APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report Nos. 50-498/92-04
50-499/92-04

Operating License Nos. NPF-76
NPF-80

Licensee: Houston Lighting & Power Company
Vice President, Nuclear
P.O. Box 1700
Houston, Texas 77251

Facility Name: South Texas Project, Units 1 and 2

Inspection At: South Texas Project, Units 1 and 2

Inspection Conducted: February 10-14 and 27, 1992

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Inspection Summary

Inspection Conducted February 10-14 and 27, 1992 (Report No. 50-498/92-04; 50-499/92-04)

Areas Inspected: Routine, announced inspection consisting of evaluating the engineering and technical support activities, and the assessments and quality assurance (QA) audits of those activities. The engineering organization was reviewed for organizational structure and interfaces, manpower and work backlogs, scheduling and prioritization of work activities, and qualification and training. The quality of the engineering performed was evaluated by reviewing completed

station modification, design change work packages, and requests for action (RFAs). The QA audits and assessments of the engineering and technical support organization and the actions taken with respect to the assessments and audit findings were reviewed.

Results: The modification packages reviewed were well written and complete. Considerable effort had been incorporated into the modifications to identify and address all issues of safety significance. Walkdowns indicated that the hardware changes were consistent with the design packages. During the walkdowns of the standby Diesel Generator Room 23, the inspector identified lube oil and fuel oil leaks that did not have maintenance work request tags. The licensee subsequently initiated actions to repair and cleanup the identified leaks. A significant backlog of design change notices against vendor drawings was considered a weakness. Based on the two drawings reviewed there were 27 amendments outstanding. Fourteen existed back to 1987 and one dated back to 1986. The licensee indicated that based on a maintenance department request, vendor documents were in the process of being prioritized for revision and once revised, then the number of outstanding revisions for a revised document would be limited (paragraph 2.1.1).

Generally, the technical engineering responses to the nonconforming conditions identified in the Requests for Action (RFAs) which are issued as Conditional Release Authorizations were well documented and reflected conscientious and conservative efforts to resolve the identified problems. Timeliness was appropriate to the relative significance of each issue. In the 15 RFA packages reviewed, three potential weaknesses were identified. These related to a nonconforming pipe support that did not receive a review by engineering (Conditional Release Authorization) to confirm operability, a Design Change Notice (DCN) that had not been issued for a change of material in a check valve installation alignment dowel, and an RFA package that did not maintain the DCN status (paragraph 2.1.2).

The temporary modification program was found to be functioning properly. Noteworthy was the management attention that open temporary modifications received. However, there were 18 temporary modifications older than 2 years (paragraph 2.1.3).

Based on the interviews of design engineering personnel, a number of areas continued to warrant licensee management's attention and action as appropriate. These areas include staffing levels, work priorities, training, computer capabilities, and engineering procedures. An outside consultant's review of design engineering was under assessment by licensee management for comment and action as appropriate (paragraph 2.2.4).

The inspectors found design engineering to be a hard working, dedicated group and that engineering was producing a quality product. The interviews of engineering personnel indicated that the design engineering interfaces were viewed as working well with other plant organizations. The new design basis documents were viewed as reliable and complete design aids (paragraph 2.2.4).

Overall the system engineers appeared to be a highly skilled and motivated group. Although their workload was high, there was an attitude that they would find a way to accomplish their assigned work within the existing resources. Through the interviews, the system engineers indicated they would like more voice in the decision process for system needs and/or the priority placed on system work activities (paragraph 2.2.5.1).

The plant programs division was actively involved in providing technical support for production activities. Their programs appeared well developed and implemented. Their approach to administering and managing the programs was very positive. There was a good expression of teamwork and an attitude of continual refinement and improvement of their products (paragraph 2.2.5.2).

It appears that the licensee has recognized the need to make improvements in the manager and technical staff training program. The implementation of these improvements should enhance the manager and technical staff personnel. The actual benefits of this program should be realized in the future when fully implemented (paragraph 2.2.6).

In the area of assessments, a non-cited violation was identified with regard to a deficiency in the licensee's corrective action program resulting from the handling of program violations that were identified during quality engineering assessments without issuing site problem reports for collective evaluation. Overall the licensee's assessments of engineering activities which are performed by the QA organization and the design engineer quality engineering group was considered a strength (paragraph 2.2.7).

The licensee has developed a significant number of initiatives to enhance the plant and its performance including comprehensive DBD and PRA programs. The IREO4 Outage Planning and the Strategic Plan for Plant Modernization would appear to be a strength for future modification and outage planning and control provided that there are proper allowances for reactive and unanticipated safety issues (paragraph 2.2.8).

DETAILS

1. PERSONS CONTACTED

STP

V. Albert, Division Manager, Plant Engineering
*T. Appleby, Training Manager
R. Arellano, Engineer, Mechanical/Nuclear Modifications
T. Asbury, System Engineer
R. Attar, Senior Consulting Engineer, Civil/Structural
*C. Ayala, Supervising Engineer, Licensing
*M. Balcar, Engineering Associate
*M. Berg, Division Manager, Mechanical/Nuclear
H. Blinka, System Engineer
R. Caruthers, Engineer, Electrical/Instrumentation and Control
*L. Casella, Division Manager, Electrical, Instrumentation and Control
B. Cawthorn, Mechanical Maintenance Supervisor
D. Chamberlain, Supervising Engineer, Quality Engineering
R. Chewing, Vice President, Nuclear Support
D. Clark, Supervising Engineer, Instrumentation and Control
J. Cook, Nuclear Steam System Supplier Supervisor
M. Coppinger, Manager, Mechanical Maintenance
T. Crawford, Supervising Engineer
*R. Dally, Engineering Specialist, Licensing
D. Dvjka, Lead Engineer, Structural Supports
R. Engen, Lead Engineer, Structural Modifications
T. Fryar, Engineer, Mechanical Support
R. Garris, Department Manager, Nuclear Purchasing and Materials
*J. Gruber, Division Manager, Material Technical Services
*D. Hall, Group Vice President
E. Halpin, Power Production Supervisor
*R. Hernandez, Manager, Design Engineering
D. Hoppes, Division Manager, Reactor Engineering
K. House, Engineer, Mechanical Support
*W. Humble, Programs Manager
*J. Johnson, Supervisor, Nuclear Assurance
*T. Jordan, General Manager, Nuclear Assurance
*W. Jump, Manager, Nuclear Licensing
M. Kanavos, Supervising Engineer, Mechanical
S. Kannon, Lead Engineer, Pipe Stress/Supports
A. Kent, Supervisor, Reliability/Statistics
R. Kersey, Lead Engineer, Nuclear Support
*W. Kinsey, Vice President, Nuclear Generation
R. Lacey, Engineer, Electrical Modifications
A. Lanik, Engineer, Electrical Support
*D. Lazar, Manager, Plant Engineering
*A. McIntyre, Director, Plant Projects

