

The Light company

Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

November 25, 1992

ST-HL-AE-4267

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Mr. James L. Milhoan
Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
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South Texas Project
Units 1 and 2

Docket Nos. STN 50-498, STN 50-499
Supplemental Response to Initial Systematic Assessment
of Licensee Performance (SALP) Report

Reference: Correspondence from D. P. Hall (HL&P) to NRC Document
Control Desk, dated October 27, 1992 (ST-HL-AE-4245)

Dear Mr. Milhoan:

In its October 27, 1992 response to the initial SALP report, Houston Lighting & Power Company (HL&P) committed to provide a description of the actions being taken to address areas of weakness noted in the report. The NRC's observations in the initial SALP report have been carefully examined by HL&P, and the Company is determined to apply the management attention and resources required to reverse the causes of the declining performance noted in the report. This Supplemental Response (including Attachment) describes the primary actions currently underway or planned.

HL&P considers improvement in two areas to be key to strengthening overall station performance and maintaining the record of reliable operation achieved during the previous SALP period: (1) management, teamwork and ownership; and (2) maintenance and the reduction of plant challenges.

Management, Teamwork and Ownership

Significant action has been taken to strengthen the STP management team. This includes the appointment of new personnel in the positions of Plant Manager, Security Department manager, Nuclear Training Department manager, and Plant Operations manager. In addition, HL&P has established new positions of General Manager, Nuclear Engineering, and Deputy Plant Manager. These changes are expected to strengthen teamwork among Senior Managers and improve performance in certain areas warranting increased management attention.

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Several actions have also been taken or are underway to improve communication and teamwork between the various site organizations and to strengthen ownership and site commitment to safe operation.

For example:

- A series of reviews of current improvement programs is underway under the direction of the Manager of Planning and Assessment to evaluate whether these programs are achieving their objectives. Particular attention is being given to the effectiveness of program implementation. Adjustments will be made to these programs as indicated by the results of these reviews.
- An assessment of organizational interfaces and teamwork will be conducted by Behavioral Consultant Services Inc. in the first quarter of 1993. The first priority of this assessment will be to address interfaces (including communication and work processes) between key departments (Operations, Maintenance, and Engineering) responsible for safe operation and maintenance of STP, and to identify ways to enhance organizational performance.
- A Senior Management Observation Program has been established providing increased management presence in the field. Management expectations regarding in-plant presence by managers, supervisors, and crew leaders have also been established. The program provides the means for assuring that management expectations are reinforced to personnel and that personnel are provided with appropriate support.
- Management has reemphasized the need for personnel to report and promptly address identified safety issues. This was communicated through a bulletin issued by the Plant Manager and through oral reminders by senior management during meetings and briefings. HL&P is also enhancing the SPEAKOUT program to assure more timely response to concerns and to provide increased assurance that the identity of concernees will be kept confidential.
- To assure participation of Shift Supervisors in the resolution of issues involving operational matters, meetings relating to such matters (especially those involving operability issues) are being held more often inside the Protected Area. In addition, the corrective action program has been revised to provide better and more timely notification and support to the Shift Supervisor regarding plant problems.

- Management has reemphasized the principle that the Plant Manager and Operations personnel are primarily responsible for plant operating decisions. Specifically, NRC-licensed personnel are responsible for operability determinations and assuring that operational actions comply with license and Technical Specification requirements. Other site groups are responsible for assuring that these personnel receive the support and review needed for effective performance of their functions.

Long term personnel development and career growth for STP personnel are being fostered by implementation of a Human Resources Development Program. This program is designed to ensure that organizations are staffed with appropriately skilled personnel, and that these personnel clearly understand their own functions, areas for skill improvement, and career paths. This program was implemented on a pilot basis in 1992 by the STP Nuclear Assurance department and is being extended to the other site departments in 1993.

