to resolve the majority of them. The problems identified with this program were unique and not indicative of a more general problem.

In summary, the applicant's performance in this area has improved during this assessment period.

2. Conclusion

Category 1 - Improved

3. Board Recommendation

NRC

None

Applicant

None

E. Electrical Power Supply and Distribution (19%)

1. Analysis

Activities in this area included cable pulling, terminations, raceway installation, mounting of electrical equipment, and battery installation. Twelve potential CDR's were reported by the applicant. NRC inspections observed implementation of controlling procedures, documentation, and QC and QA activities.

The CTI review in this area concluded that the overall management and implementation of electrical construction activities was good. Supervisory personnel appeared knowledgeable in their areas of responsibility and adequately experienced to provide direction to their workers. Procedures generally provide requirements to ensure proper construction and inspection activities. Within the electrical QA/QC organization, the personnel were found to be independent of the construction organization and dedicated to ensuring quality requirements are met. Within the construction organization and in particular with the craft, strong evidence of strict management control of activities was noted. This was evident in the attitude of the supervisors and craft alike and manifested itself in the manner in which work activities were conducted. This level of control is considered a strength.

Several questions were raised and one violation was noted with regard to raceway support construction: A potential cause of problems with raceway supports was noted to be the complexity of Drawing E-1406. Because this drawing was used in conjunction with several other drawings and specifications and, due to the numerous options generally provided for proper construction of any given support type, the potential for misinterpretation of requirements was significant. An example of this involved a violation related to eccentricity requirements for attaching raceway support members to base plates that were not met on two supports. Construction built the supports incorrectly and QC inspection failed to identify the nonconformance. Subsequent applicant inspection identified other supports with similar problems. The applicant responded to the violation by reinspecting, identifying, and dispositioning the non-conforming supports and responded to the more general concern by revising and simplifying E-1406. A similar problem of this type was identified in previous SALP's in the HVAC area. The applicant's use of complicated and detailed "cookbooks" designed to contain all construction requirements has been a weakness. Major revisions and reinspections have been necessary each time a "cookbook" was used.

Concerns were identified regarding QC inspection's failure to identify problems with control room console (CRC) wiring and field wiring harness installation in MCC's and switchgear. A concern was also identified involving CRC turnover acceptance by PSSUG with unidentified seismic and separation concerns. Violations involving CRC mounting deficiencies and failure to follow installation procedures, indicated a problem with incorrect construction installation and inadequate QC inspection. A review of the procedures in this area showed them to be acceptable and suggested that the resolution of this problem requires effort by Bechtel management to ensure correct construction and accurate QC inspection. It was also noted that as-built data submitted for CRC seismic evaluation was not accurate. Although the discrepancies did not appear to be major, they illustrate a potential weakness in seismic qualifications when items are field modified. The applicant needs to pay particular attention to existing procedures to ensure that, when seismically qualified equipment is field modified, accurate as-built data be used to reevaluate the seismic analysis. A CDR was reported that involved an induced voltage problem associated with the CRC design. The problem is significant and was under evaluation at the end of the assessment period. Preliminary investigations indicate the problem was the result of a major design oversight.

Cable pulling and terminations were found to be in accordance with program requirements. Battery charging, maintenance, storage, and installation requirements were also met.

Twelve potential CDR's were reported. In addition to the induced voltage problem discussed above, ten potential CDR's involved equipment manufacturing problems and one involved altered expansion anchor bolts used in two raceway supports. In general, the applicant aggressively pursues resolution of CDR's.

An allegation was received and investigated that involved inadequate electrical equipment tagging procedures. The basis for the allegation was a tagging incident that involved an individual's failure to verify proper tagout of a piece of electrical equipment. NRC followup included review of the applicant's controls for equipment tagging. It was noted that as a result of this incident and a previous awareness of a potential for problems, the applicant significantly revised tagging procedures. All tagging of energized equipment was placed under the PSE&G operations tagging system. Bechtel personnel involved with tagouts

were trained in the application of the licensee's procedure and selected Bechtel supervisors were given tagging authority and are responsible for verifying that requested tags are properly hung. Permanent plant equipment may only be energized by applicant personnel. This action was prompt, perceptive, and aggressive and satisfactorily addressed the underlying basis of the allegation.

In summary, there was an increase in the number of concerns identified by NRC in the electrical power supply and distribution area during this assessment period. However, this increase in the number of concerns is a direct result of the greatly increased work activity in this area. The applicant's performance in this area was consistent during the assessment period.