T. Monsen, Secondary Support Supervisor
R. Moore, Electrical Supervisor
R. Morales, Engineer, Instrumentation and Control
*B. Mower, Consulting Engineering Specialist
R. Murphy, Division Manager, Plant Analysis
*M. Pacy, Division Manager, Structural/Supports
S. Patel, Senior Consulting Engineer, Pipe Stress/Supports
*S. Phillips, Consulting Engineer, Licensing
D. Pieknik, Lead Engineer, Mechanical/Nuclear Modifications.
*R. Rehkygler, Director, Quality Assurance
T. Roberson, Engineer, Structural Support
*S. Rosen, Vice President, Nuclear Engineer
G. Sandlin, System Engineer
*G. Schnizel, Engineering Supervisor
*J. Sharpe, Maintenance Manager
S. Skinner, Engineer, Structural Modifications
E. Stanser, Division Manager, Plant Computers
*S. Timmaraju, Senior Consultant Engineer
W. Trefethern, Lead Engineer, Instrumentation and Control
*T. Underwood, Director, Independent Safety Evaluation Group
*G. Weldon, Manager, Operations Training
J. Winters, Programs/Responses Engineer
J. Worden, Division Manager, Nuclear Fuel

NRC Personnel

*G. Dick, Projects Manager, Licensing, NRR
*A. Dummer, Reactor Inspector Intern, Region IV (RIV)
*P. Goldberg, Reactor Inspector, RIV
*R. Mullikin, Resident Inspector RIV
*M. Runyan, Reactor Inspector, RIV
*J. Tapia, Senior Resident Inspector, RIV
*R. Vickrey, Reactor Inspector, RIV
*T. Westerman, Chief, Plant Systems Section, RIV

The inspectors also contacted other licensee personnel during the course of the inspection.

*Denotes those persons who attended the exit meeting conducted on February 14, 1992.

2. ENGINEERING AND TECHNICAL SUPPORT ACTIVITIES

The inspectors evaluated the effectiveness of the South Texas Project engineering and technical support programs in the areas of adequacy of staffing levels and experience, training, design changes, and quality assurance (QA) audits. The evaluation consisted of documentation and personnel interviews to verify that the license requirements included in the Technical specifications (TS) and codes and standards were being implemented and that the commitments contained in the

Updated Safety Analysis Report (USAR) and other correspondence were being followed.

2.1 Design Changes and Modifications (37700 and 37702)

2.1.1 Permanent Design Changes and Modifications

The inspectors examined three design modification packages to verify that the design modifications were in conformance with the requirements of the Technical Specifications (TS), 10 CFR Part 50.59, the Safety Analysis Report, and applicable codes and standards. The inspectors walked down the modifications to determine if they were in conformance with the design packages. The packages reviewed were Design Modification No. 88012, "Spray Additive Tank Deletion and Trisodium Phosphate Passive Addition Modification," Design Modification No. 90076, "Addition of Air Inlet Check Valve Assembly to Relieve Water Hammer Pressures," and Engineering Change Notice Package No. 89-L0047 concerning the removal of an electrical relay. These modifications were applicable to Unit 2. Similar packages had been prepared for Unit 1 but were not reviewed.

Design Modification No. 88012

The inspectors reviewed Design Modification No. 88012 for the in-place abandonment of the three sodium hydroxide containment spray additive tanks and associated piping and replacement of that equipment with a system of seismic Category I baskets located on the Unit 2 containment floor containing trisodium phosphate. This modification was developed due to leakage of the normally closed containment spray additive tank outlet motor operated valves. The leakage of the valves resulted in an excessive sodium concentration being introduced into the refueling water storage tank (RWST). In addition, leakage from the RWST into the chemical spray additive tank caused the sodium hydroxide concentration to be reduced to below the minimum TS values. The six baskets containing trisodium phosphate were added to the floor of the containment to meet the requirement for a minimum pH during the long-term circulation mode which ensures that iodine would be retained in the sump solution. The sodium hydroxide spray additive system was isolated from the containment spray system by installing permanent blind pancake flanges in lines connecting the two systems.

The inspectors walked down the piping separation of the sodium hydroxide additive system from the containment spray system. It was found that the modifications appeared to be in conformance with the design package.

The inspectors reviewed the evaluation performed in accordance with the provisions of 10 CFR Part 50.59, TS changes, FSAR changes, and the significant hazards evaluation for the modification. The documentation was complete and well written. The inspectors noted that considerable engineering effort had been incorporated into the modification to identify and address all issues of safety significance. A design modification, No. 88011, was prepared for Unit 1 for the same modification but was not reviewed by the inspectors.

Design Modification No. 90076

The inspectors reviewed Design Modification No. 90076 for the addition of air inlet check valve assemblies to the 4-inch lube oil cooler essential cooling water system (ECW) return header piping from the three Unit 2 standby diesel generators (SBDG). In 1990, Station Problem Report 900274 identified frequent damage to the 6-inch diameter SBDG intercooler expansion joints in the ECW system. An investigation was performed which revealed the ECW piping was experiencing waterhammer pressures during shutdown of the ECW pumps. The check valve assemblies were added to the ECW piping to relieve the water hammer pressures by allowing air to enter the piping whenever the pressure in the piping dropped below atmospheric by more than 2 psi. This allows a cushion of air to soften the water hammer caused by the shut off of the ECW pumps. The modification consisted of adding an air inlet check valve and locked open ball valve, designed to ASME Section III Class 3 requirements, to an existing 1-inch capped line attached to the 4-inch ECW lube oil cooler return header. The locked open ball valve was placed upstream of the check valve to provide isolation during maintenance of the check valve.

The inspectors walked down the modification in SBDG room number 23. The valves were installed in accordance with the modification package. While in the SBDG room, the inspectors noted fuel oil and lube oil leaks around the diesel that did not have maintenance work request tags. The HP&L engineers who were present during the walkdown stated that they would have the leakage investigated.

