APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV
FOLLOWUP TEAM INSPECTION

NRC Inspection Report: 50-498/92-07
50-499/92-07

Operating Licenses: NPF-76
NPF-80

Dockets: 50-498
50-499

Licensee: Houston Lighting & Power Company (HL&P)
P.O. Box 1770
Houston, Texas 77251

Facility Name: South Texas Project Electric Generating Station (STPEGS), Units 1 and 2

Inspection At: Matagorda County, Texas

Inspection Conducted: March 9-13, March 23-27, and April 14, 1992

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Inspection Summary

Inspection conducted March 9-13, March 23-27, and April 14, 1992 (Report 50-498/92-07; 50-499/92-07)

Areas Inspected: Special, announced followup team inspection. The specific areas inspected included the licensee's general employee training, specific training for maintenance employees, and specific training for contract security employees; maintenance work controls and maintenance work package backlog; security controls for escorting visitors; internal radiation exposure assessment of exiting employees; handling of employee concerns; and corrective actions taken as a result of licensee review of issues provided in the petition.

The inspection procedures (IPs) used during the inspection included:

41400, "Non-Licensed Staff Training";

41500, "Training and Qualification Effectiveness";

62700, "Maintenance Program Implementation";

62704, "Instrumentation Maintenance (Components and Systems), Observation of Work, Work Activities, and Review of Quality Records";

81018, "Security Plan and Implementing Procedures";

81020, "Management Effectiveness - Security Program";

81038, "Records and Reports";

81070, "Access Control - Personnel";

81401, "Plans, Procedures, and Reviews";

81501, "Personnel Training and Qualification - General Requirements";

83723, "Training and Qualifications: General Employee Training, Radiation Safety, Plant Chemistry, Radwaste, and Transportation";

83725, "Internal Exposure Control and Assessment (Minimum and Basic)"; and

93702, "Prompt Onsite Response to Events at Operating Reactors."

Results: Within the scope of the inspection, two apparent violations were identified in paragraph 2.3.1. The apparent violations involved the failure of escorts to maintain view and control of their visitors (50-498/9207-02; 50-499/9207-02), the failure of escorts to notify security before transferring their visitors and the failure of an escort to have the assigned visitor depart the protected area ahead of the escort (50-498/9207-03;

50-499/9207-03). During the inspection, the licensee identified other similar examples in which the visitor escort requirements had been violated. The licensee's investigation of visitor escort controls was initiated in response to a concern which was identified through the Speakout program prior to the time that the 2.206 Petition was filed.

The effect on plant performance of an increasing service request backlog was identified as an inspection followup item in paragraph 2.2.4 (50-498/9207-01; 50-499/9207-01).

EXECUTIVE SUMMARY

On February 11, 1992, the U.S. Nuclear Regulatory Commission (NRC) received a petition dated February 10, 1992, filed pursuant to the provisions of 10 CFR Part 2.206, "Requests for Action Under this Subpart." An inspection team of NRC staff members subsequently gathered specific and programmatic information to enable the Commission's staff to address issues identified in the petition and in other related information given to the news media and obtained by the NRC staff.

The team utilized guidance from the NRC Inspection and Enforcement Manual to perform the inspection. The specific inspection procedures used and areas inspected are listed in the results section of this report.

The team substantiated a number of concerns expressed by the petitioner, however, most did not have direct bearing on plant safety or regulatory requirements. Many of the petitioner's concerns related to historical problems that have continued in the implementation of the maintenance program and, in particular, in the instrumentation and control activities. Some of these historical problems were previously documented in the Maintenance/ Surveillance functional area of the July 31, 1991, Systematic Assessment of Licensee Performance Report (NRC Inspection Report 50-498/91-99; 50-499/91-99).

The licensee's staffing for conducting its general employee training (GET) program was found to be marginally acceptable. The allocated number of instructors, which had recently been decreased, may cause significant stress on the staff, especially during times when large groups of people must be trained in a short time period (e.g., preparations for major plant outages are underway). The licensee's GET coverage of visitor escort requirements was appropriate. The specific training given to maintenance personnel on work processes met necessary objectives. Workers were suitably tested to demonstrate their knowledge in both of these specific areas. It was noted that some minor refinements might enhance the licensee's program for ensuring the correctness of lesson plan information.

The team determined that the licensee had a good maintenance work control process program. This program provided for the identification of equipment problems, evaluation of such problems on operability and technical specification limiting conditions of operation, work activity prioritization, work order planning, conduct of maintenance activities, and closure of the packages with feedback to owners (i.e., the licensee's assigned system representative). There were, however, instances where licensee procedural requirements were not strictly complied with, for example in obtaining work-start authority before work packages were given to craftsmen. The use of the Planners Guide had resulted in greater detail in work planning and a more consistent use of cautionary statements and more consistency in the product of work packages. Work instructions had improved. Although some personnel thought that the increased level of detail limited their use of "skill of the craft," others recognized that the increased level of detail decreased the potential for personnel errors.

The number of open maintenance service requests had grown during the last several months. At the end of February, the number was approximately 4300. Two of the reasons for such an increased backlog were (1) operators and system engineers were being more active in identifying deficiencies and (2) the licensee's apparently reduced effort in dispositioning service requests. The increased backlog itself did not necessarily mean that the physical condition of the plants had deteriorated, mc eover, some of the licensee's staff had expressed that the plants' material condition had actually improved in recent months. Although the team did not fully assess the accumulative effect of the increasing maintenance backlog, further NRC review of this effect on plant performance will be an inspection followup item.

Licensee management had no policy regarding its expectations about personnel backdating their signatures on permanent plant records. The team considered this a weakness, especially in lieu of the inconsistent ways that personnel were handling the late signing and dating of work packages. Before the end of the inspection, the licensee issued a station procedure to provide guidance on this matter. As a separate matter, the inspection team told the licensee that confusion existed over the written guidance concerning who in the Maintenance Department was authorized to release equipment clearance orders.

The team also found that some of the licensee's internal procedures were not being satisfied by maintenance workers. In particular, there were instances when the configuration control change log was not used for lifting leads. There were two instances of technicians working on work requests without signing the work orders. The team was concerned that procedural violations of licensee requirements that occurred during the performance of nonsafety-related activities could also occur during the performance of safety-related activities because the same administrative controls were in place for all maintenance activities.

Another team observation was that the licensee's employees had not attained a mature concept of equipment ownership. Some licensee personnel believed that management could improve the transition from a construction-to-operational perspective by increasing the opportunity for maintenance personnel to be able to follow through with work activities that were initially assigned to them, rather than allowing another shift crew to complete the task, when circumstances permit.

Although initial training of the security force on visitor access and controls was adequate and GET was also appropriate, most of the employees and security officers interviewed could not successfully explain all of the necessary aspects of visitor access and escort control. These personnel had all successfully passed the requisite training on visitor escort requirements, but it appeared to the team that a lax attitude toward visitor escort requirements had developed among certain maintenance workers and security officers and that certain personnel failed to comply with the security plan's implementing procedures. Specifically, apparent violations of visitor access controls in the protected area had occurred, involving the failure of escorts to appropriately transfer visitors, the failure of escorts to maintain view and control of visitors, and the failure of an escort to have the assigned visitor precede the escort out of the protected area. Most noteworthy was the

licensee's lack of immediate corrective action taken in response to the petitioner's and NRC team's concerns about its visitor access and control program.

The licensee's practice and means for providing whole body counts for employees whose employment at the South Texas Project was being terminated was found to be acceptable.

The licensee's Speakout program was found to be an effective factor in resolving employee concerns. Employees were well aware of the program, and several indicated that they had provided concerns to Speakout. Most of the licensee's staff and contractors stated that they were generally confident of their freedom from reprisal when taking concerns to the Speakout program. NRC review of Speakout investigations noted that the investigations were of a rather limited scope and that more definitive and comprehensive results would have been generated, if the investigations had a broader approach and had involved more interviews with licensee management.

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1. INTRODUCTION (IP 93702)

On February 11, 1992, the U.S. Nuclear Regulatory Commission (NRC) received a petition dated February 10, 1992, filed pursuant to the provisions of 10 CFR Part 2.206, "Requests for Action Under this Subpart." (10 CFR Part 2.206 specifies that a person may file a request to institute a proceeding to modify, suspend, or revoke a license, or for such other action as may be proper.) The petition presented concerns regarding the Houston Lighting & Power (HL&P) Company's South Texas Project (STP), Units 1 and 2. The petitioner requested that the NRC institute a show cause proceeding pursuant to 10 CFR Part 2.202, "Order to Show Cause," and take a number of immediate and swift actions because of concerns about physical security, maintenance activities, compliance with technical specifications and procedures, and training at the STP. On February 18, 1992, the petitioner met with NRC staff at the Region IV office to discuss the issues presented in the petition. On February 27, 1992, the NRC received related information that the petitioner had developed and provided to Houston-area news media. Subsequently, on several occasions, NRC staff telephoned the petitioner to obtain additional details on various issues.

By memorandum dated March 5, 1992, Region IV management initiated a special followup inspection team and assigned personnel to the team. Another memorandum dated March 5, 1992, outlined the team charter.

HL&P responded to the issues in the petition in its letter dated March 11, 1992, to the Director of the Office of Nuclear Reactor Regulation. During discussions with the petitioner, the licensee noted two concerns that were not in the petition. The licensee categorized the petitioner's concerns into 17 separate cases that were investigated through its Speakout program process.

The licensee's voluntary response letter of March 11, 1992, to the 2.206 Petition concluded that there were no safety-significant issues identified by the petitioner. The licensee's conclusion was based on either: (1) a lack of specificity in the petition, or (2) if true, the concerns had no affect on safety. According to a senior licensee official, the licensee limited, pursuant to its legal counsellor advice, the information it considered in preparing its response. For example, while there was limited specifics included in the petition, there was additional information available later that could have been considered as supporting information to the petition. In particular, there was a package released to the public by the petitioner, in late February, that had draft "notices of violation" that related to the security concerns. Also, available to the licensee was the information obtained by the licensee's Speakout organization when an interview was conducted with the petitioner in February after issuance of the petition.

The licensee's response that there were no programmatic breakdowns relied on internal quality assurance audits, quality assurance surveillances, and previous NRC staff inspections of the maintenance and security programs. Considering the additional information available to the licensee, a more detailed review of some of the petitioner's concerns may have revealed their validity and permitted the licensee to determine if there were similar situations that might affect safety. For example, only a short extrapolation of one of the petitioner's concerns (Item d on page 2 of the petition) could

have led one to question whether security personnel were adequately trained on the existing procedures regarding escort responsibilities and, if there was compliance with the Technical Specifications.

On March 24, 1992, the Director of the Office of Nuclear Reactor Regulation denied the petitioner's request for immediate and swift actions because the concerns that could be substantiated did not involve nuclear safety or did not raise safety concerns of such importance to warrant the requested actions. The director indicated that NRC would take appropriate action regarding the specific issues within a reasonable time.

The persons contacted during this inspection are listed in Attachment 1. The licensee's employees and contractors who were interviewed by the team are listed in Attachment 2. The various documents that were reviewed by the team are listed in Attachment 3. Copies of "Work Process Program," and the handout provided by HL&P are given in Attachments 4 and 5, respectively. The team's specific findings from the special followup inspection are discussed below.