The current Group Vice President, Nuclear, is scheduled to retire in December 1993. His successor has not yet been selected. A transition is planned to ensure management continuity in implementing these initiatives and an orderly turnover of responsibilities to his successor.

Maintenance and Reduction of Plant Challenges

In reviewing indicators of plant performance, including the initial SALP report, it has been apparent that Maintenance warrants special management attention, especially to ensure that challenges to plant equipment and operating personnel are minimized. Initiatives to improve Maintenance performance include the following:

- Significant resources are being applied to address several longstanding equipment problems and availability issues, including the Standby Diesel Generators, the Essential Cooling Water System, the Essential Chillers, and the Feedwater System. In addition, modifications are being developed that will extend steam generator life by reducing primary side "hot leg" coolant temperature, and an agreement has been reached to upgrade the low pressure turbine rotors. These significant upgrades should improve plant reliability.

- HL&P has entered into a contract with an architect/engineering firm for assistance in preparing design modifications and implementation of upgrades to STP. Because this firm has committed to provide full home office support to STP projects, this arrangement is expected to ensure high-quality assistance while permitting preparation of design modifications in a more expeditious manner. HL&P views this as a significant step toward improved plant safety, reliability, and maintainability over the long term. This also represents the commitment of significant capital expenditures in support of long range plant operation.
- A Reactor Trip Prevention program and an ESF Actuation Reduction program were initiated in 1992 to reduce the number of challenges to the plant. Under these programs, the causes of plant trips and ESF actuations are analyzed by task forces which use this information to develop corrective actions. Several improvements to maintenance work processes have been implemented as a result of these programs.
- In April 1992, the station philosophy for maintaining operational margin to prevent plant trips or other operational challenges was clarified to reemphasize that plant safety takes precedence over power generation. Accordingly, to reduce the potential for unnecessary plant trips, power reductions are now considered under a wider variety of circumstances than was previously the case.
- Fundamental changes to maintenance work control processes have been made during 1992 to provide for more efficient processing of maintenance work while ensuring appropriate review for plant and worker safety. At the same time, a dedicated team of engineers has been assigned to provide technical support to maintenance. These changes should assure more efficient disposition of maintenance service requests, reducing the number of outstanding service requests over time.
- A review of the basic skills of individual maintenance personnel was conducted. Supervisors refer to the results of this review during the assignment of maintenance work to ensure that personnel have the requisite skills for assigned tasks.

- A significant effort is underway to upgrade the skill levels of maintenance craft and supervisory personnel. Performance-based skill assessments are planned for newly hired craft to assure that their training needs are clearly identified. To enhance line management ownership of training, supervisors are attending selected training and production activities to observe the quality of training and provide constructive feedback. Senior and executive management is taking a more vigorous role in oversight of training through enhanced Technical Advisory Committees for each accredited training program and a newly-created Executive Training Review Board. Enhancements to the accredited maintenance training program for supervisors are being developed to provide leadership, technical, and administrative skills training. These enhancements will also include a program of orientation through meetings with interfacing departments.

In addition to these specific improvements, a Maintenance Department Self Assessment program was established in July 1992 covering work control, training, housekeeping, material control, and other areas. This program provides for assessment of the various maintenance groups by other groups within the department.

Many of these initiatives have been underway for just the last several months. Nonetheless, their positive effect on plant performance is apparent and is reflected in key indicators of overall plant safety and reliability.


- The number of unplanned automatic reactor trips while critical during 1992 to date has been one each for Unit 1 and Unit 2, which is consistent with plant goals and represents a considerable decrease from prior years (station totals of 10 in 1990 and 7 in 1991). Since the recommendations of the Trip Reduction Task Force were implemented in the Spring of 1992, there have been no unplanned automatic reactor trips at STPEGS.
- During 1992, unavailability of the Standby Diesel Generators has decreased by 20% from 1991 levels, and unavailability of the Auxiliary Feedwater System has decreased by approximately 40% for Unit 1 and 45% for Unit 2 compared to 1991. In 1993, the maintenance frequency and planning of outages for these systems will be adjusted to further increase availability.