2. Conclusion

Category 2 - Consistent

3. Board Recommendations

NRC

- (1) Hold a management meeting to review the CRC design and associated problems that have been identified.

Applicant

- (1) Should "cookbook" type drawings be used in the future, take care to minimize their complexity and ensure they can be effectively implemented.
- (2) Pay close attention to the effects of field modifications on seismic qualification of equipment.

F. Instrumentation and Control Systems (2%)

1. Analysis

Construction activity in this area included installation of instrumentation sensing lines, racks, and equipment. Pre-operational activity included calibration of instrumentation and follow-up of problems identified during calibration. NRC inspection activity included review of the seismic II/I instrumentation program and observations of the preoperational instrumentation program. No violations were identified.

Discrepancies between documents controlling the instrumentation seismic II/I program were identified. In particular, it was not clear if there was a II/I concern; and, if there was, how it would be identified and, ambiguity existed regarding the intent of the use of special tubing clamps as II/I tubing supports. Additionally, an inconsistency existed regarding Q-tray support span requirements. These problems were identified early in the II/I program implementation and indicated that the program had not been sufficiently thought out when it was developed. Corrective action was taken by the applicant to address this problem.

The quality of instrumentation construction was evaluated by observations during plant tours and documentation review. It was observed that instruments were well protected by physical barriers, tubing runs were generally neat and adequately supported, and QC inspections were properly performed. Documentation reviews indicated QC records were complete and accurate. The management initiative taken to involve field engineering in the inspection process prior to QC was effective in minimizing reject rates.

A review of the status of the preoperational instrumentation program indicated design changes were continuing, instrument indices were not current, some vendor information was lacking, and accurate loop calibration data was not available. Additionally, initial calibration efforts resulted in the identification of many scaling discrepancies. The applicant was aware of these problems but effective management action to address them was slow.

In summary, additional effort is required by the applicant to upgrade the preoperational instrumentation program.

Performance in this area was consistent during the assessment period.

2. Conclusion

Category 2 - Consistent

3. Board Recommendation

NRC

(1) Devote additional inspection effort to this area.

Applicant

(1) Pursue upgrading of preoperational instrumentation program.

G. Preoperational Testing (9%)

1. Analysis

This area was not applicable during the previous SALP period. Although the formal opening of the preoperational test program did not occur until October 1984, NRC inspection did occur prior to this. Specific areas inspected included the preoperational QA/QC program, administrative procedure review, turnover process, and personnel qualifications.

Safety-related applicant activities in this area included preoperational group staffing, procedure development, and facilities and systems turnover reviews and acceptance. No safety-related preoperational tests were performed during this assessment period. The qualifications of the Preoperational Review Committee (PORC) members were reviewed and one administrative problem was identified. In particular, the FSAR committed to meet part of the requirements contained in ANS3.1 but the administrative procedures did not reflect this commitment. This resulted in certain PORC members not meeting FSAR qualification commitments. A FSAR revision was initiated to address this concern. Although the PORC members, based on their experience, were sufficiently knowledgeable to perform their duties, the discrepancy between the administrative procedures and the FSAR was indicative of a potential problem. The applicant needs to ensure FSAR commitments are met by a thorough review of controlling procedures and FSAR commitments for consistency. The personnel certifications were also found to be in error in that many stated the certified individuals met the requirement of ANS3.1. This error was corrected by the applicant who subsequently performed a thorough review of personnel qualification records to ensure no additional discrepancies existed. One violation, involving three instances of failure to follow procedures, was identified. This violation, occurring early as it did, indicated that startup group management personnel may not be strongly insisting that administrative procedure requirements be implemented. Efforts need to be made to ensure all PSSUG personnel are familiar with program requirements and that requirements be implemented. Additionally, based on the frequent revisions to these procedures, efforts are needed to assure updated training is conducted.

The turnover process was reviewed from both the QA program and procedure implementation standpoints. The results of the QA program review are discussed in Section 8.