2. INSPECTION DETAILS

2.1 Training (IPS 41400/41500/81501/83723)

2.1.1 General Employee Training

The team inspected the licensee's program for general employee training (GET) to review the petitioner's concerns about staffing, instructor qualification, and security training.

The Professional and Support Services Division of the Nuclear Training Department was responsible for presenting GET. GET Category I included modules on plant description and layout, security, industrial safety, quality assurance, emergency response, and radiation protection; Category II specifically addressed radiation worker training; Category III covered respiratory protection training; and Category IV included use of self-contained breathing apparatuses. In addition to GET Categories I-IV, the training group provided instruction in the use of the emergency plan, first aid, cardiopulmonary resuscitation, fire brigade, confined space, hazardous material, power plant fundamentals, and equipment clearance orders (ECOs).

The GET group consisted of a supervisor and six instructors, until recently. One instructor terminated employment on February 6, 1992. It was the supervisor's understanding that the job position for the instructor was transferred elsewhere in the department, although the group's duties were not reduced. Approximately 1400 people received GET in 1991. The average size of each class was just over 20 people; however, the licensee's enrollment records indicated classes with as many as 54 students. GET instructors spent in excess of 50 percent of their time in class instruction (based on six instructors) while the average time in class instruction for other Nuclear Training Department instructors was approximately 16 percent.

Three of the five instructors in GET had no health physics experience, although they all taught radiation worker training. The licensee had no minimum requirement for health physics experience, and the NRC has issued no requirements in this area. Licensee representatives stated that the instructors visited the plant and spent time observing health physics personnel and operations. Additionally, some of the instructors took part in radiation protection training in order to increase their knowledge and skills in that area. All GET instructors had completed the necessary requirements to obtain instructor certification. In their quarterly critiques of GET Categories I through IV training, instructors identified no major instructor weaknesses. (These critiques were completed subsequent to the identification of a noncited violation which is discussed in NRC Inspection Report 50-498/92-02; 50-499/92-02.)

The security section of lesson plans, student handouts, and tests showed that proper instructions and testing were given to trainees regarding visitor escort responsibilities within the protected and vital areas. The GET Category I tests typically included two to four questions directly related to escort responsibilities. Conceivably, individuals could miss all questions in one particular area of a test year after year and still receive a passing grade. However, a review of successive test results for selected individuals did not indicate this to be the case and did not identify patterns that would suggest that individuals were not knowledgeable about the requirements. Moreover, trainees were required to review any questions they answered incorrectly and to sign a statement affirming that they had received the correct information. In spite of this information, the team noted that most of the employees and security officers interviewed could not successfully explain all of the necessary aspects of visitor access and escort control.

2.1.2 Specific Training for Maintenance Employees

During the first part of 1992, the licensee made several changes to its work process program. The principal change was the consolidation into one procedure of various procedures associated with the method for identifying and requesting work activities and for conducting and closing out work packages. As a result, Station Procedure OPGP03-ZA-0090, "Work Process Program," underwent several major revisions. Revision 3 of Station Procedure OPGP03-ZA-0090 became effective January 31, 1992. Instructors from the Staff Training Division of the Nuclear Training Department provided training on Revision 3 of the procedure during January. Modification and Support Services Certification/Qualification Training included Lesson Plan MSS108.01 for individuals not familiar of the work process program, and Maintenance Continuing Training included Lesson Plan MCT009 to address the new program. The petitioner alleged that this training was insufficient and provided incorrect information in some cases, that testing was inadequate, and that instructors did not resolve concerns.

To assess the quality of training given in this area, the team reviewed Revision 3 of Station Procedure OPGP03-ZA-0090, Lesson Plans MSS108.01 and MCT009, trainee handouts, examinations, and course critiques. The team

interviewed instructors, numerous planners, instrumentation and control (I&C) technicians, an owner (i.e., licensee's assigned system representative), and supervisory personnel who had received classroom training on Revision 3 of Station Procedure OPGP03-ZA-0090. The I&C technicians described the training as appropriate to meet the course objectives. At the time the training was provided, many of the I&C technicians believed they could properly implement the maintenance process procedural requirements; later, however, several I&C technicians said they had to use the Addendum 1 maintenance process flow chart (Attachment 4 to this report) to assist them in implementing the procedure. The owner, supervisors, and planners also iterated that the classroom presentations met the course objectives; however, few of these individuals indicated that the instructors were not able to completely address several implementation concerns. Training on the Planners Guide, which was used in conjunction with Station Procedure OPGP03-ZA-0090 to plan work orders, was provided through informal group meetings with the supervisor, and selected areas were reviewed through reading and group discussion. The planners interviewed were found knowledgeable about the contents of the Planners Guide.

To specifically address the petitioner's concern that incorrect information was provided to workers during the training on Station Procedure OPGP03-ZA-0090, the team reviewed Enabling Objective 13 which read: "State who is responsible for protecting the radiation worker from unplanned exposure to radiation." In answer to the objective, the text of the trainee handout stated: "The radiation worker is responsible for controlling their own exposure." The object of contention was the use of the word "unplanned." The petitioner objected to its use and postulated examples of situations in which the individual worker could not control circumstances or radiation exposure.

The team questioned licensee personnel, including members of the health physics program, about the definition of "unplanned exposure," as referred to in Enabling Objective 13. Licensee personnel stated that, they understood that, while the term had not been explicitly defined, the meaning was clear when considered in the context of the examples of industry events given in the trainee handout. The team reviewed the industry events described in the trainee handout and noted that in each example a worker took deliberate actions that brought about increased exposure to himself. Other workers who had received the training expressed no misunderstandings or concerns regarding this training objective.

To gain an understanding of both the broader issue of how the licensee ensured that it presented correct information to workers and the petitioner's concern that the work process program training only represented the instructors' interpretations of procedural requirements, the team discussed with licensee personnel the process used to develop the lesson plan and trainee handout. (The two documents were essentially the same, except the former contained instructor notes or prompts.) The lesson plans for each of the two training sessions listed the objectives to be accomplished. According to licensee personnel, the objectives were developed to focus the students' attention to various licensee commitments or needs identified by analyses of tasks involved in the work process program. The licensee was unable, through a cursory

review of historical information, to determine a specific reason for including Enabling Objective 13 in the lesson plan. According to licensee representatives, the lesson plan was approved, as required by procedure, by the Maintenance Technical Advisory Council. However, different divisions have different technical advisory councils, and these councils do not have representatives from every discipline on site.

Training and health physics personnel were unable to confirm that the information dealing with radiation protection was reviewed by members of the health physics program to ensure that it was properly worded and that it agreed with the licensee's philosophy and procedures. However, a representative of health physics management reviewed, at the time of the inspection, Enabling Objective 13 and the supporting material and stated that the material presented was in agreement with the site radiation protection policy.

The team reviewed additional training which had been cited by the petitioner as an example of the licensee giving incorrect information to workers. As part of maintenance equipment qualification training (on January 30, 1992, following Lesson Plan MSS108.01), the class watched a film on the use of lubricants at nuclear power facilities that was produced by the Electric Power Research Institute. The film included a statement that oils consisted of 80 to 98 percent base oil and the remainder was additive. The examination following the training contained a test question asking the percentage of base oil required at the licensee's facility. The correct answer, 90 percent, was not discussed by the instructor during the training. Possible answers to the examination question regarding site-specific requirements included multiple choices that were within the range of values given in the film. Consequently, four to five trainees answered the examination question incorrectly. As a result of comments on the course critique, the licensee agreed to take action to emphasize that the information in the film was general and to highlight the site-specific value, which was within the range given in the film.

The petitioner contended that guidance involving instruction on the licensee's policy of adherence to procedures was vague. Revision 1 of the trainee handout used with Lesson Plan MSS108.01 stated: "Verbatim compliance allows no deviation from procedural steps . . . . Procedural adherence implies meeting the intent . . . . Deviation is expected in cases where; A. Personnel safety . . . B. Equipment safety" [is placed at risk]. No other discussion was included. Workers receiving work process program training had mixed responses when questioned about their understanding of these terms and as to which term described the policy in effect at the licensee's facility. Some understood that the licensee's policy was that there should be procedural adherence; however, some were not sure and one stated that verbatim compliance was expected. Instructors pointed out that the issue was not listed as an objective in that specific training; therefore, no examination questions addressed the issue to test (and document) workers' knowledge of the policy. The information was included in the training presentation as a result of a commitment related to the licensee's Operational Improvement Plan (see Item 25.1).

Revision 2 of the trainee handout (dated February 28, 1992) expanded the discussion of the terms and defined verbatim compliance as "A term used in the past to demand that the performance of steps in a procedure were done exactly as they were written; without deviation. . . . [and added] STPEGS will no longer use the term." It stated: "Field application of procedural adherence implies every individual responsible for independent performance of a procedure controlled task shall meet the intent of the procedure . . . . Anyone SHALL perform the steps of that procedure as written unless such performance would violate the intent of the procedure."

The petitioner expressed concern that examinations following the work process program training were inadequate to test workers' knowledge because the workers were allowed to use the handout material during the examination. Licensee personnel stated to the team that it was their intent to test the ability of individuals to work within the work control process, not their ability to memorize the procedure. They also stated that approximately one-third of the examinations given in this portion of the training department allowed open reference material and that, if the workers were likely to be able to have access to references or procedures in the field, it was considered appropriate to allow them to demonstrate the use of such references as part of the examination. The team determined this testing method was appropriate.

2.1.3 Specific Training for Security Employees

Paragraph 3.4 of the physical security plan states, in part, that all personnel are to receive security orientation training prior to being granted unescorted access to the protected area. Certain specific training for security employees was contained in Nuclear Security Training Lesson Plan 004.06, "Basic Nuclear Security Officer - Access Control." The lesson plan contained all the requirements necessary for a security officer to be knowledgeable of and effectively perform duties concerning visitor access and escort control requirements. While some specific items, such as who was responsible to notify security of any changes in escorts, may not have been identified as a significant objective, all the information was in the lesson plan used for initial training. However, Lesson Plan NST204.01, "Nuclear Security Training Requalification Phase II," dated July 9, 1991, did not address changes in escorts. Consequently, Training Objectives 16 and 17 from the initial training that did address escort changes were not reinforced during requalification training.

2.1.4 Conclusions

After the loss of one instructor, the group responsible for GET appeared marginally staffed, particularly when preparing for situations such as major outages. Most GET Category II (radiation worker training) instructors did not have strong health physics backgrounds; however, there was no applicable educational requirement. Trainees received appropriate training on security procedures and demonstrated sufficient knowledge of the procedures by successfully passing examinations.

The team was unable to substantiate that the licensee presented incorrect information during work process program training. Since the training was designed to convey policies and operating philosophy, the licensee was free, within regulatory constraints, to express its expectations of workers. The philosophy regarding radiation exposure was in agreement with industry practices and did not violate regulatory requirements. The information presented in training class was not simply the result of the instructors' interpretations; however, improvements were warranted in the way the licensee prepared training aids dealing with topics outside the discipline being instructed, which would ensure the correctness of the information.