- There have been no unplanned actuations of the Emergency Core Cooling systems (ECCS) or emergency AC power systems on either unit during 1992.
- The Unit 2 capacity factor through October, 1992, has been 94.3%. The 1992 capacity factor for Unit 1, which entered a refueling outage in September 1992, is 79.4%.
- The number of Licensee Event Reports (LERs) submitted during 1992 to date is 25 (two more are pending). This figure indicates a decrease in the number of events that trigger LERs (for calendar years 1989, 1990, and 1991, numbers of LERs were 53, 45, and 34, respectively), and compares favorably with industry averages for recent years.

These data suggest that HL&P improvement initiatives are showing positive results. HL&P is committed to continuing these trends. HL&P also recognizes that in other areas, such as the number of outstanding maintenance service requests and total ESF actuations, the data indicate a need for additional management attention. Attention and resources required for improvement in those areas is being applied.

In addition to the actions described above, HL&P has examined the six areas for improvement noted in the cover letter to the initial SALP report to assure that those areas are fully addressed by our improvement activities. A summary of actions underway or planned to address each of those areas is provided in the Attachment to this Supplemental Response (the Attachment also provides more detail regarding a number of the items discussed above).

Please call me at (512) 972-8434 should you wish to discuss these matters or require any further information.



D. P. Hall
Group Vice President,
Nuclear

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Attachment: HL&P Supplemental Response to NRC SALP Comments

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South Texas Project Electric Generating Station

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HL&P Supplemental Response to NRC SALP Comments

INTRODUCTION:

This Attachment describes the actions that HL&P is taking to address the six areas for improvement noted in the cover letter to the initial SALP report. Actions to improve human resources development and to improve Security performance are also discussed. A number of the actions summarized in the cover letter to this Supplemental Response are presented in more detail in this Attachment.

As indicated in its October 27, 1992 response to the SALP Report, HL&P has reviewed the issues identified by the NRC to ensure that effective corrective actions have been implemented or planned. Since the SALP is a report of past performance, many of these issues were not new information and STP had already developed action plans to address most of them. Also, as the NRC has noted, STP has good programs; however, improvements are needed in the implementation of these programs. Consequently, HL&P is directing substantial effort toward monitoring the effectiveness of corrective actions so that adjustments can be made as necessary.

HL&P is using task forces to resolve a number of the issues identified in the report. This technique establishes clear ownership of a problem and accountability for its resolution. One area where this approach has succeeded is in reactor trip prevention.

HL&P believes that the more significant issues from the initial SALP report are addressed in this Supplemental Response. In addition, to assure completeness in responsive action, each issue in the text of the SALP report was reviewed by the responsible department and appropriate corrective actions (either in-place or planned) were identified.

RESPONSE TO THE GENERAL AREAS:

1. Improve the material condition of the plant by resolving long-standing equipment problems, providing sufficient maintenance support to systems and equipment that are not governed by Technical Specifications and improving the level of housekeeping in plant areas outside the radiological controlled areas.

HL&P is devoting substantial resources to improving the material condition of STP and recognizes that continued effort is needed. The success of the HL&P effort is evident in the increased capacity factors of both STP units over the past two years.

An important recent accomplishment is the selection and retention of an outside Architect/Engineering firm to help implement modifications and design changes that will improve the reliability and maintainability of STPEGS. This firm has committed to provide full home-office resources which should permit design work to be performed in a high-quality, efficient, and timely manner. HL&P views this as a significant step in ensuring long-term station reliability and safety.

HL&P is correcting recurrent equipment problems. Particular attention has been given to the Standby Diesel Generators (SDG), the Essential Cooling Water System (ECW), the Essential Chillers, and the Feedwater system.