Implementation was found to be in accordance with controlling procedures. It was observed, however, that the controlling procedures allowed a substantial amount of latitude in the applicant's involvement in the walkdown process and that the applicant elected for minimum participation in at least part of this process. At least part of the reason for this minimum participation was the fact that the walkdowns are misnomers in that they are not hand-over-hand walkdowns but cursory walk-throughs. Although there is no requirement for aggressive applicant involvement in assuring facilities/systems completion at the time of turnover, more applicant involvement would demonstrate a greater commitment to control the turnover process. The number of punchlisted items at the time of turnover was low, thus indicating an appearance of a high state of construction completion. Efforts should be made to continue this trend as more substantial safety-related systems are turned over.

Systems may be turned over to PSSUG for testing prior to official turnover from Bechtel to the applicant. This feature is the release for test (RFT) program. It was observed at the end of this SALP period that the RFT program, rather than being a well thought-out program, is an evolving program, i.e., it is modified each time another problem is encountered. Examples include maintenance responsibility, inspection status of systems released for test, and instrument calibration. An example of this type is the problems experienced with instrumentation calibration. The applicant has had previous problems with evolving programs, and needs to rethink their approach to anticipating problems, rather than reacting to them.

The QA/QC program is deeply involved in the preoperational program. This is considered a positive factor.

Many PSSUG personnel participated in the Salem preoperational and startup programs. Additionally, many Bechtel personnel in the preoperational group have recent experience from Susquehanna.

In summary, the preoperational program is in place and functioning. Preliminary indications are that the applicant will have to be more aggressive in administering and controlling the program. A strong QA/QC involvement should help.

Applicant performance in this area during the assessment period was consistent.

2. Conclusion

Category 2 - Consistent

3. Board Recommendation

NRC

None

Applicant

- (1) Perform reviews to ensure that FSAR commitments are reflected in administrative procedures.
- (2) Ensure administrative procedures are followed by all PSSUG personnel and that periodic training be administered to keep up with changes made to these procedures.
- (3) With regard to the RFT program, the applicant needs to rethink their approach to anticipating problems, rather than reacting to them.

H. QA/QC (15%)

1. Analysis

This area was not specifically addressed during the previous SALP period. The applicant's and Bechtel's QA/QC organizations were involved in all safety-related activities including construction and preoperational testing. The area received substantial NRC inspection including the CTI.

Previous SALP evaluations discussed weaknesses in the QA/QC surveillances of subcontractor activities. Based on the minimal amount of subcontractor problems, effective corrective action appears to have been taken. Additionally, stronger subcontractor QA/QC programs and personnel were evident during this period. Corrective action to address bypass of QC holdpoints was also effective. NCR trending continued to be used to identify repetitive and/or related problems. Most often action taken to address the trended problem was effective. The NCR trend involving unauthorized reworks continued to be tracked and, although not eliminated, was less recurrent. NCR trending information input to the training program continued. A program to trend startup deficiency reports (SDR's) remained under development throughout this period. The applicant should take aggressive action to establish a SDR trending program.

QA audits and surveillances reviewed were found to be comprehensive and performed in accordance with a schedule. Bechtel responses to applicant Corrective Action Requests (CAR's) were generally timely and thorough. Improvement could be made, however, if the applicant was more insistent upon quality and timely responses to all CAR's. The subject matter of CAR's indicated that experienced personnel were involved in the audit program and were making constructive findings. QA reports were sent directly to upper management and contained a synopsis of current quality problems. This was an effective management communication tool.

The applicant undertook several initiatives in the quality area. These included an onsite Supplier Quality Program, field engineering inspection of most safety-related items prior to QC inspection, aggressive QA/QC involvement in the preoperational test program, and independent QA review of 10 CFR 21 reports for reportability. Additionally, Bechtel improved their system to track resolution of applicant QA and NRC identified items.

Bechtel QC was reorganized in August 1984 to support system turnovers. Applicant QA audits of turnover packages were conducted. The results of these audits indicated that Bechtel QC was effectively preparing the turnover package documentation.

In summary, the applicant's QA/QC performance has continued to improve throughout the evaluation period. The management changes that resulted in the project's QA manager reporting directly to the vice president and strong QA support by the vice president were instrumental in this achievement.

2. Conclusion

Category 1 - Improved

3. Board Recommendation

NRC

None

Applicant

- (1) Take action to establish a functioning SDR trending program.