During equipment qualification training, the licensee did not supply information specific enough to inform workers of site-specific policy regarding base oil percentages; however, this case appeared to have had little significance. It did indicate, that there was need for refinement in course content review methods to ensure that conflicting or inadequate information was not presented to workers.

Although the licensee's training with regard to its policy on procedural adherence was not entirely successful, the licensee recognized this and revised lesson plans to provide additional emphasis and guidance. The matter did not involve regulatory issues and constituted only a small portion of the training. Examination methods were determined to be appropriate for the goal of the training. Although not successful in every case, the instructors attempted to resolve all concerns and answer all questions.

The team found the classroom training provided on Station Procedure OPGP03-ZA-0090, Revision 3, was appropriate to meet the course objectives. The course objectives were based on the procedure requirements. In meeting the objectives, the licensee ensured that the fundamental program requirements could be implemented by the I&C technicians, planners, owners (i.e., the licensee's assigned system representatives), and supervisory personnel.

Although GET and the initial training of the security force on visitor access and controls were adequate, most of the employees and security officers interviewed could not successfully explain all the necessary aspects of visitor access and escort control. Perhaps a lack of reinforcement of the escort change requirements during requalification training for security officers contributed to this factor.

2.2 Maintenance (IPS 62700/62704)

2.2.1 Procedures for Control of Maintenance-Related Work Activities

On January 31, 1992, the licensee implemented Maintenance Procedure OPMP01-ZA-0040, Revision 0, "Maintenance Work Practices and Requirements." This procedure provided the guidelines for conduct of corrective and preventive maintenance activities in accordance with applicable site procedures and policies, conduct of post-implementation testing activities for verification of function and operability, and performance of minor maintenance

work activities as assigned by the owner. The procedure provided an extensive overview of maintenance work practices and requirements. Supporting maintenance programs were appropriately identified and specific reference to supporting procedures and applicable sections was provided.

Two of the several I&C technicians interviewed about the requirements and guidance provided in Maintenance Procedure OPMP01-ZA-0040 could not recall having reviewed the procedure, and the remaining I&C technicians could not recall the specifics in the procedure. However, when I&C technicians were questioned about the program requirements that were referenced in the procedure, including ECOs, configuration control, and plant labeling, they were knowledgeable about the different requirements.

The licensee implemented Station Procedure OPGP03-ZA-0090, Revision 3, "Work Process Program," on January 31, 1992. Revision 4 of this procedure, which is discussed below, was implemented on March 9, 1992, to establish the requirements for implementing the "Tiger Team" process and an independent technical review checklist for initial work planning and work package revision.

The licensee had used Revision 1 of Station Procedure OPGP03-ZA-0090 until January 31, 1992. Revision 2 of this procedure was in draft and was to become effective on January 31, 1992. However, after the approval of Revision 2 on September 27, 1991, the licensee's management reevaluated the guidance provided and concluded that the work process program procedure and supporting procedures should be integrated into a single work process program document. The licensee then issued Revision 3, which incorporated the following procedures:

- OPGP03-ZM-0003, "Maintenance Work History Program," Revision 20;
- OPGP03-ZM-0017, "Maintenance History Program," Revision 2;
- OPGP03-ZM-0024, "Service Request," Revision 2;
- OPGP03-ZM-0026, "Control of Troubleshooting," Revision 0;
- OPGP03-ZM-0007, "Conduct of Maintenance," Revision 7;
- OPGP02-ZG-0005, "Work Planning," Revision 4;
- OPGP02-ZG-0006, "Work Implementation," Revision 4; and
- OPGP02-ZG-0007, "Work Review," Revision 4.

The team reviewed the scope of each procedure that had been incorporated into Station Procedure OPGP03-ZA-0090, Revision 3, and found that the significant attributes of each procedure were appropriately considered. Station Procedure OPGP03-ZA-0090, Revision 3, established the requirements and responsibilities for implementing the maintenance work program. Addendum 1, "Work Process Program Flow Chart," provided as Attachment 4 to this report, accurately portrayed the procedural requirements for implementing the work process program. Interviews with I&C technicians, supervisors and owners, revealed that the work process flow chart was an essential tool in their understanding and implementation of the maintenance work program requirements.

The maintenance work program was developed to allow the plant staff to identify any necessary procedural revisions and equipment deficiencies. An individual would initiate a service request in accordance with the instructions in Addendum 2, "Service Request and Instructions," which ensured that the deficiency was evaluated for validity and operability concerns; that a station problem report was made, if needed; and that a work priority and responsible work organization were assigned. Once the appropriate work organization was selected, the owner (for Maintenance Department work activities) or the responsible maintenance authority (RMA)/other (for other department work activities) became the focal point for development, issuance, and closure of the service request.

The owner would assess the service request again to evaluate its validity and to determine if it met the criteria for minor maintenance as described in Addendum 4, "Minor Maintenance Rules." Service requests that were valid, but did not qualify as minor maintenance, were sent to maintenance planners for development of a work package. In addition to the above, the owners:

- Verified that requested material was properly staged to support the scheduled date of implementation;

- Obtained approvals of work packages and revisions to packages developed by the planners;

- Coordinated actions required for work including permits, scaffolding, insulation removal, staffing requests, prestaging of parts, measuring and test equipment, materials, and special tools;

- Ensured packages and ECOs were submitted to the work-start authority;

- Coordinated post-maintenance test activities and related activities required to restore from work activities; and

- Ensured work packages were properly reviewed and the Work Management System was updated.

The work-start authority was the person designated by the issuing authority to grant work-start approval (release of system or equipment for maintenance) and work acceptance (return of system equipment to service) after maintenance. Such persons included the operations shift supervisor or unit supervisor, security force supervisor, and radiation protection supervisor. The responsibilities of the work-start authority included implementing ECOs and designating limiting conditions for operation before the work package was given to the RMA. Other persons important to the implementation of Station Procedure OPGP03-ZA-0090, were the RMA, maintenance planner, work supervisor, and craftsmen. Their responsibilities are identified in Attachment 4.

During implementation of work activities pursuant to Station Procedure OPGP03-ZA-0090, Revision 3, the licensee found that personnel responsible for

implementing this procedure were not able to strictly comply with certain procedural requirements. An example was the owners' responsibility to attain work-start approval before the RMA or craft received work packages. A second example was that the work-start authority was to implement ECOs before the work package was provided to the RMA. The first example would not have been a good work practice because a work-start authority will typically review a job scope (particularly a complex activity) with craft personnel before granting work approval. This practice was confirmed through interviews with both I&C technicians and operators. Strict adherence to the second example could have resulted in needed equipment being out-of-service longer than required to perform a maintenance activity. An example of craftsmen receiving a work package for which authorization had not been granted and the ECO had not been implemented was Work Order DW-111394 (makeup demineralized water system). In this case, the reason why work-start authority had not been given was that the system had to remain in service to support ongoing plant evolutions.

The licensee implemented Revision 4 to Station Procedure OPGP03-ZA-0900, to improve the above procedural requirements. This revision required that the work supervisor ensure that craftsmen had obtained approval for the work package and permitted the work supervisor and craftsmen to work in parallel with the work-start authority up to the point of granting approval. The licensee recognized that additional procedural problems existed. Consequently, at the time of the inspection, Revision 5 to Station Procedure OPGP03-ZA-0090 was being developed to incorporate the lessons learned and good practices identified from implementing the previous revisions to the maintenance process procedure. The licensee indicated that Revision 5 would be implemented around July 1992.

2.2.1.1 Maintenance Work Order Job Planning

The licensee has also developed a means of working similar service requests through one work order. The service requests were independently tracked by the service request numbers and did not result in a total number of tracked open maintenance items being reduced. These master work orders were said to primarily apply to minor maintenance activities. The licensee has developed a programmatic means of incorporating several work packages into a single master work package; however, the licensee was not aware of any cases where this had been performed. An example given where this process could be used would be several corrective maintenance activities on the same pump. In this case, the work packages could be combined into a single master work package and tracked as a single open maintenance work item; however, the number of open service requests were not changed by this consolidation. The team found the program would provide for the needed work-start activity and work controls.

The team evaluated the maintenance work order planning process through the review of Station Procedures OPGP03-ZA-0090, Revisions 3 and 4; the Planners Guide, Revision 0; personnel interviews; and review of several work packages.

Revision 4 to Station Procedure OPGP03-ZA-0090 required that the issuing authorities forward the service requests to the owners after their initial

review. Each owner then evaluated each service request to determine if they were valid and if they could be accomplished through minor maintenance, the "Tiger Team" process, or if they should be forwarded to the maintenance planners. In Revision 4 to Station Procedure OPGP03-ZA-0090 the licensee established the requirements for implementing the "Tiger Team" process. Addendum 11, "Tiger Team Work Process," defined the scope of the Tiger Team process to include work on the main control board, inoperable automatic functions of plant operations, chemistry monitoring out of service, and inoperable automatic functions of technical services. The work activities also could include Priority 1 and 2 service requests. The "Tiger Team" was responsible for planning, scheduling, and performing the work package. Several of the I&C technicians indicated that this process was effective in accomplishing work activities within the scope of the "Tiger Team" process. This process was evaluated in NRC Inspection Report 50-498/91-22; 50-499/91-22 as effective in reducing the maintenance service request backlog in certain areas.

In the event a service request was evaluated as invalid, the procedure required that the service request be returned to the issuing authority for concurrence before being voided. If the service request could be implemented using a preventive maintenance task, the procedure required that the applicable preventive maintenance task be attached to the service request and processed. The team discussed this process during the interviews. No individual could recall an instance where a service request had been improperly voided. However, one person identified a concern that I&C technicians, who had assisted the owners during their initial walkdowns, may have been performing minor maintenance activities without proper documentation or work-start approval. This person could not identify any specific examples of this occurring; nevertheless, the licensee's management was informed by the team of this concern.

In Revisions 3 and 4 to Station Procedure OPGP03-ZA-0090, Addendum 5, "Work Planning," established the requirements for planning work orders. The Planners Guide (not a controlled procedure) was required to be used in conjunction with the addendum for developing work instructions. The Planners Guide was developed from good practices and guidance that had been disseminated to the different maintenance disciplines. Prior to the implementation of the Planners Guide, the work instructions were approved by the owner and RMA. In some cases, the cognizant engineer and an operations quality control individual were required to approve the work packages. Subsequently, Addendum 12, "Independent Technical Review Checklist," was incorporated into Revision 4 to provide an additional independent review of some work instructions.

The licensee developed a planners checklist that identified the significant attributes in the Planners Guide and helped to ensure uniformity in developing the work packages. Many of the I&C technicians noted that the work packages were more uniform and that they could no longer tell by reading the work instructions who planned the activity. All the individuals interviewed indicated that the work instructions had become more detailed. Many

individuals thought the increased detail limited their use of "skill of the craft." However, many also believed that the increased detail resulted from management attempting to reduce the number of personnel errors that have occurred. It was apparent from the team's review that there was a more consistent use of cautionary statements.

The licensee's management established their maintenance planning expectations in the Planners Guide. These expectations included planners walking down work orders as part of the planning process. The planners indicated that safety-related, and most other work orders, were walked down before being planned. This was consistent with the I&C technicians' observations that planners have been more frequently seen in the plant and that the quality of the work packages have improved.