Standby Diesel Generators

A Diesel Generator Reliability Task Force has been established to resolve long-term diesel generator reliability and availability issues. To date, the task force has identified several proposed solutions, a number of which are currently being implemented. These include:

- Procedure changes to increase the allowed time to start and load the diesels during performance of monthly surveillances. This will reduce unnecessary wear on the engines.
- Modifications to rebuild the fuel oil delivery valve and nozzle holders to eliminate cracking and add new high pressure fuel lines (fuel oil delivery system problems have caused diesel generator start test failures in the past).
- Modifications to replace lube oil crossover lines with 0.62" wall tubing (current tubing is 0.35" wall thickness) to reduce the potential for line failure.

- Changes to circuitry design to reduce the incidence of non-emergency diesel generator trips are currently under development.

To provide better focus on diesel generator maintenance and reliability over the long term, a Diesel Generator Improvement Project Team is being established. This team will be headed by a Project Engineer supported by a dedicated crew of mechanical maintenance personnel responsible for continuous attention to diesel generator maintenance and modifications. The team will: perform regular maintenance walkdowns of the diesels; keep the engine rooms clean and attend to other housekeeping tasks; make repairs and adjustments that can be performed without taking the diesels out-of-service; ensure that design changes to enhance diesel performance are scheduled, tracked, and worked; and coordinate with the Work Control Center to maximize work during short-duration outages so that availability is maximized.

Essential Cooling Water System

Issues associated with the Essential Cooling Water (ECW) System have been due to specific metallurgical concerns. HL&P has made substantial progress in addressing these issues. Welds with cracks have been repaired and dealloyed castings have been replaced. Provisions have been made for monitoring the system to detect leaks. Long term plans are being developed to ensure continued operability of the ECW System.

Essential Chillers

A task force established to resolve issues associated with the Essential Chillers is being enhanced by the assignment of a full-time Project Engineer. Under the supervision of the Project Engineer, the Task Force will identify causes of system issues, propose solutions (including appropriate equipment upgrades or modifications), and assist in implementing those solutions. The task force will also review and upgrade ongoing maintenance for the chillers so that potential problems are detected earlier and prevented. This is expected to improve the sense of "ownership" of chiller problems and ultimately improve chiller availability and reliability.

Feedwater System

Modifications made to the Unit 2 Feedwater Isolation Valves (FWIV) have eliminated problems associated with these valves. The same modifications are being implemented for Unit 1 during the refueling outage currently in progress. A major upgrade is planned for the electro-hydraulic controllers for the steam generator feedpump turbines (SGFPT) during upcoming outages in each unit. The upgrade provides separate power and control logic for each SGFPT, and will increase reliability. This upgrade will also reduce the potential for plant trips due to an electro-hydraulic system failure. Other modifications to the SGFPTs are planned that will increase their reliability and improve operation.

Reduced "Hot Leg" Temperatures

Modifications and operational changes are being developed to lower the temperature of coolant in the "hot leg" of the reactor coolant system. This should reduce stress and corrosion of steam generator components, which will lower the potential need for tube plugging and extend component life.

Generic Efforts to Preclude Recurring Equipment Issues

HL&P is closely following equipment performance so that other components do not develop recurrent failures. Actions taken or planned include:

- Requiring maintenance Service Requests to include more detailed documentation regarding as-found conditions and subsequent corrective actions. This will permit easier detection of repetitive problems and their causes.
- Implementing system performance monitoring by system engineers. Monitoring includes identifying parameters, collecting data, and trending and evaluating results. This will assist in detection of equipment performance issues before failures occur, and will provide data for analysis of failure causes.

Nonsafety-Related Equipment

HL&P is providing increased maintenance support to nonsafety-related equipment. A primary area where this work is visible is reduction of the number of steam leaks. Known Unit 1 steam leaks are being repaired in the current refueling outage. The number of Unit 2 steam leaks is also trending down. The Unit 2 1993 refueling outage will provide an opportunity to repair steam leaks remaining at that time.