The inspectors reviewed the design modification package which included an evaluation performed in accordance with the provisions of 10 CFR 50.59. The safety evaluation was thorough and well written. The inspectors noted that conservative practices had been utilized and that considerable engineering effort had been incorporated into the modification. Design Modification No. 90075 was prepared for the same modification to Unit 1 but was not reviewed by the inspectors.

Engineering Change Notice Package No. 89-L-0047

The inspectors reviewed completed Engineering Change Notice Package No. 89-L-0047 concerning the removal of an electrical relay due to misoperation of a feedwater isolation valve on Unit 1. Included in this review was a proper 10 CFR Part 50.59 evaluation, along with the licensee's evaluation of the design change for potential impact on 10 CFR Part 50, Appendix R, and safe shutdown capability. The inspectors found these evaluations to be well performed.

The inspectors also reviewed completed Work Request No. IA-83523 which specified the physical installation of the design change. The work request was found to be complete with all required approvals and with evidence that post-modification testing was successfully completed. A field verification of the work performed in Auxiliary Relay Panel 3E251ERR120B was completed with no discrepancies noted.

The two vendor wiring drawings, which were affected by this modification, were reviewed to verify that they were updated with the design change. The inspectors

reviewed Drawings 14926-4366-00087-OM, "Auxiliary Relay Panel RR120B - Wiring Detail," Revision 2, and 14926-4366-00103-OM, "Terminal Block Arrangement - Auxiliary Relay Panel," Revision 1. It was discovered that neither drawing had been updated but that a list of outstanding amendments were given with the requested drawings. The two drawings had 7 and 20 amendments, respectively, posted against them. Fourteen amendments have existed since 1987 and one dated back to 1986. Since these drawings are used in preparing a design modification package, having this many outstanding amendments makes for a design change process and for utilization of these documents by maintenance and other site personnel which is complicated and time consuming. This was brought to the licensee's attention and the inspectors were told that the updating of vendor drawings was indeed backlogged. The licensee stated that priority was given to updating key drawings which were defined as controlled design bases drawings used by plant operators in evaluating plant status in both normal and off-normal conditions. During a subsequent discussion on site with Messrs. Rosen and Hernandez on February 27, 1992, the licensee indicated that as a result of a maintenance memorandum to engineering, actions were being initiated to prioritize vendor documents for update. Once a vendor document was updated, then the number of changes outstanding would be limited prior to revising the document.

Conclusions

The modification packages reviewed were well written and complete. Considerable effort had been incorporated into the modifications to identify and address all issues of safety significance. Walkdowns indicated that the hardware changes were consistent with the design packages.

However, the walkdowns did find lube oil and fuel oil leaks in SBDG Room 23 which did not have maintenance work request tags. Actions were initiated by the licensee to repair and cleanup the diesel fuel leaks. Similar conditions were identified in 1991 during the electrical distribution system functional inspection.

The inspectors identified that there would appear to be a significant backlog of Design Change Notices (DCN) that have not been incorporated into vendor drawings and/or documents. The licensee indicated that as a result of a similar concern identified by maintenance, actions were being implemented to prioritize vendor documents for revision. The licensee also indicated that once a document was revised the number of outstanding changes against a document would be limited.

2.1.2 Requests for Action

The inspectors reviewed approximately 15 Requests for Action (RFAs), which are used both as information requests (usually of Engineering) as well as a means for documenting nonconformances associated with materials, parts, components, and structures. All of the RFAs reviewed during this inspection were of the nonconformance type.

Conclusions

Generally, the technical engineering responses to the nonconforming conditions were well documented and reflected conscientious and conservative efforts to resolve the identified problems. Timeliness was appropriate to the relative significance of each issue.

Three of the RFA packages reviewed were considered to indicate potential weaknesses as discussed below:

- RFA 91-1299 identified a loose sway strut clamp on pipe support AF-2011-HL5006 in the auxiliary feedwater system of Unit 2. Based on RFAs reviewed for other pipe supports with identified nonconformances, the inspectors found that a Conditional Release Authorization (CRA) would be written and submitted to Engineering to resolve any immediate operability concerns. In this case, and with no apparent justification, the shift supervisor did not request a CRA and simply wrote "I do not believe this affects operability." The plant operated at full power for 22 days and in a shutdown status for 74 days before the support was repaired. The licensee indicated that the shift supervisor's decision was based on his experience and the fact that the sway strut was loose, not detached. The inspectors were informed that a CRA was performed by engineering subsequent to the inspection which confirmed the support to be operational. In a subsequent discussion on site, on February 27, 1992, the inspectors informed the licensee that based on the review of Procedure OPG03-ZA-0088, Revision 1, the inspectors had concluded that it was the final responsibility of the shift supervisor to determine operability. However, for a nonconforming pipe support (did not meet original design requirements), as in this case, an engineering analysis and/or other documented basis to confirm the operability call made by the shift supervisor would have appeared necessary. The failure to provide a timely, acceptable basis to confirm operability was considered a weakness in the program for RFAs/CRAs. The inspectors also indicated that a potential problem identified from the review of OPG03-ZA-0088, Revision 1, was that it provided no guidance to the shift supervisor for determining when an operability call resulting from a nonconforming condition should be supported by a CRA performed by engineering.

- RFA 91-1618 requested a change of material for the dowel pins in the Emergency Cooling Water (ECW) pump 2A discharge vent check valve 3R282TEW0370A in Unit 2. New pins made from aluminum bronze were substituted for the originals made of naval brass. A design change notice (DCN) was not issued and as a result the vendor drawing for this check valve was not corrected to show the change in material. The inspector's review indicated that the dowel pin was necessary for installation but did not affect operability. The failure to maintain configuration control was noted to be a weakness in the RFA process.

- RFA 91-1560 resulted in a design change to install spacers at a flanged connection in the ECW system. The DCN drafted for this purpose (MD. 2208)

was not annotated on the RFA. As a result, the RFA was closed out prior to issuance of the DCN. The failure to maintain DCN status current on the RFA was of no safety consequence in this case; however, it was identified as a weakness in the RFA process.