The maintenance process provided several means for revising maintenance work instructions. The foreman was authorized to make a one-time change to the work instructions, provided the change did not modify the scope of the work activity. In cases where the scope of the work instructions would be exceeded, the work packages were returned to the planners. The individuals interviewed noted that when work packages were returned for revision, the packages were typically returned to the planner who had originated the package providing feedback as well as promoting ownership. The licensee had established other methods of providing feedback on planning problems in areas where improvement could be made. One method was the Maintenance Feedback Request form which was provided with each work package. This form could be used to identify maintenance and training issues. In addition, the maintenance process required that completed service requests be returned to the owner for review. These packages were also provided to the planners. This enabled both individuals to become cognizant of what problems or changes were made to work packages in order for them to be implemented.

The team reviewed several corrective and preventive maintenance work orders, which were appropriate to complete the tasks. Work instructions were reviewed in which the foreman had properly implemented the one-time change authority. However, there were examples of work instructions that had not been well prepared. It appeared that these work orders may not have been properly evaluated before the work instructions were developed. Examples of these observations are given in Section 2.2.2.

2.2.1.2 Equipment Clearance Orders

General Procedure OPGP03-ZO-0039, Revision 1, "Configuration Management," Section 9.3.3 stated: "An ECO may be accepted by a Classification. IF the ECO is assigned to a classification, THEN the on-shift individual filling the classification is the Acceptor." Section 9.3.4 stated: "WHEN an ECO is being accepted by a classification, THEN the Classification Acceptor may designate another qualified individual(s) to perform some or all of the ECO Acceptance Verification." The procedure defined a classification as the title of the division or group supervision normally expected to be on-shift for the duration of the ECO activity (e.g., general maintenance supervisor, electrical

maintenance foreman, I&C foreman, mechanical maintenance foreman, unit/shift supervisor, and chemical operations foreman).

The plant manager's memorandum of February 7, 1992, on ECO classifications restated the definition of a classification and the requirement of Section 9.3.3. However, the memorandum also stated: "There are NO provisions which allow a classification to designate another individual to accept or release an ECO for that classification (e.g., a journeyman CANNOT accept or release an ECO for a foreman) . . . . IF an individual other than a classification accepts an ECO, THEN that individual SHALL record the NAME (NOT the classification) of their immediate supervisor in block 16 'Classification of Foreman' of the ECO form."

The team reviewed the procedural requirements and the memorandum's guidance with licensee personnel qualified to accept and release ECOs (i.e., an individual responsible for the ECO desk in the Unit 1 control room, foremen, and journeymen). In several cases, the personnel could not recall the memorandum and were uncertain about what guidance had been provided. In each case, personnel indicated that they adhered to the requirements identified in General Procedure OPGP03-ZO-0039 for accepting and releasing ECOs. A review of several nonsafety-related ECOs issued after February 7, 1992, indicated that journeymen were accepting ECOs for foremen and that block 16 was completed with the classification titles and not the foremens' names. ECO DW-1-92-298, issued on February 12, 1992, for the makeup water system, was one example in which procedural requirements and the plant manager's guidance was not adhered to. The licensee was informed of this during teleconferences on April 2 and 16, 1992, and the licensee's representatives stated they would again review the guidance and expected to conduct training on this matter.

2.2.1.3 Guidance for Backdating Permanent Plant Records

Some signatures and corresponding dates on completed work packages appeared inconsistent with the times when the packages should have actually been signed and dated. The team noted this most often in the "Personnel Performing Work " block (e.g., Preventive Maintenance Work Package PM:IC-2-CV-89002775). During interviews of I&C technicians, foremen, supervisors, and management, it became clear that the licensee had not established a policy for late signing of a completed work package. Some personnel stated they would sign and date the document for the date the activity was performed; others indicated that they would sign and date the document with the date they actually signed the document; and some personnel indicated that they would sign and date the document with the date for when the activity was performed, but then annotate in the remarks section that the signature was provided at a latter date than documented. The team told the licensee that this lack of a consistent policy for backdating signatures was a weakness. The licensee subsequently issued a station procedure to clarify management's expectations for backdating documents before the exit meeting (see Section 2.6).

2.2.2 Employee Implementation of Procedural Controls for Maintenance

The team reviewed completed and ongoing maintenance work packages to ascertain if procedural requirements were being adhered to. The packages were selected on the basis of concerns identified by the petitioner. Issues that were identified by the petitioner and alleged to be procedural violations were independently reviewed and discussed with the I&C technicians. Many of the work packages reviewed were found to be for nonsafety-related equipment and, therefore, not subject to the requirements delineated in 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants," or Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)."

(1) Proteus Computer

The team reviewed maintenance packages for which the petitioner had participated in the work activity. A specific concern of the petitioner was about the procedural adherence associated with a work activity on the computer. The computer is not safety-related and provides passive functions only. Service Request HD-149218 was initiated on November 24, 1991, to determine if two Proteus computer points were sensing the desired parameters. The computer points were associated with temperature indication from a Unit 1 drain line to the dearator (T7309) and a drain line to the hotwell (T7308). On February 6, 1992, work-station approval on the applicable temperature elements was granted in accordance with the Station Procedure OPGP03-ZA-0090. Step 3.02 of the work instructions required that operations be informed that computer points T7308 and T7309 would be unreliable during the conduct of the maintenance and required that the cognizant operator sign, indicating that he had been notified. However, the work package showed that the cognizant operator did not sign the step until February 7, 1992, after troubleshooting activities had been initiated.

The documented scope of the work performed revealed that an I&C technician had failed to sign the work order, indicating that he would be performing maintenance in accordance with the job plan. The job scope further indicated that it would be necessary to lift leads within the 2500 Computer Cabinet ZCC 005 to obtain the required readings. The team observed that the cabinet was well labeled. Two Proteus computer technicians confirmed this need to lift leads. Step 2.02 in the work instructions stated that permanent plant equipment configuration control changes shall be controlled in accordance with General Procedure OPGP03-ZM-0021, Revision 4, "Control of Configuration Changes." However, the configuration control change log was not used for lifting leads within the cabinet or for lifting the leads at the temperature elements.

The petitioner's concerns in this area were validated.

(2) Makeup Demineralized Water Conductivity Instrumentation

Another concern expressed by the petitioner was that work was performed on the makeup demineralizer system and that the work was not performed in accordance with the requisite procedure. Service Request DW-111174 was initiated on September 20, 1991, to calibrate, repair, or replace, as necessary, Product Conductivity Meter RO 104. This meter was designed to provide continuous conductivity readings for demineralized makeup water. The system and the conductivity meter are not safety related. The I&C maintenance daily activity status log showed that Work Request DW-111174 was implemented on February 10, 1992, by two I&C technicians; however, the work order disclosed that neither I&C technician had signed the work order package. The work summary section indicated that the last work performed on this work order was on February 5, 1992.

Service Request DW-126165 was initiated on October 10, 1991, to replace all Beckman model conductivity transmitters in the makeup demineralizer building with comparable models. Associated with this work activity, a concern of the petitioner was that 120-volt breakers located in a makeup demineralizer (MUD) system panel were inappropriately operated without the use of an approved procedure or ECO. A separate petitioner concern was identified that a lead to an annunciator alarm window in the same MUD system panel had been lifted without proper documentation or approval.

Initial work-start approval was granted by Chemical Operations on November 14, 1991, to begin replacing the Beckman Model conductivity instruments. Work activities appeared to have been conducted approximately 13 times. The summary of work activities performed, ECOs, and configuration control change logs appeared to adequately document the work performed. The work instructions and summary reflected that work began on February 12 to remove four conductivity instruments (NODWCITS-6480, 6484, 6492, and 6962). ECO DW-1-92-298 indicated that Breaker ZLP-140 Number 2 was opened for the first time during this work activity. This breaker was opened, in accordance with the ECO. Personnel indicated that the foreman was contacted when the annunciator horn actuated on the loss of power, and that he revised the work instructions to allow the horn lead to be lifted. The foreman's one-time-change authority was used to revise Section 3.0.3.01.1 of work instructions to permit the I&C technicians to lift the lead. This change was within the scope of the work instructions, and the configuration control change log, dated February 12, 1992, properly documented that the lead was lifted and relanded the same day. The activity, as documented and described by the I&C technicians and foreman, was appropriately performed. This portion of the petitioner's allegation was not substantiated.

ECOs DW-1-92-0308 (implemented February 14, 1992), DW-1-92-0037 (implemented February 18, 1992), DW-1-92-0351 (implemented February 21, 1992), and DW-1-92-0373 (implemented February 26, 1992) each opened Breaker ZLP 140 Number 2 although the configuration control change log did not document that the lead was again lifted. On April 1, 1992, the licensee confirmed that the horn lead was lifted and relanded each time that the breaker was opened and

closed. The team noted that the failure to document the configuration changes was contrary to the licensee's work instructions and General Procedure OPGP03-ZA-0021, but was not considered to be a regulatory requirement as the system was not safety related.

To address the second petitioner's concern of an alarm window lead being inappropriately lifted, the team reviewed the work summary statements. The work summary for February 11, 1992, contained a statement: "Annunciator windows respond in reverse logic. Request rev to ECN allowing wiring changes to correct problem." It was not clear if a lead was lifted in response to the problem, and none of the personnel interviewed were able to recall a time when a lead to an annunciator was inappropriately lifted. The petitioner's second concern in this area could not be substantiated.

During a walkdown of the cabinet on March 24, 1992, the team observed that there were only two of approximately eight screws holding the back annunciator cover in place. This failure to replace all of the retaining screws was considered a poor maintenance practice.

In summary, none of the petitioner's concerns in this area were substantiated.

(3) Boric Acid Tank Level Transmitter

Another work activity that the petitioner participated in involved a boric acid tank level transmitter calibration. Preventive Maintenance (PM) Work Order IC-2-CV-89003173 was performed on February 20, 1992, to calibrate Level Transmitter B2CV-LT-0105 for the Unit 2 boric acid tank B. Performance of this PM verified the accuracy of the level instrument used to ensure the minimum required level (Technical Specification 3.1.2.6) was maintained in the boric acid storage system tank. Maintenance Procedure OPMP08-CV-0105, Revision 0, "BAT B Level Set 3 Calibration (L-0105)," was part of the work instruction to perform this activity.

During the performance of the PM, one I&C technician maintained the controlled copy of the procedure in the rack room while the other two I&C technicians worked at the transmitter location. They established communications with the first I&C technician, but did not have a copy of the procedure. The practice of not taking a copy of the procedure to the area where maintenance was to be performed appeared to have been common among the I&C technicians. This practice occurred most often in areas that could be radiologically contaminated, as was the area near the subject transmitter. The licensee had established this as an acceptable practice, provided communication between the individuals was maintained. However, the team determined that although communication was established during the performance of the PM, the headphone cord was too short to permit the I&C technician to reach the transmitter while wearing the headphone; therefore, continuous communication was not maintained throughout the performance of the PM.