I. Licensing Activities

1. Analysis

During the current rating period, the management of PSE&G exhibited involvement and control in Hope Creek licensing activities. PSE&G seemed motivated to produce quality responses and exhibited evidence of prior planning in producing responses to NRC concerns. Decision making is consistently at a level which assures adequate management review. For Draft SER open items, responses were submitted for staff review under affidavit signed by the Vice President of Engineering and Construction. In a number of instances, the staff elected to perform the review by conducting audits. Those audits involved visits to the Hope Creek site, PSE&G corporate headquarters and/or the Architect/Engineer's offices. In most instances, the appropriate level of PSE&G management was present at these audits to assure a smooth-running review. The information provided by PSE&G at these audits was generally complete and thorough. Where decisions are made by committees, such as in safeguards, PSE&G has assured those committees are properly staffed.

During this rating period, the applicant responded to the staff concerns resulting from the Draft SER. Generally, PSE&G provided technically sound responses and displayed an adequate understanding of the technical issues to be resolved. Conservatisms were usually incorporated into the responses. In instances where the applicant took exception to the staff's regulatory guidance, sound bases and supplemental analyses, where necessary, were provided as justification for the exceptions. Generally, responses to staff concerns were made in a timely fashion. However, there were some exceptions. For example, in an April 1984 Fire Protection meeting, the applicant committed to provide the staff with information by late June 1984. This information was not submitted until mid-August 1984. In one case, the applicant's responses to staff concerns were neither timely nor demonstrative of an adequate understanding of the staff's concerns. This occurred in the areas reviewed by the Power Systems Branch. To rectify the situation, a number of meetings were held with the applicant with the purpose of discussing and resolving the issues. Once the applicant understood the concerns, timely and complete responses were provided. As stated herein, the applicant has made generally timely and complete responses to staff concerns. In the future, however, the applicant should be sure he is aware of exactly what information the staff needs when a request for additional information is issued.

Additionally, the submittal date of this information should be carefully tracked and maintained.

Overall, the applicant has been responsive to NRC initiatives. Responses to NRC Generic Letters, where required, have been timely. In instances where more time is needed to respond, the applicant has requested extensions by approved methods. In Generic Letter responses, generally sound and thorough responses are provided. In many cases, those responses endorse the BWR Owner's Group position. For the evaluation regarding the applicant's responses to staff concerns resulting from the SER, see the preceding section.

Late in the rating period, the applicant underwent a corporate reorganization. As part of the SER, the staff has reviewed the Hope Creek general organizational structure. In this organization, positions have been described in detail and authorities and responsibilities are well defined. The applicant has maintained a substantial licensing staff to assure timely responses to NRC concerns.

The applicant's licensing staff is considered very good.

2. Conclusion

Category 2 - Consistent

3. Board Recommendation

NRC

None

Applicant

None

V. SUPPORTING DATA AND SUMMARIES

A. Construction Deficiency Reports

Twenty-four CDR's were reported during this assessment period. No causal links were identified. The subject and status of the CDR's are summarized in Table 4 and were considered in the evaluation of the associated functional areas.

B. Investigations

The NRC Office of Investigation initiated an investigation into an allegation that certain Dravo pipe spools had not been properly inspected. This investigation was continuing at the end of the assessment period.

C. Escalated Enforcement

There has never been escalated enforcement against Hope Creek.

D. Management Conferences

September 9, 1983: SALP management meeting at Hope Creek site

October 22, 1984: Second corporate management meeting held at Hope Creek site to discuss status of construction and pre-operational test program.

TABLE 1
INSPECTION HOURS SUMMARY (8/1/83 - 10/31/84)
HOPE CREEK GENERATING STATION, UNIT 1

<u>Functional Area</u>	<u>Hours</u>	<u>% of Time</u>
1. Containment and Other Safety-Related Structures	237	11
2. Piping Systems and Supports	627	29
3. Safety Related Components	237	11
4. Support Systems (Including HVAC)	86	4
5. Electrical Power Supply and Distribution	409	19
6. Instrumentation and Control System	43	2
7. Pre-Operational Testing	194	9
8. QA/QC	323	15
9. Licensing Activities		
TOTAL	2156	100

TABLE 2
ENFORCEMENT DATA

(August 1, 1983 - October 31, 1984)

HOPE CREEK GENERATING STATION

A. Number and Severity Level of Violations and Deviations

1. Severity Level

Severity Level I	0
Severity Level II	0
Severity Level III	0
Severity Level IV	5
Severity Level V	3
Deviations	0