2.1.3 Temporary Modifications

The inspectors reviewed four safety-related temporary modifications that were currently installed in the plant. The following temporary modifications were reviewed:

- T2-EW-89-041, "Actuators Removed From Pressure Control Valves PV-6854 and PV-6904"
- T2-EW-89-042, "Actuators Removed From Pressure Control Valves PV-6864 and PV-6905"
- T2-EW-89-043, "Actuators Removed From Pressure Control Valves PV-6874 and PV-6906"
- T1-EW-90-023, "Standby Diesel Generator No. 13 Cooling Water Supply to Intercooler Expansion Joint Removed and Replaced by a Carbon Steel Spool"

The inspectors performed a field verification to determine that the temporary modifications were installed in accordance with the description in the packages. There were no discrepancies noted and it was observed that temporary modification tags were appropriately attached to the field installation. In addition, the inspectors reviewed the control room drawings affected by the temporary modifications and found that they were sufficiently annotated to reflect the modification. The annotating of updated drawings was found to be proceduralized.

The inspectors found that the use of temporary modifications receive a high degree of management visibility. A temporary modification coordinator has the responsibility of assuring that the program performs as planned. There are audits performed in addition to those by the quality assurance group. The temporary modification coordinator performs a monthly review of the control room temporary modification log. Also, on a quarterly basis the shift supervisor assigns an individual to make a physical check of all temporary modifications. Any findings are coordinated with the temporary modification coordinator for inclusion into the licensee's corrective action program.

The monthly review performed by the temporary modification coordinator notes those that are installed for more than 3 months. The applicable system engineer is required by procedure to either:

- Initiate the restoration of temporary modifications no longer needed;
- Initiate appropriate measures requesting a permanent change be made, if applicable; or

- Develop an approved restoration action plan and submit it to the temporary modification coordinator.

A review of the control room temporary modification index showed that there were 46 installed in Unit 1 and 31 in Unit 2. Out of these there were 11 older than 2 years in Unit 1 and 7 in Unit 2. The four temporary modifications reviewed were installed in either 1989 or 1990. A review of the temporary modification restoration action plans for these modifications indicate that an outage is required for removal. However, a refueling outage had already passed for these modifications. It appears that actions have not been timely in reducing the backlog of older installed temporary modifications.

To address this concern, the licensee has instituted quarterly meetings to review the temporary modification restoration action plans. The purpose of these meetings is to develop action items for the restoration of temporary modifications installed for longer than 6 months. These meetings are attended by licensee management up to and including the Vice President - Nuclear Engineering. The level of visibility obtained by these meetings should help in the reduction of the backlog in temporary modifications.

Conclusions

The temporary modification program was found to be functioning properly. Noteworthy was the management attention that open temporary modifications received. This support should help reduce the number of older (over 2 years) open temporary modifications. There were 18 temporary modifications older than 2 years.

2.2 Offsite Support Staff (40703)

2.2.1 South Texas Project (STP) Nuclear Engineering Organization

There are four engineering departments that makeup the STP Nuclear Engineering Organization. The department managers for each department report to the STP Vice President Nuclear Engineering. There were as of December 31, 1991, a total of 365 personnel authorized (350 actual personnel) and 65 contractor personnel on site. The departments are nuclear engineering, design engineering, nuclear purchasing and materials management, and plant engineering.

A South Texas Project Electric Generating Station (STPEGS) Master Operating Plan is issued under the signature of the Group Vice President, Nuclear. The intent of the plan is to integrate the various nuclear group plans necessary for the achievement of the nuclear group goals. The plan is to be reviewed at least quarterly and the information shared with each department. Each department within the STP Nuclear Engineering Organization is responsible for achievement of the plan. The plan for 1992 covers the following key results areas:

- Plant Availability
- Work Environment

- Work Processes
- Regulatory Management
- Fiscal Management
- Material Condition

For each area of the plan, an action plan is developed with a schedule and a goal manager assigned. The plan established performance goals with milestones to be accomplished in 1992. It also provided the staffing plan for 1992.

In review of the plan, the inspectors noted that all design modifications for the Unit 1 September 1992 refuel outage (1RE04) will be frozen on March 1, 1992. Engineering personnel indicated that a deadline of April 1, 1992 has been established for issuance of all design modification packages and completion of material procurement and installation packages. It was indicated by licensee personnel that a similar schedule will be initiated for all future planned refueling outages with the issuance of all design modification packages 6 months prior to the outage. The inspectors indicated that this approach would appear to be a strength for future outage planning and control provided that there were proper allowances for reactive and unanticipated safety issues.

Corporate management indicated to the inspectors that the actions and directions being implemented are intended to complete the transition from a construction organization to a operating organization. This includes the capability to ensure proper planning for future refueling outages and plant operation. Licensee management's view was that they were outstanding performers in the reactive mode, but that planning and scheduling of day-to-day activities needed improvement.

Nuclear Engineering Procedures

The inspectors found that the nuclear engineering organization procedures are different for the four departments identified above.

The nuclear engineering group functions are detailed in the nuclear group policies (NGP xxx), interdepartmental procedures (IP x.xxx), nuclear engineering department procedures (NE-xx.xx.xxx), and the plant procedures used by reactor engineering personnel which includes plant general procedures, operating procedures, surveillance procedures, and engineering procedures including those specific to the STA function.

The design engineering group functions are detailed in the interdepartmental procedures (IP-xx.xxx), the operating engineering procedures (OEP-xx.xxx), and the engineering instructions (EI-xx.xx). The inspectors noted that the licensee considers that the EIs are only guidelines and not under the quality system, since the EIs "implement the requirements of the IPs and OEPs." The EIs are issued and controlled within design engineering. The licensee's QA organization indicated that they consider EIs to be subject to audits.

The nuclear purchasing and materials management procedures were not part of this inspection.

The plant engineering group procedures consist of the plant engineering procedures (PEPxx-xx) and the operating plant group procedures (OPGP03-xx-xxxx).

2.2.2 Nuclear Engineering Department

The nuclear engineering department on January 31, 1992 had 40 personnel including 2 Co-ops (excluding secretarial personnel). There were also 5 engineer vacancies indicated. From the data provided by the licensee the average years of nuclear experience in this group was approximately 12.6 years. Reporting to the department manager are the three division managers of nuclear fuel, reactor engineering, and plant analysis. In review of this organization the inspectors noted that the division manager for nuclear fuel reports administratively to the department manager and is technically responsible to the STP owners group (STP Management Committee) composed of members from each of the four utilities that own percentages of STP. This activity encompasses the fuel procurement and processing prior to arriving at the fuel fabricator. At STP the shift test engineers (STAs) and the in-plant reactor engineers also report to the division manager of reactor engineering as well as the reload, fuel performance and fuel supply engineers. The plant analysis group is composed of the risk and reliability analysis and thermal hydraulic engineers. There has been better than a 100 percent turnover in the risk and reliability analysis group (four personnel) in the past 2 years. Licensee management indicated that they believe this group now to be relatively stable.