Maintenance Procedure OPMP08-CV-0105, Step 7.3.2, required that the transmitter be verified out-of-service by the second I&C technician at the

transmitter. However, it was not until the I&C technicians assembled in the rack room after performing the PM that it was learned that the second I&C technician had not observed the removal of the transmitter from service and, therefore, could not independently verify it had been removed from service. It appeared that the procedural steps for removing the transmitter from service were not closely adhered to by the technicians because the technician in the rack room had not realized that the verifier had not seen the instrument removed from service and could not sign the verification step. The I&C technician in the rack room said he had indirect indication that the transmitter had been removed from service by a step change in the transmitter output that he was monitoring. He signed the verification-by-step of the procedure on that basis. However, this was not an appropriate use of the independent verification process as described in Section 3.3.3.2 of General Procedure OPGP03-ZA-0010, Revision 12, "Plant Procedure Adherence and Implementation and Independent Verification." When this was realized, the I&C technician subsequently lined out the step, because the transmitter could not be independently verified as having been out of service, and the PM was again performed on February 21, 1992.

During the performance of the calibration on February 20, 1992, several as-found scaling values exceeded the maximum output values. The output values were adjusted within tolerance and Request For Action (RFA) 92-0222 was initiated by the I&C technicians to have the Plant Engineering Department (PED) evaluate the out-of-tolerance condition. On March 4, 1992, PED responded that although the instrument was out of tolerance, the resulting output values were still within the Technical Specification limit.

An I&C technician indicated that during the performance of the calibration on February 21, 1992, the initial scaling output values were found to be out of tolerance. The technicians subsequently repeated the steps for removing the transmitter from service, but this time provided a slight pressure on the process side of the transmitter bellows rather than use the gravity drain process as described in the procedure. (The team considered this deviation from the procedure to be reasonable discretion afforded under the "skill of the craft.") The addition of the slight pressure resulted in what was described as a slurry of boric acid and water that came out the instrument drain. The drain line was then capped and the drain valve closed. The calibration was then performed satisfactorily with all scaling output values found to be within tolerance. The team compared the as-left values from the previous day with the as-found values obtained during the subsequent calibration and concluded that the instrument had been left in calibration at the end of both calibration efforts. The petitioner's concern was not substantiated, but some poor work practices (e.g., communications) were identified.

A separate petitioner's concern was reviewed that pertained to the use of air instead of water for the calibration of level transmitters. The team reviewed a memorandum justifying the use of air or water to calibrate level transmitters and discussed the technical merit with the licensee for performing this type of calibration with either medium. The licensee

responded that technically there was no difference in the calibration result, if the proper techniques were employed. Factors, which were discussed, that could adversely affect the calibration of th[illegible] type of transmitter were (1) use of a mixture of different mediums in the same fluid line or (2) improperly locating the test equipment so that a water column was inadvertently created. The team concluded that the licensee's technical justification was acceptable. The petitioner's concern that the calibration process was inappropriate was not substantiated.

(4) Feedwater Pump Pressure Transmitter

The petitioner identified concerns with the procedural compliance of work practices that involved a Rosemont pressure transmitter. Corrective Maintenance Work Package FW-160126 for the Unit 2 main control board steam driven feed pump discharge pressure indicator was issued when the indicator was observed to fail low; however, during the calibration work the instrument indicated the correct discharge pressure. Work-start approval had been granted on February 14, 1992, to verify instrument (N2FW-PT-7117) calibration in accordance with Procedure OPMP08-ZI-0028, Revision 2, "Generic 7300 Loop Calibration." No out-of-tolerance values were noted, and the instrument was left in service. During the review of the transmitter data sheet, an I&C technician had transcribed the scaling values onto the data sheet. The values were obtained from a controlled document, which provided the required scaling values for each specific transmitter. The team inquired if the transfer of the scaling values were independently verified at the time they were transferred to the data sheet or by a reviewer after the calibration was completed. The licensee's representative responded that there was no independent verification required. However, if an instrument was found out of calibration, according to the input and output values listed, the licensee's representative said that the error should be obvious to the I&C technicians performing the calibration. In addition, the licensee's representative indicated that the error should be apparent to the supervisor during his review. An additional review would also be required if a safety-related transmitter was found out of calibration, at which time a request for action document would be initiated and an engineering evaluation conducted.

In summary, the team did not substantiate the petitioner's concern that calibration activities on the Rosemont pressure transmitter were contrary to procedural requirements.

(5) Work-Start Authority

In response to several petitioner concerns, the team reviewed the licensee's procedural requirements for authorization and resumption of work, interviewed personnel about their work practices, and reviewed several work orders.

Maintenance Procedure OPGP03-ZA-0090, Revision 3, required that the owner obtain work-start approval before giving the work packages to the craftsmen. As discussed in Section 2.2.1.1 of this report, the team found that this specific requirement was not always being met. The licensee, nevertheless,

believed the intent of the procedure was met by the craftsmen obtaining the required work-start approval before actually beginning work.

Of the several corrective and preventive maintenance work orders reviewed, the team found that, in general, the required work-start approval had been granted before beginning work. Maintenance work orders, which required the placement of ECOs, initiation of radiation work permits, and/or other programmatic requirements were properly implemented before work commenced.

An example of a work activity that appeared to have been authorized, but was not properly documented involved Service Requests SH-135517 and SH-135518. These service requests were initiated on December 12, 1991, to correct problems with the sodium hypochlorite dissolver tank level switches HOSHLSHL6605A and B. This system was not safety related and was used only to supply brine to the demineralized makeup water system. On February 5, 1992, two I&C technicians were assigned both work packages. Work-start approval had been received for Service Request SH-135517, but not for Service Request SH-135518, as was the case for Step 1.11 of the work instructions, which required the work-start authority to indicate if additional work-start authority review was needed when additional work instructions were required. In addition, the I&C technicians signed Service Request SH-135518 but failed to sign Service Request SH-135517.

The two work orders were found to be essentially identical. The work-start authority identified that no further review of the work instructions was required if they were revised. The work activities did not require the use of an ECO, and any potential breaches in the system would not have exposed the workers to hazardous chemicals. The summary of the work performed for both work orders described the problems with the switches to be the result of a deteriorated junction box in which the relay and other components were located. The work activity was stopped after identifying the problem because replacement parts were needed. The work package was returned to planning to revise the work instructions. Both I&C technicians noted that this was an example of poor job scope planning before development of the work instructions.

The team assessed the adequacy of the maintenance and operations interface through the review of work packages, supervisors' logs, and personnel interviews. Particular attention was focused on potential interface problems that resulted in delay. Work Orders DW-111394, for the demineralized water system softener totalizer, and SH-116984, for the sodium hypochlorite injection into the essential cooling water system, indicated that the maintenance and operations interface was good. These systems are not safety-related.

On January 24, 1992, work-start approval was denied on Work Order DW-111394 because the system was required to be in operation at that time. Work-start approval was subsequently granted February 3, 1992, and the meterhead packing was replaced. The system was returned to service later that day. Work-start approval was denied on February 5, 1992, because the ECW hypochlorite

injection pump contained a leak and could not be operated. The I&C maintenance daily activity status log for the period January 16 through February 21, 1992, indicated that delays in work-start approval were infrequent.

In summary, the petitioner's concern that procedural requirements for work-start authority were not being fulfilled was not substantiated, although an example of improperly documented work-start authority was identified. Also, the petitioner's concern that interface problems between operations and maintenance personnel resulted in work delays was not substantiated.

2.2.3 Insights From Personnel Interviews

Many of the I&C technicians, planners, and supervisors believed that a philosophy of equipment ownership had not been established at the STP. Apparently, the philosophy of equipment ownership was still in a transitional state from a construction-to-operational perspective. Personnel suggested a need for greater management involvement to ensure that personnel were provided with an opportunity to establish a sense of equipment ownership. There were examples of personnel who were not necessarily allowed to follow through with specific work activities to their completion and were not designated responsibility for specific equipment or systems. Examples were given where work activities on equipment (not critical to plant operations or governed by technical specification limiting conditions for operation) were assigned to a given crew, but then those activities that were not completed were reassigned to another crew the subsequent day. Also, planners, at the time of the NRC interviews, were not given ownership of specific equipment or systems that they were responsible for planning.

A related issue, which was iterated at several levels within the maintenance organization, was that engineering support had not evolved to a mature "service organization." The concern was that internal engineering department priorities unnecessarily delayed engineering involvement in planning and addressing work implementation issues.

Many individuals indicated that they believed in procedural adherence, although the level of adherence depended on the complexity of the procedure and their familiarity with it. Individuals were comfortable in their freedom to request changes to maintenance procedures. Procedures such as analog channel operability tests were strictly adhered to, whereas procedures on equipment, such as generic transmitter procedures, may not have been as closely followed. Similarly, the documentation of work activities were sometimes completed back in the shop rather than at the first opportunity during the work process. Some individuals indicated that configuration control change logs may not be used for certain "minor" changes.

A couple of interviewees expressed dissatisfaction with their promotional opportunities in the Maintenance Department. The team considered such limited complaints to be normal for the number of personnel interviewed. Also, the team saw evidence that the licensee had promoted internal employees.

The licensee's self-verification process (STOP-LOCATE-TOUCH-VERIFY-ANTICIPATE-MANIPULATE-OBSERVE) was not fully followed by all of the individuals implementing maintenance. Each individual appeared to accept the process to some extent; however, it was principally emphasized and used after an event occurred.

2.2.4 Maintenance and Material Backlogs

The licensee's budget for the previous year provided for the maintenance backlog reduction task force; however, the task force was subsequently eliminated as part of the current budget. The licensee's continuing tradition of augmenting its maintenance staff with a large contract force was based on relative costs considerations. The licensee had experienced an increase in the number of open maintenance service requests during the last several months. The total backlog was approximately 4300 open service requests at the end of February 1992. This represented an increase in approximately 1000 open service requests since the end of 1991. The licersee had not defined a new goal for total open service requests. Licensee management attributed the increase primarily to personnel identifying maintenance issues that may have not been identified before the implementation of the backlog reduction task force. Inoperable automatic functions increased at the end of 1991, but the trend appeared to be decreasing at the time of the inspection. Discussions with operators and I&C technicians indicated that the number of inoperable automatic functions had not changed considerably and that many of the maintenance activities will require plant modifications. The impact of the increase in the service request backlog on plant performance is an inspection followup item (50-498/9207-01; 50-499/9207-01).

Personnel indicated that reassignment to the Maintenance Department of an individual with warehouse experience had lessened time delays due to spare parts availability that were previously experienced.

2.2.5 Conclusions

The licensee established a good overall maintenance work control process program. This program provided for the identification of equipment problems, an evaluation of these problems on equipment operability and technical specification limiting conditions for operation, work activity prioritization, work order planning, conduct of maintenance activities, and final closure of maintenance work packages. Some personnel did not fully comply with some procedural requirements; however, the majority of the procedural requirements were being met. The licensee addressed several implementation difficulties in latest revision to Station Procedure OPGP03-ZA-0090; however, the licensee recognized that additional clarification of the maintenance process was needed and planned to issue Revision 5 to Station Procedure OPGP03-ZA-0090 later this year.

The work order planning process has been improved to provide uniform guidance on developing work instructions. The work instructions have become more detailed and appear to restrict some types of work activities that had

previously been performed by the "skill of the craft." The planning process provided (1) for review of work instructions and, in some cases, an independent technical review, (2) for foremen or planners to make revisions to work instructions depending on scope of the work activity, and (3) for a means of providing feedback on work instructions to the planners and owners. These improvements should not only enhance worker efficiency, but also improve safety in that they should provide additional barriers to human error.