TOTAL 8

B. Violations and Deviations vs. Functional Area

<u>Functional Area</u>	<u>Deviations</u>	<u>Severity Level</u>	
		<u>IV</u>	<u>V</u>
1. Containment and Other Safety-Related Structures	0	0	0
2. Piping Systems and Supports	0	1	2
3. Safety-Related Components	0	1	0
4. Support Systems (Including HVAC)	0	0	0
5. Electrical Power Supply and Distribution	0	2	1
6. Instrumentation and Control Systems	0	0	0
7. Preoperational Testing	0	1	0
8. QA/QC	0	0	0
9. Licensing Activities	0	0	0
TOTAL	0	5	3

C. Listing of Violations and Deviations

<u>Report</u>	<u>Dates</u>	<u>Subject</u>	<u>Reference</u>	<u>Severity Level</u>	<u>Functional Area</u>
83-14	9/19-30/83	Nonconforming cable raceway supports	Appendix B, Crit. X	V	Electrical Power and Distribution
83-18	12/4/83 -1/5/84	Pipe support welding	Appendix B, Crit. X	IV	Piping Systems & Supports
84-01	1/10-13/84	EDG alternator maintenance	Appendix B, Crit. XIII	IV	Safety-Related Components
84-05	5/14/84 -6/24/84	Tie-wrap installation & unauthorized	Appendix B, Crit. V	IV	Electrical Power & Distribution
84-05	5/14/84 -6/24/84	Control Room Console installation	Appendix B, Crit. V & X	IV	Electrical Power Distribution
84-06	4/30/84 -5/4/84	Hanger installation discrepancies	Appendix B, Crit. X	V	Piping Systems & Supports
84-06	4/30/84 -5/4/84	Unauthorized rework	Appendix B, Crit. V	V	Piping Systems & Supports
84-12	8/6/84 -9/16/84	Startup organization: implementation of procedural requirements	Appendix B, Crit. V	IV	Preoperational Testing

TABLE 3

INSPECTION ACTIVITIES

HOPE CREEK GENERATING STATION, UNIT 1

<u>Inspection Report No. and Dates</u>	<u>Inspector/ Hours</u>	<u>Areas Inspected</u>
83-13 8/18-10/16/83	Resident 66 Hours	Pipe hangers, storage, battery charging, housekeeping, structural steel erection, backfill, investigation of altered expansion anchor bolts, Bulletin & CDR review, training, concrete allegation, action on previous findings, and potentially generic issues.
83-14 9/19-9/30/83	Resident and Specialists	Construction management, quality assurance, design control, 707 Hours electrical construction, welding and piping, mechanical equipment, procurement, and training.
83-15	Specialist 43 Hours	Pre-service inspection activities, licensee action on previous findings.
83-16	Resident	HVAC ductwork supports, torus mods, raceway supports, housekeeping, piping and supports, instrument tubing, training, CDR's outstanding items, INPO S.I.E.
83-17 12/20-12/23/83	Specialist 34 Hours	Torus modification activity including program status, procedure review, and observations of work in progress.
83-18	Resident	HVAC duct and supports, cut rebar tracking, pipe and supports, torus mods, housekeeping, outstanding items (OI's).
83-01 1/10-1/13/84	Specialists 50 Hours	Electrical components and systems.

84-02 1/9-2/20/84	Resident 43 Hours	Pipe and supports, NCR trending, torus mods, housekeeping, rupture disc documentation, CDR's, OI's, Response Coordination Team.
84-03 1/20/84	Specialist 6 Hours	Corrective action to resolve discrepancies identified in the original seismic analysis of the auxiliary building.
84-04 2/21-4/1/84	Resident 59 Hours	Torus mods, pipe and supports, cable pulling, housekeeping, OI's, Bulletins and Circulars.
84-05 5/14-6/24/84	Resident 144 Hours	Torus mod, raceway and cable installation, seismic II/I program, HVAC ductwork supports, instrumentation, housekeeping, NCR and SDR trending, hydrostatic testing, electrical terminations, pipe and hangers, OI's, CDR's and startup program.
84-06 4/30-5/4/84	Specialist 66 Hours	Pipes and supports.
84-07		Cancelled.
84-08 6/5-6/8/84	Specialist 34 Hours	Heave/settlement, licensee action to resolve CDR involving grout intrusion into the drywell airgap.
84-09 6/11-6/15/84	Specialist 140 Hours	Cables, terminations, HVAC, QA and QC activities.
84-10 6/25-8/5/84	Resident 95 Hours	Equipment maintenance, turnovers, seismic II/I program instrumentation, reactor vessel water level instrumentation modification, housekeeping, OI's, CDR's, and falsification of records and drug abuse concern.
84-11		Cancelled.
84-12 8/6-9/16/84	Resident 84 Hours	Hydrostatic testing, pipe supports, torus sand blasting and inspection, core boring, drywell shell mods, OI's, startup personnel qualifications, turnovers, and Bulletin and Circular closure status.