Other activities to improve condition and reliability of non-safety (and safety) equipment include:

- Retaining of a specialty contractor to repair valve packing leaks, valve seat leaks, and flange leaks.
- Establishing a breaker refurbishment program which includes 13.8 kV and 4.16 kV breakers.
- Initiating a materiel condition program for doors, coatings, and insulation.
- Upgrading the low pressure turbine rotors in both units in order to extend their life and enhance long term reliability.

Housekeeping

Housekeeping is also being given additional attention by HL&P, particularly toward establishing employee ownership and accountability for housekeeping. Specific personnel have been assigned responsibility for cleanliness of particular plant areas, and the Plant Manager has initiated a manager area ownership/walkdown program. Equipment cleaning assignments have been made by the Operations Department. HL&P Facilities Management, which directs the janitorial contract, has assigned a supervisor to specifically oversee cleaning operations in the power block areas. The housekeeping deficiencies observed by the NRC during tours on September 11 and 15, 1992, have been corrected. A significant improvement in the appearance of the station has already been achieved since implementation of the corrective measures.

A systematic painting schedule for secondary plant areas will enhance housekeeping efforts. A pilot program has been initiated for painting at the neutralization basin. HL&P plans to expand the program to include other balance of plant buildings such as the Turbine Generator Building. Improvements in lighting are also part of the program which will improve overall appearance and visibility in the plant.

2. Provide effective guidance and support to plant operators.

HL&P recognizes that providing effective support for the operating staff is central to the safe and reliable operation of the station. Key aspects of providing support to the operators are assuring effective communication and preserving the operators' central role in plant decision-making. Station management must also provide operators with adequate tools and resources to enable them to perform their duties consistently and confidently. To accomplish these objectives, HL&P has taken action including:

- Developing guidance through Operations Policies and Practices for operator use in determining operability. HL&P will also issue enhanced guidance to Shift Supervisors to aid them in making reportability decisions.
- Facilitating the participation of the Shift Supervisors in meetings to discuss operational issues (especially those which could involve operability) by holding the meetings more frequently inside the Protected Area.
- Implementing corrective action program changes which ensure the Shift Supervisor is promptly notified of plant problems. This provides the shift supervisor with the immediate ability to direct station resources to assist in making operability decisions.
- Obtaining the services of Behavioral Consultant Services, Inc. to assist in improving organizational interfaces. The first priority will be to address interfaces (including communication and work processes) between key departments such as Engineering, Operations, and Maintenance. This effort is expected to improve teamwork between departments and result in better support of operations by other plant departments.
- Issuing written communications defining Operations Department management expectations and job standards for Operator performance.
- Reducing the number of main control board instruments that are out-of-service and the number of inoperable automatic functions.

HL&P is reinforcing line management's responsibility for operation of the station, including their assumption of the lead role in directly communicating with outside organizations such as the NRC on operational issues. STP policies and procedures are being clarified where necessary in this regard. The role of Nuclear Licensing remains important from the perspective of providing internal regulatory assistance for the line departments and in interpreting the licensing basis of the station.

3. Improve work control and coordination to increase equipment availability.

HL&P recognizes that optimizing availability of equipment is important to plant safety. The three train design of STP, coupled with the capability to safely shut down the plant using only one train provides additional margin over more conventional designs. However, because there is more equipment to maintain with three trains, the requirement for strong work control is not diminished.

STP uses a scheduling process which provides for advance preparation through planning meetings. The STP work control process requires the preparation of detailed schedules for major equipment outages, and includes critical path analysis. An Owner is assigned to each work activity, with the Work Control Center acting as the overall coordinator. Preparatory activities are completed prior to taking the equipment out of service. Equipment clearance orders are coordinated to optimize the time between equipment being available for work and actual work start. Corrective and preventive maintenance activities on Technical Specification equipment are worked continuously, across shifts, to completion.