The guidance provided to the plant staff on implementation of ECOs was not properly received or was not well understood. The licensee's staff, responsible for implementing the equipment clearance program indicated that the program was generally carried out in accordance with the procedural requirements. The team recommended for licensee consideration that guidance on implementing the program could be provided in the procedure.

The licensee's lack of formal guidance for signing and backdating permanent plant records, such as work packages, was considered a weakness; however, this matter was resolved when the licensee issued a station procedure that provided such guidance.

The licensee's implementation of work activities was adequate. In general, personnel believed that shift turnovers were adequate. Personnel indicated that their awareness was enhanced with regard to procedural requirements for safety-related activities and those requirements that could affect personnel safety. There was, however, some evidence that some maintenance employees' work attitudes were poor. This issue was previously discussed in NRC Inspection Report 50-498/91-16; 50-499/91-16. Principal issues adversely affecting workers' attitudes was the upcoming realignment of and duration of shift schedules as well as limited training opportunities for journeymen. There was no evidence that poor attitudes had adversely impacted safety-related work. These matters were discussed in general terms with the licensee's senior management following the NRC exit meeting.

2.3 Security (IPS 81018/81020/81038/81070/81401)

2.3.1 Control of Escorted Personnel Within Protected and Vital Areas

In response to the petitioner's concerns, the team interviewed various plant staff, contract security force members, and previous visitors to the plant and reviewed security plans, procedures, and records governing visitor access and control at the station.

On numerous occasions between January 15 and February 19, 1992, visitors were transferred from assigned escorts to other escorts, but the visitor escort change logs did not reflect the escort changes. This was a failure to comply with station and security procedures. At times, security had not been notified of such escort changes; some escort changes had not been recorded when security was notified; and security officers and sergeants had not answered telephones when called because they were too busy. A Nuclear Security supervisor confirmed that numerous telephone calls had been directed

to the security shift supervisor and the gatehouse sergeants. The following are some examples of escort changes that apparently occurred without the proper notification/documentation: January 17, visitor 131; January 20, visitors 003 and 142; January 23, visitors 025 and 154; January 25, visitors 002 and 005; January 30, visitor 001; January 31, visitor 11; February 3, visitor 11; February 6, visitor 13; and February 12, visitor 11. Although there was no record of formal escort changes in the examples given, the team did confirm that these visitors, who entered and exited vital areas, were escorted by authorized persons.

At times, visitors telephoned security badging locations and requested escort changes at the direction of the assigned or new escorts. Security force members indicated that they did not know or were not informed that it was the visitors who requested the changes, and, because all the information provided concerning badge numbers and names appeared correct, they would document the changes. Some security force members admitted they knew that visitors were requesting changes and did not realize such actions were in conflict with specific procedural requirements. Some plant employees who had directed visitors to contact security for escort changes also indicated that they did not realize this was in conflict with the licensee's procedures.

An individual had told the team that contrary to procedural requirements an escort had exited the protected area ahead of a visitor. When the licensee was provided with the same information, it investigated the incident and confirmed that it occurred on February 19, 1992. The licensee also determined that a security force officer was present at the badge cubicle when the event occurred and had been made aware of the incident. Apparently, the security officer did not realize that this process was in conflict with the licensee's procedures and took no procedurally required action (e.g., prepare incident report) in response to the incident.

At times, visitors were left within the protected area in the I&C shop while the escorts went to the restroom. The physical security plan's implementing procedures require escorts to maintain view and control of all individuals being escorted. Three individuals acknowledged that in these instances no one in the shop had been requested to assume temporary escort responsibilities and no one was even requested to keep the visitors under surveillance to assure they did not leave the work area. More than one employee stated that such practice had become a routine practice in the I&C shop.

The failure of the licensee's employees to comply with the physical security plan's implementing procedure governing escort view and control of visitors is an apparent violation (50-498/9207-02; 50-499/9207-02). Also, the failure of the licensee's employees to comply with the procedure governing visitor transfer and protected area exit is an apparent violation (50-498/9207-03; 50-499/9207-03)

The petitioner had notified the licensee in February 1992 of various visitor escort problems in the Maintenance Department. However, the licensee's initial investigation did not identify that there were occasions when visitors

were not under the view and control of personnel who would qualify as escorts. The team had given the licensee second notice of such visitor escort problems on March 13, 1992, when it characterized this problem as an apparent violation. On March 25, the licensee's manager informed the team leader that he had no evidence from the security logs that a visitor escort problem existed. The manager also stated that a work scope assessment of the security organization had been performed before the recent reduction in force and he did not believe security officers were overworked. However, many of the instances of visitor escort requirements not being adhered to were later confirmed by way of Speakout program investigations.

2.3.2 Other Security Concerns

The petitioner also was concerned that personnel were tailgating into vital areas. The licensee was provided with this same concern. Electronically generated access control records indicated that on one occasion, January 13, 1992, a possible tailgating event occurred. The records showed that the computer had not recorded the petitioner's entry into a specific vital area although the record did indicate that the assigned escort had entered that vital area. However, at the next vital area door requiring access both visitor and escort badges were recorded. Consequently, this does not appear to have been a specific attempt by the petitioner to surreptitiously enter a vital area since 1) an authorized escort was accompanying the petitioner, and 2) both badges were properly recorded at all other vital area doors used. The licensee's vital area access control devices are equipped with visual aids to indicate to the user if the badge used to gain access has been accepted by the computer or not. However, the visual aid is small and if the visitor and the escort were not being particularly observant they could miss the signal that the visitor's badge had not been accepted at that vital area door. While the NRC is concerned that an access control device did not register a specific transaction, this does not constitute a violation of NRC or licensee requirements.

The petitioner was concerned that the licensee's visitor access procedure specified a requirement for visitors and that visitors were not informed of this requirement. The procedural requirement of contention was that visitors shall "close and secure the door [vital area]." The petitioner maintained that it would be better to place the responsibility for closing doors upon escorts rather than visitors. The team found the referenced requirement in Section 4.5.3 of Revision 7 to Station Procedure OPGP03-ZS-0001, "Personnel Access Control." The team reviewed lesson plans and discussed with security personnel the information given to visitors prior to their entering the protected area. The team did not find any evidence that visitors were trained on the procedural responsibility to close doors. This matter was brought to the attention of the responsible licensee management personnel on March 13, 1992, and they committed to review the procedure for possible revision.

The petitioner also was concerned that security force personnel falsified security documents for visitor escort changes. The licensee was provided with this same concern. In a conversation with NRC staff, the petitioner gave a

specific date that the alleged potential willful falsification occurred. The petitioner also provided reference to the falsified document and the responsible persons. The team inspected the subject document and interviewed the involved personnel. The team found no indication of the escort record being falsified, although it did find discrepancies in the record for the transfer of visitor escorts. Likewise, other security records had no indications of falsified entries.

2.3.3 Conclusion

On various occasions, the recording of visitor escort transfers was not performed or was performed at the request of personnel other than the assigned escorts. Instances of the latter was considered an apparent violation. On occasion, escorts and visitors became confused over administrative controls, such as who exited the protected area first. One instance of the latter was considered an apparent violation. This instance apparently did not result in the responsible security officer taking immediate corrective action. Three individuals indicated that they were left inside the protected area without their escorts maintaining view and control over them. These instances constitute an apparent violation.

The licensee's assertion in its letter to NRC of March 11, 1992, that the petitioner had tailgated was unsubstantiated.

The team found no security records that indicated falsified entries, although discrepancies in escort transfers were not infrequent.

It appeared that the licensee's attention was needed with regard to more reliable access of security officers to their shift supervisors, who were responsible for making reportability determinations. This matter was brought to the licensee's attention by the team.

2.4 Internal Expose Control and Assessment (IP 83725)

The petitioner stated that the licensee failed to provide a whole-body count. On February 21, 1992, licensee personnel stated that they asked the petitioner to wait until an escort could arrive and accompany the petitioner to the central processing facility for a whole-body count; however, after approximately 45 minutes, the petitioner left the site. Licensee personnel also stated that the escort was waiting for the petitioner at the Speakout offices while the petitioner was at lunch downstairs in the cafeteria. The petitioner, not knowing this, did not return to the Speakout offices and learn of the escort's presence.

The licensee's checkout process for terminating personnel, described in Section 6.2 of Interdepartmental Procedure 9.04, "Personnel Processing Procedure," did not require escorts. Whole-body counting was performed at the central processing facility, which was not in the protected area thus did not require an escort to comply with security procedures. Therefore, the petitioner could have proceeded to the central processing facility at any time

for the whole-body count. Licensee personnel stated that the use of escorts, while not a procedural requirement, was the practice and acknowledged that it had been implied to the petitioner that an escort was necessary.

The petitioner subsequently received a whole-body count on February 27, 1992.

In conclusion, the licensee sought to impose a practice not included in its procedure, and the petitioner sought to impose arbitrary time constraints on the licensee's out-processing procedure. Although there is no regulatory guidance, it is reasonable to expect that such matters be handled in a timely manner, and a waiting period of an hour or less did not seem unreasonable. Therefore, the petitioner's allegation that a whole body count was not provided was unsubstantiated.

2.5 Employee Concerns Program (IP 93702)

The licensee's Speakout program for handling employee concerns had many similarities to NRC's program for the management of allegations. The Speakout program provided for the following attributes:

- The protection of the identity of concernees;
- The referral of certain concerns (i.e., mostly balance-of-plant or non-safety-related concerns) to other parts of the licensee's organization for resolution;
- The use of trained investigators;
- The use of a review committee to assess the scope and quality of investigational results;
- The referral of recommendations for changes or improvements to quality assurance personnel for review;
- The feedback of investigational results to concernees, if they so desired; and
- The posting of "sanitized" synopses of select concerns for the general edification of employees.

Recently, the Speakout program had expanded its authority to conduct investigations into possible matters of wrongdoing. In the past, such matters were handled by the licensee's Nuclear Security investigators who were considered a contract source for wrongdoing investigations under the Speakout program. Previously, there were two licensee definitions of wrongdoing: the Speakout definition of wrongdoing, given in the Speakout Program Instruction Manual, implicitly encompassed the NRC definition of wrongdoing (NRC Inspection Manual Chapter 0517, "Management of Allegations") and went far beyond to include matters not necessarily considered by NRC to constitute

wrongdoing (i.e., improper conduct). The definition of wrongdoing used by Nuclear Security was given in Procedure OSDPOZ-ZS-0025, "Nuclear Security Investigators." The Nuclear Security definition of wrongdoing was more restrictive than NRC's definition (i.e., no reference to careless disregard or reckless indifference to regulatory requirements). Speakout personnel used their program definition to determine if a referral to Nuclear Security was warranted.

The licensee reassigned Nuclear Security investigators to Nuclear Licensing during this inspection. Therefore, future cases of suspected wrongdoing may fall under the purview of either Speakout or Nuclear Licensing. The licensee's current definition of wrongdoing was under management review.