2.2.3 Nuclear Purchasing and Materials Management Department

This group was not reviewed during this inspection.

2.2.4 Design Engineering

Organization Structure

The design engineering department had 96 engineers, 5 vacancies, and approximately 40 contractor personnel based on a December 31, 1992 organization chart. The design engineering department consists of the following three divisions: (1) structural/supports; (2) mechanical/nuclear; and (3) electrical/instrument and control. These divisions report to the department manager through a division manager and are comprised of 85 engineers including four vacancies. In addition there are three support groups (quality engineering, codes and standards ISI, and plant modifications) reporting to the department manager. The support group consists of 16 engineers including one vacancy. The December 31, 1991 data provided by the licensee indicated that in the design engineering department the average total engineering experience was 18.9 years, the average nuclear experience was 14.3 years, the average STP nuclear experience was 7.9 years and there were a total of 76 degreed engineers with 30 holding a professional registration. There is also a Bechtel project engineering group on site, which is scheduled to be moved back to Houston the end of March 1992, that will continue to function until at least the end of 1992. The Bechtel project engineering group utilizes the licensee's procedures. This group provides modification packages and engineering work consistent with the licensee's own

program. The licensee indicated that Bechtel also provides independent design review for the structural/supports division where there is presently insufficient manpower to perform independent design reviews. The inspectors also noted that STP has three Geotechnical engineers in the structural/supports division because of the onsite dams. The quality engineering support group provides for inhouse design engineering procedure development, assessments and audits (self and external groups), interface for design control and quality related issues, training coordination, and maintenance of configuration control. There is a modification group to provide coordination for plant outages and modification installation.

Interview of Design Engineering Personnel

The inspectors interviewed 20 design engineering department supervisors and engineers assigned to the mechanical/nuclear, structural/supports, and electrical/I&C engineering groups. The interviews were conducted for the purpose of determining how the engineering staff was functioning.

The average nuclear experience of the engineering staff interviewed was greater than 10 years and most were degreed in an engineering or technical discipline. The engineering personnel were viewed by the inspectors as a hard working, dedicated group. As a result of the review of modifications and temporary modifications, it was the inspectors view that engineering is producing quality products.

The majority of the design engineering personnel interviewed felt that the interfaces between design engineering personnel and other plant organizations were effective. The engineers felt that support from their immediate supervisors and middle management was strong, but that the visibility of upper management was limited. The inspectors found that middle management felt there was effective communication with upper management.

The design engineers expressed confidence in the new design basis documents as a reliable and complete design aid. The inspectors found the description of the design basis documents provided by the licensee indicated that they represent very comprehensive documents.

Several engineers indicated that a shortage of computer hardware and software was having a direct effect on productivity. In discussion with licensee management, the inspectors were informed that overall improvements in the licensee's computer capability were being pursued. This includes a mainframe capability with the capability to up load and down load from local area networks.

During the interviews, there were concerns expressed by personnel with regard to design engineering staffing levels. The inspector's review of this issue was based on information provided by licensee personnel. The inspectors found that overtime was estimated to be around 15 percent which equates to 46 hours per week. This was not considered by the inspectors to be excessive. Overtime was, however, much higher during refueling outages which come more frequently for a two unit site. The inspectors found that up to 60 percent of the modifications

in one group were performed by the contractor. As discussed in Section 2.2.9 of this report, 57 percent of the modification packages in the last refueling outage were performed by Bechtel. Licensee management stated it is their intent to continue the use of contractors in addition to the STP design engineering group. The inspectors were informed that previous consultant reviews had recommended increased staffing levels of design engineering personnel. The inspectors discussions with design engineering supervision indicated that supervisors were performing duties that if there was more manpower they would delegate to others in order to have a better opportunity to plan and initiate improvements. Licensee management indicated they were aware of the concerns with staffing levels and acknowledged that there was a heavy work load being placed on design engineering. Licensee management stated that the establishment of a modification scope of work for 1992 was in part intended to provide management with better insights into design engineering staffing requirements for 1992.

There were also concerns expressed by personnel that scheduling of work was difficult due to shifting priorities. The inspectors noted that the development of the Strategic Plan for Plant Modernization and the 1RE04 Outage Planning initiatives as discussed in section 2.2.8 had a very significant impact on the engineering priorities, planning and workload. Management acknowledged that there was little warning provided before announcing these two initiatives. It is, however, management's intent to complete a timely transition from a construction to an operating organization. The inspectors noted the cascading effect of these initiatives throughout the site organization. The inspectors found that the communication of the initiatives with little warning had caused most of the concerns experienced by licensee personnel. Licensee engineering supervision indicated that there were instances of being too reactive which better planning should eliminate.

There were concerns expressed by personnel that training was an area needing improvement. Most of the engineers interviewed indicated that more technical training was desired. The inspectors found that training was receiving management attention and that the licensee had recently revised their training program for managers and technical staff. They were also in the process of upgrading their training program for engineering with a goal for implementation of January 1994 as discussed in section 2.2.6. The effectiveness and benefits of the training will not be evident until the future. The inspectors found the training initiatives had not been communicated to the nonsupervisory personnel based on the interviews conducted.

The inspectors noted that personnel were also concerned that participation in professional committees, conferences, and seminars had been restricted. However, the information provided by the licensee indicated that there is an active participation in such activities as the Motor Operated Valve User Group.

The inspectors found that some personnel were performing 10 CFR Part 50.59 reviews and safety evaluations without receiving the training first. The inspectors were, however, shown that the licensee had initiated second-person reviews by personnel designated in a January 20, 1992, office memorandum and who had received the appropriate training.

Several of the engineering personnel interviewed indicated that the engineering procedures were too numerous, redundant and cumbersome. The inspectors review indicated that the procedures were complex, but identified no programmatic deficiencies during the review of the procedures associated with modifications, temporary modifications and requests for action (RFAs).

The inspectors found that a consultant had recently completed a review of the engineering organization at STP. The findings reviewed by the inspectors were in draft. These findings generally followed the inspectors observations identified above and were being reviewed by licensee management for comment and action where appropriate. The inspectors review indicated that there were no programmatic safety issues.