HL&P will improve the availability of selected safety systems by decreasing the number of planned maintenance outages each year. Beginning in 1993, the ECW/SDG and Auxiliary Feedwater train outages will be conducted on a semi-annual rather than quarterly basis, and High Head Safety Injection System maintenance will be done on a refueling outage basis. Sufficient maintenance on these systems will be ensured by careful planning of maintenance not requiring system outages, and through more efficient and well-planned use of outage time.

HL&P has implemented an improved work control process designed to be more responsive to out-of-service equipment. This change has been accompanied by improved station procedures and dedicated engineering support for maintenance activities. A dedicated team of technical support engineers, located in the maintenance planning area, has been assigned to support maintenance. These engineers quickly address many planning issues that require engineering support, often significantly reducing the time needed to resolve such issues. This permits Maintenance to respond to out-of-service conditions and other maintenance problems more rapidly. These improvements are expected to reduce the number of outstanding Service Requests and improve the material condition of the station. The effectiveness of the changes will be more evident when both units are operating after completion of the Unit 1 fourth refueling outage currently in progress.

4. Reduce unnecessary Engineered Safety Features actuations and continue efforts to further reduce personnel errors.

HL&P is including reactor trip prevention in the response to this item since there are a number of common or related activities. HL&P has created task forces to address reactor trips and ESF actuations. These task forces report to the Plant Manager. Data on STP reactor trips and ESF actuations have been compiled which include pertinent information such as system, cause, time of occurrence, group responsible, etc. The task forces are using this information to develop corrective actions. Actions which HL&P has taken or planned to address reactor trips and ESF actuations include:

- Continuing emphasis on the seven-step self-verification program.
- Revising procedures which STP or industry experience indicates have the potential to cause ESF actuations.
- Changing the STP toxic gas monitoring system in Unit 1 from a 1/2 logic to a 2/3 logic, even though nonvalid Control Room Envelope (CRE) HVAC actuations caused by the toxic gas detection system are no longer reportable to the NRC. This change will significantly improve reliability and reduce CRE HVAC actuations. The same change is scheduled for Unit 2 during its next refueling outage.
- Developing an Event Review Team to investigate events such as reactor trips and selected ESF actuations. By bringing a dedicated team of investigators in quickly after an event, the investigation will be more comprehensive than those done in the past by the Shift Technical Advisor and the Station Problem Report investigator.
- Implementing procedure enhancements to identify those procedures required to be "in hand" when performing the subject task. This will reduce the potential for errors due to procedure noncompliance.

Actions to-date are beginning to have a positive effect. The total number of unplanned automatic reactor trips to date in 1992 is 2, compared to 10 in 1990 and 7 in 1991. There have been no automatic actuations of the Emergency Core Cooling System or Emergency AC Power System in 1992. HL&P is carefully monitoring the effectiveness of these actions to determine whether they succeed in reducing other ESF actuations and lower the number of personnel errors.

5. Increase the level of Management involvement in day-to-day operations, and increase management and supervisory presence to more effectively resolve hardware and process problems.

HL&P management is emphasizing the importance of increased management and supervisory presence. HL&P recognizes that senior management's attention is necessary to ensure problems are adequately addressed and management expectations are clearly communicated. A Senior Management Observation Program has been implemented to ensure there is a management presence in the field to communicate standards and expectations to workers and to assure that field activities receive adequate support. Plant management has also established expectations regarding the amount of time appropriate crew leaders, supervisors, and managers are to devote to field activities. Management has also taken an active role in monitoring station housekeeping.

The supervisory skills training program provided to STP managers and supervisors was augmented by Plant Manager presentations to provide increased focus on improving communication across departmental interfaces. This is expected to result in enhanced teamwork and mutual support among site groups in resolving hardware and work process issues. Management monitoring of training programs is also being increased to help assure training effectiveness.