84-13 8/20-8/24/84	Specialist 33 Hours	Safety-related equipment, vendor documentation and QC records of piping and equipment, QA audits, and OI's.
84-14		Cancelled.
84-15 9/19-9/21/84 9/26-9/28/84	Specialist 141 Hours	Piping and supports, valves, pumps, welding, PSI/ISI, and OI's.
84-16 9/24-9/28/84	Specialist 117 Hours	Turnover including QA/QC overview and interfacing activities.
84-17 10/1-10/4/84	Specialist 42 Hours *	Preoperational environmental surveillance program, radiological environmental monitoring program, meteorological program, facilities and equipment, documentation, quality assurance and contractor programs.
84-18 9/17-11/4/84	Resident 60 Hours	Instrumentation, potentially generic issues, mechanical and piping walkdowns, falsification of soils test records, turnover package audits, CDR's, outstanding item torus coating, safeteam.
84-19 10/29-11/2/84	Specialist 66 Hours	Preop QA, surveillance, audits.
84-20 10/30-11/1/84	Specialist 48 Hours	This inspection was mainly to open the preoperational test program at Hope Creek. Ten procedures were reviewed for administrative adequacy. Housekeeping and equipment protection were also reviewed.
84-21		N/A
84-22 10/22/84	Management Meeting	This was a second corporate management meeting to discuss construction status and Region I activities during preop and startup phases.

84-23
10/23-10/26/84

Specialist
30 Hours

Preop instrumentation program,
management action to address pre-
viously identified problems in
instrumentation area, CDR's.

* This report was not included in a functional area evaluation.

TABLE 4
CONSTRUCTION DEFICIENCY REPORTS
(August 1, 1983 - October 31, 1984)
HOPE CREEK GENERATING STATION, UNIT 1

<u>CDR No.</u>	<u>DEFICIENCY</u>	<u>STATUS</u>	<u>CAUSE CODE</u>
83-00-05	Altered Expansion Anchors	Closed	C
83-00-06	Pressure Switches with Uncured O-Rings	Closed	B
83-00-07	Questionable D/G Resistors	Closed	B
83-00-08	Faulty Valve Actuators	Open	B
83-00-09	Defective Capstan Springs in Shock Arrestors	Open	E
83-00-10	GE Type AKR-30 Circuit Breakers	Open	B
83-00-11	Storm Wave Surge - Service Water Intake Structure Hydraulic Structure Loads Possibly In Excess Design	Licensee Determined To Be Not Reportable	B
83-00-12	Agastat Time Delay Relays	Closed	B
83-00-13	GE Type AKR-30 Circuit Breakers	Open	B
84-00-01	Jacket Water Check Valves	Open	B
84-00-02	Differential Pressure Switches	Licensee Determined To Be Not Reportable	B
84-00-03	Seismic Bracing In Motor Control Centers	Closed	B
84-00-04	General Electric "HEA" Relays	Open	B
84-00-05	Silicon Control Rectifiers - Excessive Mounting Pressure	Closed	B
84-00-06	G. H. Bettis HVAC Damper Actuators	Licensee Determined To Be Not Reportable	B
84-00-07	Defects in Lube Oil Pump Discharge Nozzels	Open	B

84-00-08	Failure of GE Type SFF-30 Relays	Licensee Determined To Be Not Reportable	B
84-00-09	Design Deficiency - Underrated Cable	Open	B
84-00-10	Economizing Resistors - EDG Exciters	Open	B
84-00-11	Anchor Darling Globe Valves	Open	B
84-00-12	BIF Butterfly Valves	Open	B
84-00-13	Wiring In COMSIP Panels	Open	B
84-00-14	Induced Voltage Actuations in Logic Modules	Open	B
84-00-15	TOPAZ Inverters - Incorrect Low Voltage Cutoff Setting	Open	B

Cause Codes

- A - Personnel Error
- B - Design/Fabrication Error
- C - External Cause
- D - Defective Procedure
- E - Component Failure
- F - Site Construction Error

ATTACHMENT #2

Public Service
Electric and Gas
Company

Thomas J. Martin
Vice President
Engineering and Construction

80 Park Plaza, Newark, NJ 07101 201-430-8316 Mailing Address: P.O. Box 570, Newark, NJ 07101

February 7, 1985

Mr. R. W. Starostecki
Director, Division of Project
and Resident Programs
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

REPORT 50-354/84-26
SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE
HOPE CREEK GENERATING STATION

We have received and reviewed the report of the NRC Region I SALP Board for the period August 1, 1983 - October 31, 1984.