Conclusions

The inspectors concluded that a number of areas discussed above continue to warrant licensee management's attention and action as appropriate. These areas include staffing levels, work priorities, training, computer capability, and engineering procedures. The inspectors also found that the licensee had recently completed an outside consultant review of the engineering organization prior to this inspection and the draft findings were currently under review for action as appropriate.

The engineering personnel were viewed by the inspectors as a hard working dedicated group and that engineering was producing a quality product. The interviews of engineering personnel indicated that the design engineering interfaces were working well with other plant organizations. The new design basis documents are viewed as a reliable and complete design aid which appeared to be very comprehensive documents.

2.2.5 Plant Engineering

The plant engineering department manager reports to the nuclear engineering vice president. The staff consisted of three divisions: plant systems, plant programs, and plant computers, reporting to the plant engineering manager.

The plant engineering department objectives were to develop, implement, administer, and manage the plant testing programs, to maintain the plant computer systems (including field devices and peripherals), and to provide technical support for the day to day production activities of nuclear plant operations.

The plant engineering department had no short- or long-term contractors. Their plans were to utilize contractors for short-term defined tasks and short-term staff augmentation during scheduled outages. Plans had been set to hire a single experienced contractor for approximately 6 months to help initiate and establish a Reliability Centered Maintenance (RCM) Program. The licensee had established a goal to develop the RCM program and completely analyze 3 systems in 1992.

2.2.5.1 Plant Systems Division

The plant systems division manager reports to the plant engineering department manager. The staff consisted of five departments: NSSS, power production, secondary support, plant support, and electrical, reporting to the plant systems division manager.

The licensee revised the system engineer guidelines in 1991. The guidelines were designed to move the system engineers into proactive roles of influence to enhance the operation of their systems. In addition to becoming more involved and responsible for maintenance activities, they were proactive in developing semi-annual system status reports. The licensee intended to use these reports to initiate reviews and adjust priorities based on system "health" concerns.

The division manager was aware, from a recent industry evaluation, that the system engineering training program contained deficiencies. In light of this information, attention was being given to correct the situation. Continued management attention to this area would appear to be warranted.

NSSS Department

The department had responsibility for 25 systems, and consisted of nine budgeted system engineers with no vacancies. The department appeared to be adequately staffed with an experienced group of engineers.

The transition to direct involvement with the preventive maintenance program was seen as a short time burden that should produce positive results. Part of the burden was attributed to a shortage in computers, which was being slowly corrected. The 4 day/10 hour work week was seen as an enhancement to providing support of craft related work activities and was allowing engineering personnel to make more efficient use of their time.

The department interfaces with other engineering departments and support groups appeared good. The communications of the recent change of goals appeared to be creating confusion with regard to prioritization. This related directly to management initiatives to change from a construction operation to an operating organization.

Power Production Department

The department had responsibility for 19 systems, and consisted of five budgeted system engineers with no vacancies. Although the department was fully staffed, new workload tasks appeared to have stressed their resources.

The department was aware of their resource limits and had made priority adjustments accordingly. The department did not view their workload as an insurmountable task, but more of a temporary situation that could be solved through various achievable options. One option that was being pursued was the prospect of developing a project management section. The department felt that development of a project management section for such things as turbine outages

could have a considerable influence on department man-hours available for all other department responsibilities. At the time the department felt that more than a 40 hour week was necessary for them not to fall behind in department action items.

The engineers were heavily involved with system field work activities. The department appeared to have a positive attitude and pride in their achievements. Their interest in developing proactive projects appeared to exhibit a good pride in ownership attitude.

Secondary Support Department

The department had responsibility for 31 systems, and consisted of four budgeted system engineers with no vacancies. This group appeared to be stable and with three of the four system engineers working 5 day/8 hour work weeks, support of operations and maintenance was consistent from day to day. The department felt that their systems were fairly stable, thus maintaining a relatively consistent work load.

The department felt that the recent move to the engineering building was promoting the development of better inter-relationships between engineering disciplines. The department was working on improving their methods of sub-prioritization. It was felt that improvements in prioritization were needed station wide. There appeared to be the same confusion in the understanding and implementing of management's prioritization expectations.

Plant Support Department

The department had responsibility for 40 systems, including ownership of MOV testing, and consisted of 11 budgeted system engineers with one vacancy. As were others, this department was stressed as a result of the workload. Much of this workload was additional responsibilities that had been recently added. Consideration was being given to assigning some responsibilities to a project management group and at developing a maintenance support group for such things as pumps. Training was seen as an impact on work activities. It was also felt that training for engineers could be improved by focusing more on system task training and less on the operations concept.

The department considered the 4 day/10 hour work schedule as a productivity improvement measure. This schedule was also seen as an enhancement to system engineers' knowledge and involvement with their assigned backup systems. The system engineers were finding that their work with other personnel had a maturing effect which was reducing the call for system engineer assistance.

Electrical Department

The department had responsibility for 39 systems, and consisted of six budgeted system engineers with one vacancy and one current hire. The department had been subjected to a higher than desired turnover rate. Furthermore, some difficulty had been and was being experienced in finding qualified replacements. Management

was aware of this situation and considered it to warrant their additional attention in establishing a well balanced and qualified group.

This department's good interactions with maintenance was seen as an important tool to support their needs. In spite of turnovers and shortages in resources, this department was viewed by maintenance as doing the best they could under the circumstances. Likewise, this department viewed the maintenance personnel as a good technically skilled group who were often able to take care a lot of items that might otherwise have required system engineer resolutions.

The department felt there were still some improvements needed to support a more efficient use of their resources. Although their work load was heavy, there was still an expressed desire to see improvements made in available training programs.

Conclusions

Overall, the system engineers appeared to be a highly skilled and motivated group. Although their workload was high, there was an attitude that they would find a way to accomplish their assigned work within the existing resources. They felt that the maturity of plant personnel was starting to reduce the calls on system engineers. The system engineers indicated they would like more voice in the decision process for system needs and/or the priority placed on work.

2.2.5.2 Plant Programs Division

The plant programs division manager reports to the plant engineering department manager. The staff consisted of five departments: performance technicians, administrative technicians, Section XI, programs/responses, and reliability/stats, reporting to the plant programs division manager.

Programs/Responses Department

The department consisted of eight budgeted engineers with no vacancies. This department provided a multilevel of functions and interfaces which included the following:

- Design change implementation;
- Plant surveillance coordination;
- Request for action program;
- Station administrative procedures;
- Temporary modifications; and
- Training.

These functions and interfaces included tracking, trending, scheduling, coordinating, reviewing, and reporting status.