HL&P has created the new positions of Deputy Plant Manager and General Manager, Nuclear Engineering. These organizational enhancements will enable increased management attention in the operational and engineering areas.

6. Assess the overall effectiveness of various improvement initiatives.

As noted in the Introduction to this response, the STP programs are generally good; the key to station improvement is effective application of the programs. The Manager of Planning and Assessment has been assigned the responsibility to identify current improvement initiatives, and to conduct assessments of these initiatives to determine their overall effectiveness.

Resources from areas other than the line departments will be used to perform these assessments, such as Planning and Assessment, Corrective Action Group, Nuclear Assurance, or other individuals knowledgeable in the area being assessed. Upon completion of each assessment, a report will be provided to the department manager responsible for the initiative and to station senior management. The responsible department will modify planned actions as necessary to ensure the program accomplishes the purpose intended.

To ensure future programs are effective, the following actions will be taken. When the need for a station improvement initiative is identified, a responsible individual will be selected and charged with establishing objectives, developing action plans, and developing a schedule. This individual will also be responsible for determining how to monitor progress. The Manager of Planning and Assessment will direct periodic independent assessments of these initiatives to verify effectiveness.

STP's offsite review group, the Nuclear Safety Review Board (NSRB) also has a responsibility to review station performance. HL&P has a knowledgeable NSRB, which includes two recognized independent consultants with expertise in plant operations and engineering. In 1993, HL&P plans to add another independent consultant with expertise in radiation protection.

The NSRB is also implementing other initiatives to improve its effectiveness. To allow it to perform effective high level oversight of safety issues and to conduct its business efficiently, the NSRB has established four standing committees (Radiological, Engineering, Operations and Maintenance, and Quality & Security) for providing review assistance to the NSRB. These standing committees are expected to provide a more focused overview of specific areas of Nuclear Group performance and report the review results to the NSRB. These standing committees are structured to ensure objectivity, openness, and field orientation.

Nuclear Assurance is another oversight organization in which personnel realignments have been made to improve performance. HL&P's internal assessments indicate that positive changes in Nuclear Assurance's operations have resulted from these realignments.

OTHER HL&P ACTIONS

1. Human Resources Development

HL&P recognizes that good programs and effective assessments are complemented by development and training of the people who implement them. HL&P has implemented a Human Resources Development Program at STP to:

1. Ensure the station's capability to manage and adapt to change
2. Increase organizational effectiveness and productivity by better deployment of staff resources
3. Maintain and improve individual effectiveness and productivity, and
4. Ensure that STP has the right personnel in the right positions to achieve and sustain excellent performance throughout the operating life of the plant.

The program is directed by line management, but it recognizes that each employee is ultimately responsible for his own career development. A pilot program was initiated in Nuclear Assurance in 1992. All Nuclear Group departments are implementing a Human Resources Development plan in 1993.

In addition, the Synchrony Development Needs Assessment Program was implemented in 1992 to help identify training and development needs/strengths for individuals and groups. Skills assessments for division managers up through Vice Presidents were completed in 1992. Assessments at the first line supervisor level are scheduled for completion in 1993.

With regard to other station training, Supervisory Skills Training has undergone several improvements, and HL&P has planned a review of all the accredited training programs during 1993 to ensure they meet industry and HL&P standards.

2. Nuclear Security Actions

The Nuclear Security organization has undergone substantial realignment in 1992. This restructuring is expected to improve communication in the organization and enable work to be done more effectively and efficiently. A rotating shift schedule is planned for 1993, which will further enhance this effort. The Nuclear Security Department has implemented a self-assessment process using management/supervisory tours, including back-shift tours, structured to address all major aspects of the physical security program.

A major effort has been devoted to improving maintenance support for security equipment. The effectiveness of this effort is evidenced by the decline in Security compensatory post hours due to equipment failure from an average of 600 hours per day in May 1992 to an average of less than 140 hours per day in October 1992.