We appreciate the time taken by you and your staff to review and discuss the assessment with us on January 21, 1985. The recommendations of the board will be implemented as we discussed.

Regarding the induced voltage problem, we share your concern, but feel you may be premature in your conclusion. We will address the problem in detail at the meeting which you requested.

The concerns you noted regarding our turnover process will also be addressed at a future meeting. We appreciate the opportunity to clarify this issue.

In summary, we feel your report is a fair assessment.

Very truly yours,

TJ Martin EES

TE40

R. W. Starostecki

2

2/7/85

C NRC Resident Inspector - Hope Creek
P. O. Box 241
Hancocks Bridge, NJ 08038

ATTACHMENT #3

EXIT INTERVIEW ATTENDANCE
 NRC INSPECTION
 HOPE CREEK GENERATING STATION

REPORT #84-26 SALP
 DATE: January 21, 1985

NAME	AFFILIATION	TITLE
R. M. Eckert	PSE&G	SVP
T. J. Martin	PSE&G	VP
A. E. Giarduve	PSE&G	QA E&C
M. I. Harlacker	ATL	VP Engineering
S. K. Chaudhary	US-NRC	SR1-Const.
A. R. Blough	US-NRC	SR1-OPS
R. A. Green	NJ-BRP	Nuclear Engineer
Richard Starostecki	NRC-R1	Director-DRP
Jack Strosnider	NRC-1	Section Chief DRP
W. H. Bateman	NRC-SRI	
W. F. Kane	NRC-R1	Deputy Director-DRP
C. W. Churchman	PSE&G	Site Eng'g Manager
W. Gailey	PSE&G	Chief Project Eng'g
E. C. Logan	PSE&G	GM Const/Site Mgr
J. J. Cicconi	PSE&G	Startup Manager
B. A. Preston	PSE&G	Lic. Manager
S. LaBruna	PSE&G	A.G.M-HCO
R. S. Salves		GM-
G. Moulten	Bechtel	PQAE
B. G. Markowitz	Bechtel	Project Manager
C. Turnbow	Bechtel	Mgr of Construction
J. Wagoner	NRC	Project Mgr, (Licensing)
Faust Rosa	NRC	Chief, ICSE/NRR
Pete Landrieu	PSE&G	Project Manager
R. E. Selover	PSE&G	VP & General Council
G. D. Owen	PSE&G	PCE Site Construction



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

ATTACHMENT #4

JAN 15 1985

Docket/License: 50-354/CPPR-120

Public Service Electric & Gas Company
ATTN: Mr. T. J. Martin
Vice-President - Engineering and Construction
80 Park Plaza - 17C
Newark, New Jersey 07101

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP)

On December 21, 1984, as documented in the enclosed report, the NRC Region I SALP Board evaluated activities associated with the Hope Creek Generating Station.

A meeting has been scheduled onsite on January 21, 1985, at 11:00 a.m., to discuss the SALP. That meeting is intended to provide a forum for candid discussion, including your plans to improve performance and any comments you have on the assessment.

In addition, please respond to the assessment in writing within 20 days after the SALP discussion meeting. The SALP report (supplemented and modified as appropriate) and your response will then be placed in the NRC Public Document Room.

Your cooperation with us is appreciated.

Sincerely,

Richard W. Starostecki
SALP Board Chairman,
Director, Division of Project
and Resident Programs

Enclosure:
As Stated

cc w/encl:

R. Eckert, Senior Vice President, Energy Supply and Engineering
A. Schwencer, Chief, LB #2, NRR
A. E. Giardino, Manager, Quality Assurance Engineering and Construction
R. L. Mittl, General Manager, Nuclear Assurance and Regulation
Hope Creek Hearing Service List
Public Document Room (PDR)

8501210111A
25470
142

8501210111

Public Service Electric & Gas Company 2

Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New Jersey