Reliability/Stats Department

The department consisted of four budgeted engineers with no vacancies. The department had the program responsibility for the following:

- Infrared thermography;
- Lubrication monitoring;
- Vibration analysis;
- NPRDS;
- Plant performance testing; and
- Station trending.

The department interfaced closely with maintenance personnel and system engineers in their program implementations. In addition to generation of monthly and quarterly station generation statistics, the department monitored the daily thermal performance for anomalies. The department had been successful in being able to procure state of the art equipment.

Conclusions

The plant programs division was actively involved in providing technical support for production activities. Their programs appeared well developed and implemented. Their approach to administering and managing the programs was very positive. There was a good expression of teamwork and an attitude of continual refinement and improvement of their products.

2.2.6 Manager and Technical Staff Training

The inspectors reviewed the licensee's training program for manager and technical staff. The licensee had revised the Interdepartmental Procedure IP-8.26Q, Revision 3, "Manager and Technical Staff Training Program" effective March 11, 1991. This program's classroom curriculum consisted of one week of new employee training and three weeks of introduction to plant systems training. The training schedule target was to get 60 personnel through each year. In addition, twice a year a 4 hour continuing training class was scheduled for all personnel. The program also offered supplemental training which included 11 weeks of detailed system lecture series covered over approximately 2 years.

The licensee had developed a system engineer training guideline. This guideline addressed the indoctrination and continued training of personnel performing the function of system engineer. In addition, the licensee had established goals for

developing and implementing new guidelines for training and qualification of engineering support personnel. The new guidelines were to be developed based on recently published industry guidelines for training and qualification of engineering support personnel. The licensee's goals for development and implementation of these new guidelines were January 1993 for system, in-service inspection, and reactor engineering personnel. All other engineering positions were to be developed and implemented by January 1994.

Conclusions

The licensee appears to have recognized the need to make improvements in the manager and technical staff training program. The implementation of these improvements should enhance the manager and technical staff personnel. The actual benefits of this program should be realized in the future when fully implemented.

2.2.7 Assessments

The inspectors found that at STP the QA organization performs both audits/surveillances and engineering assessments. In addition the QA organization performs in line reviews of engineering activities such as reviews of modification packages and calculations.

The QA audits of engineer design and modification control are performed yearly with surveillances of specific areas performed monthly. The audits are not limited to compliance issues but contain observations (assessments) of specific functions. Response to observations is not mandatory but they are reviewed during subsequent audits.

The engineering assessment activity was initiated in 1988. The inspectors' review indicates that assessments of specific functional areas such as electrical power system design and control, outage modifications, and motor operated valve program have been performed on the average of two to three a year. In addition a safety system functional assessment was performed in each of the last 3 years.

The inspectors found that the design engineering quality engineering group performs internal self-assessments of such areas as configuration drawing control associated with modification packages (MDP) and engineering change notice packages (ECNPs) and engineering followup on requests for action (RFAs). The inspectors found that five assessments were performed in 1991. In review of these assessments the inspectors found that the September 3, 1991, self-assessment on 1RE03 interim key drawings identified that eight amendments to key drawings had not been posted which was stated to be in violation of IP 3.2Q "Maintenance of Key Drawings" and RMSP 2.25 "Interim Revisions to Key Documents." A station problem report (SPR) was not initiated in accordance with Interdepartmental Procedure IP-1.45Q, Revision 8 "Station Problem Reporting." As a result of the internal engineering assessment, corrective action was taken and documented solely within the design engineering organization only. This action precluded the collective corporate QA evaluation and trending of SPRs for management. Other assessments by engineering had identified similar procedural

violations. This issue was discussed with the licensee's QA organization. The inspectors were shown that licensee's QA Audit 91-019 of corrective action had identified the same problem with other groups on site. As a result of the QA audit, QA Deficiency Report (DR) No. 92-010 was prepared which stated in part that "while station corrective action programs are generally effective in identifying and correcting deficiencies on singular bases, they are not designed for, or effective in, enabling Management to collectively identify, evaluate and act upon the generic implications of problems, common root causes, or precursors to significant station events." Based on the licensee's identification and initiation of corrective action in the form of DR No. 92-010, the inspectors informed the licensee that the failure to initiate a SPR would be considered as a non-cited violation in accordance with the NRC's enforcement policy.

Conclusions

The engineering assessment activities at STP are considered a strength.

A non-cited violation was identified by the inspectors with regard to a deficiency in the licensee's corrective action program. This resulted from the handling of program violations identified during quality engineering assessments without issuing site problem reports for corrective QA evaluation.

2.2.8 Engineering Initiatives

The inspector found that the licensee has a significant number of initiatives that are in process. These include the following:

- Bolting Program Task Force;
- Development of a Design Document User's Guide;
- Pre-Authorized Nonconformance Dispositions;
- Master Equipment Database (MED) Enhancement Effort;
- Repair Design Change or Modification Equivalent to Repair;
- Modification Program Streamlining;
- Development of an Interdepartmental Procedure for DCNs;
- Quality Engineering Self-Assessments;
- Configuration Management Status Monitoring;
- Configuration Management Program Training;
- Diesel Generator Reliability Improvement Plan;
- Design Basis Document Program;
- 1RE04 Outage Planning;
- Work Control Center Engineering Support;
- Diesel Generator Fuel Injector Tips Failure Analysis;
- Erosion/Corrosion Program;
- Work Document DCN;
- Development of Turbine Generator New Look Instruction Book (NLIB);
- Develop Integrated Instrumentation Setpoint Control System (ISCS) Program;
- Develop Plant Fuse and Relay List;
- Develop Plant Load List;
- Chart Recorder Standardization;