The team reviewed summary reports of various Speakout cases, most of which had emanated from the licensee's discussions with the petitioner. Altogether there were 17 cases opened as a result of discussions with the petitioner. Most of those cases were in draft; however, the investigations were thorough enough to determine that there were no significant safety concerns identified by the licensee.

In several instances regarding interpretation of documents, Speakout personnel concluded that the concerns were unsubstantiated because they knew the author's intent. However, without the benefit of the author's interpretation, it was possible to understand how the petitioner could have interpreted the wording differently. Concerns regarding the backfitting of work packages and the responsibility for obtaining scaffolding permits were two examples, which existed at the time Station Procedure OPGP03-ZA-0090, were issued.

The team reviewed the licensee's practices for the recording of concerns and the investigational practices employed and identified no regulatory concerns. Some of the summaries of the case investigations, however, gave the appearance that the investigations were limited in scope. More definitive and comprehensive results could have been generated if the investigations had taken on a broader approach and involved more interviews with licensee's management.

The team noted a discrepancy between the licensee's March 11, 1992, letter to NRC and one of the Speakout investigations. The particular Speakout investigation reviewed whether employees were properly wearing their security badges as prescribed by the relevant station administrative procedure. The team was briefed on the results of this investigation on March 9, 1992. During the licensee's investigation, a survey had been conducted inside the protected area. This effort determined that about 38 percent of the employees examined were in some manner in noncompliance with the procedural requirements for the wearing of security badges. Contrary to this result, the March 11, 1992, letter referred to this matter and stated that "personnel are generally in compliance" with its requirements. The requirements specifying the manner for the wearing of security badges is a licensee requirement, but not an NRC requirement. Though not a significant matter, the licensee's letter appeared to overstate the extent of its employee compliance with the procedural

requirements. The licensee's representative explained that this misunderstanding was the result of an editorial change in the sequences of sentences in their letter.

Most of the licensee's staff and contractors who were interviewed during the inspection expressed a general confidence with taking concerns to the Speakout program. Many of the interviewees had taken concerns to Speakout or had known of individuals who had taken concerns to Speakout. Most of the interviewees had been previously interviewed by Speakout or Nuclear Security investigators in connection with currently active or old Speakout cases.

Some interviewees seemed apprehensive about meeting with the team. For instance, one security officer expressed the opinion that many security officers had been recently fired and inquired as to whether that officer could be fired based upon the information given to the NRC. Although the team attempted to dispel such undue apprehension, the officer's statement was thought to be somewhat indicative of the uniformed security force's profound concern about their continued employment at STP. In response to a question on the number of concerns given to Speakout, the Speakout Manager stated that there had not been any notable recent increases in concerns received. Moreover, he thought that concerns specifically from security officers had declined. However, the Speakout Manager noted that in the past many security officer concerns had been directed against a particular member of the security force whose employment had recently been terminated. Notwithstanding the perceived apprehension, most security officers stated a sense of freedom from retaliation should they take concerns to Speakout. Other security officers indicated an uncertainty in this matter and stated that their confidence would depend on the specifics of the concerns. No security officer or other interviewee stated that he or she thought that a concernee would be fired for bringing forth a concern to Speakout.

Some interviewees stated that they suspected, in a couple of instances, that the identity of Speakout concernees had become known to the concernees' managers. The conjectural evidence expressed by these interviewees was exclusively based upon the belief that only a limited number of people had known of the specifics of the concerns. The team considered these opinions, but were unable to substantiate them. The Speakout Manager stated that access controls were not formalized, but that the practice was to limit access to Speakout case files, to himself, his secretary, his immediate supervisor, his investigators and NRC. The Speakout Manager also stated that access to the unsanitized summaries of Speakout investigations, which did not provide the identities of concernees but might contain specific details that could indicate the identity of the concernees, was limited to himself, his investigators, his secretary, and the review committee members. The review committee members included the Speakout Manager, his supervisor, a licensing supervisor, and an attorney. (The accessibility to Speakout case files may not be well understood amongst the licensee's management. For example, a licensee manager thought that he had access to Speakout case files, but that he had never chosen to exercise such access authority.) Safeguard controls appeared adequate to protect the identities of concernees. However, some

concerns brought forth to Speakout would tend to, by the very nature of the details of the concerns, be self-revealing to the applicable line management.

In regard to other means for employees to express concerns, the petitioner was concerned that there was an insufficient number of Form NRC-3s, "Notice to Employees," posted on the site and that the version of the posted Form NRC-3s was outdated. The team, subsequently, inspected the licensee's posting boards and determined that an adequate number of Form NRC-3s were posted. However, the team confirmed that the version of the posted Form NRC-3s were outdated in that the NRC Region IV address was incorrect. This matter was resolved during the inspection.

In conclusion, the Speakout program was viewed as an effective factor in addressing employee concerns.

2.6 Corrective Actions (IP 93702)

At the request of the team, on April 14, 1992, the licensee's management presented an overview of corrective actions taken as a result of its review of the issues brought forth by the petitioner. A copy of the licensee's handout is given as Attachment 5 to this inspection report.

In regard to maintenance issues, the licensee developed and issued a station procedure to clarify managements' expectations concerning how employees were to sign and backdate documents.

In regard to security issues, the licensee's manager stated its escort control program required improvement and that licensee personnel had become apathetic toward notifying security of escort transfers because they believed that such notification was meaningless. The license subsequently briefed security officers on the proper way to conduct escort transfers; this action was completed on March 27, 1992. In response to a specific question as to whether security crews had stood watch following NRC's notification on March 13, 1992, of an apparent violation, the licensee's manager indicated yes. The licensee's manager stated this delay of about a week was necessary to formulate the matters that should be included in the briefing. The team considered this delay to initiate corrective actions to be unnecessary. The licensee also, on March 30 or 31, 1992, issued plant bulletin on escort requirements and posted signs in the gatehouses to remind personnel of escort requirements.

On March 30, 1992, the licensee also issued a Deficiency Report 92-028 on escort problems. During the time that the licensee received notice of the escort problems, it was conducting an overview assessment of the security requirements for escorting visitors. As stated in the deficiency report, the results of this review were to be completed by April 17, 1992. The deficiency report also stated that Nuclear Security would coordinate with the Maintenance Department to identify the cause and any additional corrective actions to be taken. This supplemental internal response was to be provided by April 27,

1992. The licensee stated that any necessary improvements to their escort procedures will be completed May 29, 1992.

During the inspection, the team found no evidence of a continuing violation of visitor escort requirements. The team informed the licensee's representative that it had no evidence of a continuing practice of escorts leaving their visitors without escort coverage. Although the team found no evidence that escorts had abandoned their visitors in vital areas and those specific occasions when escorts had left their visitors without escort coverage which were identified were only in the I&C shop area, the team concluded that the licensee's immediate corrective action taken in response to the petitioner's and the team's concerns were slow and lacking in thoroughness.

During the meeting of April 14, 1992, the licensee's senior management became aware that the apparent violations included examples of escorts abandoning their visitors in the protected area. In response to this understanding, all visitor access was discontinued on the afternoon of April 14. During a followup telephone call on April 15, the team leader was informed that the licensee was rapidly developing and training some of its employees on a revised visitor escort procedure.

Two apparent violations, one inspection followup item, and no deviations were identified in the review of these areas.

3. EXIT MEETING

On April 14, 1992, members of the team and Regional management met with members of the licensee's organization denoted in Attachment 1 and summarized the scope and findings of this inspection.

During the performance of this inspection, the team reviewed and discussed various information confidential to the licensee's Speakout program. The information presented in this inspection report does not contain any confidential information.

ATTACHMENT 1

PERSONS CONTACTED

HL&P

C. Ayala, Supervising Engineer, Nuclear Licensing
*R. Balcom, Manager, Nuclear Security
H. Bergendahl, Manager, Technical Services
*R. Bohner, Manager, Speakout
*M. Chakravorty, Executive Director, Nuclear Safety Review Board
*R. Chewning, Vice President, Nuclear Support
*R. Cink, Senior Investigator, Speakout
*R. Dally, Engineering Specialist, Nuclear Licensing
R. DeLong, Manager, Instrumentation & Control (I&C)
*D. Hall, Group Vice President, Nuclear
*A. Harrison, Supervising Engineer, Nuclear Licensing
*J. Hinson, Administrator, Nuclear Security
*T. Jordan, General Manager, Nuclear Assurance
W. Jump, Manager, Nuclear Licensing
*W. Kinsey, Vice President, Nuclear Generation
M. Ludwig, Administrator, Participant Services
*B. McLauchlin, Owners' Representative, Central Power & Light
M. Murray, Supervisor, Maintenance
J. Neal, Supervisor, Nuclear Security
*J. Odom, Manager, Human Resources
*G. Parkey, Manager, Planning and Assessment
J. Pinzon, Senior Licensing Engineer, Nuclear Licensing
E. Pomeroy, Senior Coordinator, Nuclear Security
R. Rehkugler, Director, Quality Assurance (QA)
*J. Robbins, Associate Technical Consultant, Planning and Assessment
*S. Rosen, Vice President, Nuclear Engineering
D. Sanchez, Director, Maintenance
*J. Sharp, Manager, Maintenance
*T. Underwood, Director, Independent Safety Engineering Group
S. Wagner, Senior Quality Control Specialist
*C. Walker, Manager, Public Information
*L. Weldon, Manager, Operations Training
*M. Wisenburg, Plant Manager

Newman & Holtzinger

W. Baer, Attorney

NRC

*D. Chamberlain, Deputy Director, Division of Reactor Safety
*A. Dummer, Reactor Engineer
*R. Evans, Resident Inspector
*J. Tapia, Senior Resident Inspector

* Denotes those in attendance at the exit meeting on April 14, 1992.

During the inspection, the team also contacted other licensee personnel.