- Toxic Gas Monitoring System Replacement;
- Loose Parts Monitoring System Replacement;
- Main Generator Inspection and Corrective Action Program;
- Feedwater Isolation Valve Hydraulic Fluid Filtration System; Installation;
- Perform the Reactor Containment Building's Post Tensioning System; Surveillance;
- Provide Support for Temporary Radiation Shielding;
- Improved Access to Valves and Equipment;
- Engineering Support for Seismic II/I Scaffolding;
- Area Engineering;
- Key Drawing Amendment Incorporation;
- Generate and/or Revise Figures for the UFSAR and FHAR;
- Reduced CADD System Down Time;
- Develop Skid Mounted P&IDs;
- Electrical Auxiliary Relay Panel Drawings;
- Scan Key Drawings;
- Piping Isometric Amendment Incorporation and CADD system Conversion;
- Strategic Plan for Plant Modernization;
- Enhance Substandard Vendor Drawings;
- Cobalt Reduction;
- Conversion of EQ Documentation for Equipment to Original Equipment Manufacturer (OEM) Format;
- EQ Life Extension;
- Motor Operated Valve Program per GNL 89-10;
- Plant Availability/Outage Reduction Program;
- Performed Design Review of Sodium Hypochlorite System (SH) and Made; Recommendations for System Upgrade;
- System Engineer Guidelines;
- Reliability Centered Maintenance;
- Lubrication Monitoring Program;
- Vibration Monitoring;
- STP Probabilistic Safety Analysis Program (PRA);
- PRA System Notebook Description;
- Shutdown PRA Review;
- Safe Shutdown Logic Diagrams;
- Fuel Procurement Policy/Program;
- Fuel Configuration Management; and
- Fuel Upgrade Features.

In review of the above initiatives, the inspectors noted that the development of the Strategic Plan for Plant Modernization and the 1RE04 Outage Planning (Unit 1 refueling outage) has had a very significant impact on future engineering planning and workload. These two initiatives are considered to be a strength for future outage planning, costs, budgets, organizational accountability, and the promotion of the effective utilization of station resources. These initiatives establish the following:

- The intent is to provide for early identification of scope by integrated planning and scheduling one year in advance of the modifications to be performed each refueling outage;
- Additions to the outage modification scope will be allowed only after a detailed review and executive approval;
- Modification design, installation packages, and purchase requisitions for material and equipment are required to be completed six months in advance of the outage;
- Initiate and develop a 5 year Strategic Plan for Plant Modernization; and
- Establish a modification scope for the 1992 outage to be submitted for management approval.

The licensee indicated that the April 1, 1992 (6 months prior to the Unit 1 scheduled refueling outage) issuance of design modifications for unit 1 had delayed submittal of the 1992 modification scope to management and the completion of the 5-year Strategic Plan for Plant Modernization.

The inspectors noted that the licensee had established a very comprehensive STP Design Basis Document (DBD) Program which incorporates safety-related and selected nonsafety-related systems. There have been 29 DBDs completed as of February 3, 1992. Bechtel (AE of record) and Westinghouse (STP NSSS) are the contractors providing the DBDs. All DBDs are scheduled to be completed by the end of 1992. The STP DBD Program has also been revised to incorporate the basis for the UFSAR Chapter 15 Safety Evaluations into a STP Accident Analysis Design Basis (AADB) Document. There are 25 AADB documents scheduled to be completed in 1992.

The inspectors also noted that the individual plant examination (IPE) was indicated to be on schedule for submittal on August 29, 1992. The licensee is performing a plant specific Level 1 PRA. The work is being performed in conjunction with a contractor. The computer software is still under control of the contractor. New software which is PC compatible has been developed and is initially being installed on site. The licensee indicated that the PC compatible software does not have the over penalization inherent in the original software and that they are expecting to improve on their final PRA results. The site software is not considered to be controlled although the licensee has indicated that is the future plan. The design has been frozen since April 1991 and the intent is to update design at the end of each Unit 1 refuel outage. Planned future uses of the IPE (PRA) are still under development. The licensee is considering including a PRA section in their design basis documents. They have scheduled 10 PRA System Notebooks to be completed by December 31, 1992.

Conclusions

The licensee has initiated a number of initiatives to enhance the plant and their performance. The licensee has initiated very comprehensive DBD and PRA programs. The 1RE04 Outage Planning and the Strategic Plan for Plant Modernization would appear to be a strength for future modification and outage planning and control provided there are proper allowances for reactive and unanticipated safety issues.

2.2.9 General Observations Related to Engineering

Engineering Turnover Rate

During discussions with engineering management the engineering turnover rate was indicated to be very low. In specific groups such as the risk and reliability analysis group (four personnel) the turnover rate has been 100 percent. There is a potential for a critical shortage in the electrical system engineering group.

Backlog

A review of data provided by the licensee would indicate that the total number of plant modifications and ECNPs has decreased from 1450 open in January 1991 to 1200 open in December 1991. The licensee indicated that the goal had been to be less than 1138 by the end of 1991. The emphasis on the issuance of modification packages for planned outages was identified as the reason the goal was not met. The RFAs (information only) open in design engineering was indicated to be 82 in January 1992 and the RFAs (Non-conformance) were indicated to be 40. The open station problem reports (SPRs) was indicated to be 130.

In nuclear engineering, data provided would indicate that there were six open RFAs and 16 open SPRs. In plant engineering there are a total of 635 RFAs outstanding consisting of 412 (non-conformance) and 223 (information) RFAs. The licensee indicated that the 412 (non-conformance) RFAs had conditional releases with regard to operability. The backlog was attributed to material acquisition and finding an open window of opportunity to complete required work. There is a backlog of 6035 PM feedbacks that require disposition. The large backlog was attributed to actions to review and remove equipment located in mild environments from the equipment qualification (EQ) program and a PM optimization review that was completed in July 1991 which made change recommendations.

Overtime

Overtime in design engineering was indicated based on inspector interviews of engineering personnel to be running about 15 percent and during the last refueling outage was indicated to have run even higher (no hard data provided by licensee).

Outside Contractors

The data provided by STP indicates a high reliance on outside contractor support. The principal contractors identified are as follows:

- Bechtel Power Corporation;
- Ebasco Services, Inc.;
- United Engineering Services Corporation;
- Impell Corporation;
- Altran Corporation; and
- Westinghouse.

Of the approximately 23 major design modifications and 72 ECNPs installed in the last refuel outage, 13 of the major design modifications and 22 of the ECNPs were prepared by Bechtel. Only two of the major modification packages were completed after the start of the refueling outage. Bechtel utilizes the licensee's engineering design procedures which results in design modification packages that are prepared consistent with the licensee design program.

Engineering Building

Plant engineering, design engineering and nuclear engineering are all housed in one building on site. Mostly favorable comments were observed by the inspectors during the interviews of licensee personnel regarding the improvement in the function of the organization as a result of the central location.

3. EXIT INTERVIEW

The inspectors met with the personnel identified in paragraph 1 on February 14, 1992, to discuss the findings and conclusions reached during the inspections. The licensee personnel acknowledged the findings. No information was presented to the inspectors that was identified by the licensee as proprietary.