ATTACHMENT 2

PERSONNEL INTERVIEWED

NAME	ORGANIZATION	TITLE	DATE
D. Bohner	Speakout	Manager	March 9, 1992
			March 10, 1992
			March 25, 1992
			March 27, 1992
J. Bowles	Training	Instructor	March 10, 1992
G. Pomeroy	Security	Coordinator	March 10, 1992
R. Cink	Speakout	Investigator	March 10, 1992
R. Duran	I&C	Technician	March 10, 1992
			March 23, 1992
M. Crutcher	Maintenance	Foremen	March 10, 1992
N. Cervenka	I&C	Technician	March 11, 1992
			March 25, 1992
P. Burklow	Training	Instructor	March 11, 1992
			March 25, 1992
R. Galiley II	Operations	Reactor Plant Operator	March 11, 1992
R. Robinson	Wackenhut	Security Officer	March 11, 1992
R. Williams	Wackenhut	Security Officer	March 11, 1992
G. Oyler	Sun Service	Technician	March 11, 1992
			March 24, 1992
B. Hooper	I&C	Technician	March 12, 1992
F. Reed	I&C	Specialist	March 12, 1992
I. Jaramillo	Wackenhut	Security Officer	March 12, 1992
T. Smith	Maintenance	Mechanic	March 12, 1992
R. Smith	Maintenance	Mechanic	March 12, 1992
H. Thomas, Jr.	Maintenance	Planner	March 12, 1992
			March 26, 1992
T. Miller	Maintenance	Planner	March 12, 1992
R. Hebert	NEC	Planner	March 12, 1992
B. Weaver	Ebasco	Iron Worker	March 12, 1992
R. Dupuis	I&C	Technician	March 13, 1992
H. Davis	I&C	Technician	March 23, 1992
L. Sedillo	Wackenhut	Sergeant	March 23, 1992
S. Brown	Wackenhut	Sergeant	March 23, 1992
B. Migl	I&C	Technician	March 24, 1992
T. Miller	Wackenhut	Security Officer	March 24, 1992
G. Childers	Maintenance	Foreman	March 24, 1992
S. Johnson	Wackenhut	Lieutenant	March 24, 1992
N. Ontiveros	I&C	Technician	March 24, 1992
S. Wagner	QC	Specialist	March 24, 1992
M. Murray	Maintenance	Supervisor	March 25, 1992
J. Sharpe	Maintenance	Manager	March 25, 1992
R. Hall	Maintenance	Owner	March 25, 1992
C. Wilson	Training	Instructor	March 25, 1992
M. Wisenburg	Operations	Plant Manager	March 25, 1992
J. Neal	Security	Supervisor	March 25, 1992
D. Sanchez	Maintenance	Director	March 26, 1992
J. Hinson	Security	Administrator	March 26, 1992

ATTACHMENT 3

DOCUMENTS REVIEWED

INFORMATION PROVIDED BY PETITIONER

Transcript of February 18, 1992, NRC meeting with petitioner

Petition (10 CFR 2.206), February 10, 1992

Station Procedure OPGP03-ZO-0039, Revision 1, "Configuration Management," January 6, 1992

"STP on line," January 10, 1992

"STP on line," January 27, 1992

"STP on line," February 1992

Plant Bulletin 180, "Work Process Program," January 29, 1992

Draft Notice of Violation, "Failure to Follow Procedures," February 19, 1992

Draft Notice of Violation, "Employment Discrimination," February 21, 1992

Draft Notice of Violation, "Employment Discrimination" and "Failure to Permit a Licensee Employee to Obtain a Whole Body Count," February 21, 1992

Draft news release, "Houston Lighting & Power Fires STP Nuclear Whistle Blower," undated

NRC Form 3 posting, undated

"SPEAKOUT," posting, undated

INFORMATION PROVIDED BY THE DEPARTMENT OF LABOR

Case Letters No. 92 615 12203 to Complainant and Houston Lighting & Power dated March 11, 1992, transmitting statement of complaint dated February 24, 1992

INFORMATION PROVIDED BY LICENSEE

Speakout Program Instruction Manual, Revision 1, September 21, 1990

Station Procedure OPGP03-ZS-0001, Revision 7, "Personnel Access Control," July 3, 1991

Department Procedure OSDP02-ZS-0027, Revision 6, "Access Control," August 1, 1991

General Employee Training LP. No. GET 001.02. LP, "Learning Objectives for Nuclear Security," January 6, 1992

Houston Lighting & Power Company letter to NRC, "Response to 10 CFR 2.206 Petition," March 11, 1992

Deficiency Report No. 92-028, Revision 0, "Personnel Access Control," March 30, 1992

Station Procedure OPGP03-ZA-0090, Revisions 1, 3, and 4, "Work Process Program"

Station Procedure OPGP03-ZA-0065, Revision 4, "Qualification of Plant Staff Personnel," September 8, 1989

Interdepartment Procedure 9.04, Revision 1, "Personnel Processing Procedure," October 25, 1991

Lesson Plan MSS108.01, Revision 1, "Maintenance Work Control"

Lesson Plan MSS108.01, Revision 2, "Maintenance Work Control," February 28, 1992

Lesson Plan MCT009, Revision 0, "Work Process," January 10, 1992

Lesson Plan GET001.02, Revision 9, "Securit_," January 7, 1992

Service Request MT-101122, Main Steam Line Drain, December 12, 1991

Request for Action 92-0222, B2CV-LT-0105 Out of Tolerance, February 20, 1992

Maintenance Procedure OPMP08-CV-0105-2, "BAT B Level Set 3 Calibration (L-0105)," Revision 0

Preventive Maintenance IC-2-CV-89003173, B2CVLT0105 BATK 3LVL, Revision 1, February 20, 1992

Procedure OPGP03-ZA-0010, Revision 12, "Plant Procedure Adherence and Implementation and Independent Verification"

Service Request DW-111394, Softner #1 Totalizer Leaking from Weephole, Revision 0, September 19, 1991 (Priority 4A)

Maintenance Craft Overtime for January and February 1992

Service Request MT-101122, Steam Dump Level Control Valve Failed Open, Revision 0, February 12, 1991 (Priority 4A)

Maintenance History Backlog, February 29, 1992

Service Request FW-160126 SGFPT 23, Discharge Pressure Ind. PI-7117, Revision 0, January 28, 1992 (Priority 3C)

Planners Guide, Revision 0

Planners Feedback Forms (No Revision)

Procedure OPGP03-ZO-0039, "Configuration Management," Revision 1

Plant Bulletin #180, January 29, 1992

Service Request HD-149218, Proteus Computer Points, Revision 0, November 24, 1991 (Priority 4A)

Maintenance Daily Activity Status Log, January - February 1992

Work Request SH-116984, Pump Trips Off During Required 20 Minute ECW Injection (Sodium Hypochlorite), Revision 0, April 11, 1991 (Priority 4A)

Service Request SH-135518 SH, Salt Dissolver Level Switch, Revision 0, December 31, 1991 (Priority 3C)

Service Request SH-135517 SH, Salt Dissolver Level Switch, Revision 0, December 31, 1991 (Priority 3C)

Service Request DW-111174, Meter Does Not Correspond to Portable Meter, Revision 1, September 20, 1991 (Priority 4A)

Preventive Maintenance IC-1-AC-86012304, Condenser VAC Pump 13 GLG Water, Revision 3, February 17, 1992

Work Request CC-92939, Spare CCW Pump Motor, Revision 1, August 17, 1990 (Priority 3)

Work Request DO-133451, Diesel Generator No. 13 Fuel Oil Filter DP, Revision 1, July 10, 1991 (Priority 3C)

Preventive Maintenance IC-1-LV-86004658, "Diesel Generator 13 Lube Oil Pump Discharge," Revision 3, February 19, 1992

Preventive Maintenance IC-2-CV-89002775, BTRS RC RTN Temperature, Revision 0, February 11, 1992

Equipment Clearance Order DW-0052, January 9, 1992

Service Request DW-126165, Conducting Transmitter, Revision 2

South Texas Project Electric Station, "1990-1991 Operational Improvement Plan"

Lesson Plan NST004.06.LP, Revision 4, "Basic Nuclear Security officer - Access Control," August 9, 1991

Lesson Plan NST204.01.LP, Revision 3, "Requalification Phase II," July 9, 1991

General Computation Sheet, "Air vs Water for Calibration of Level Transmitters"

Configuration Change Logs, DW-126165, November 14, 18, 19, 20, and 21, 1991; February 4, 6, 7, 12, 14, 15, 17, 20 and 21, 1992; and March 3 and 13, 1992

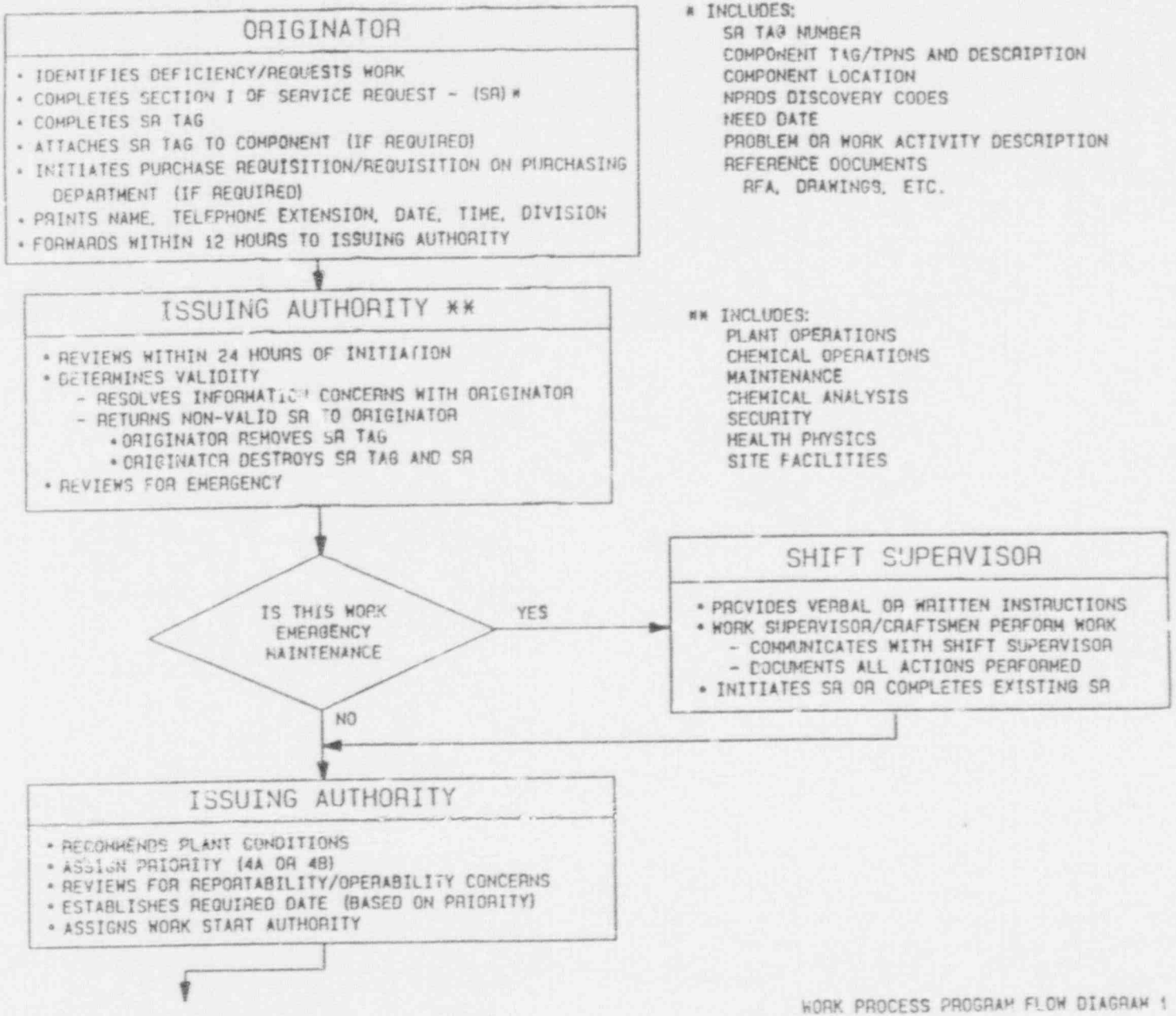
Procedure OPMP08-ZI-0028, "Generic 7300 Loop Calibration," Revision 2

General Procedure OPGP03-ZM-0021, "Control of Configuration Changes," Revision 4

General Procedure OPGP03-ZA-0010, "Plant Procedure Adherence and Implementation," Revision 12

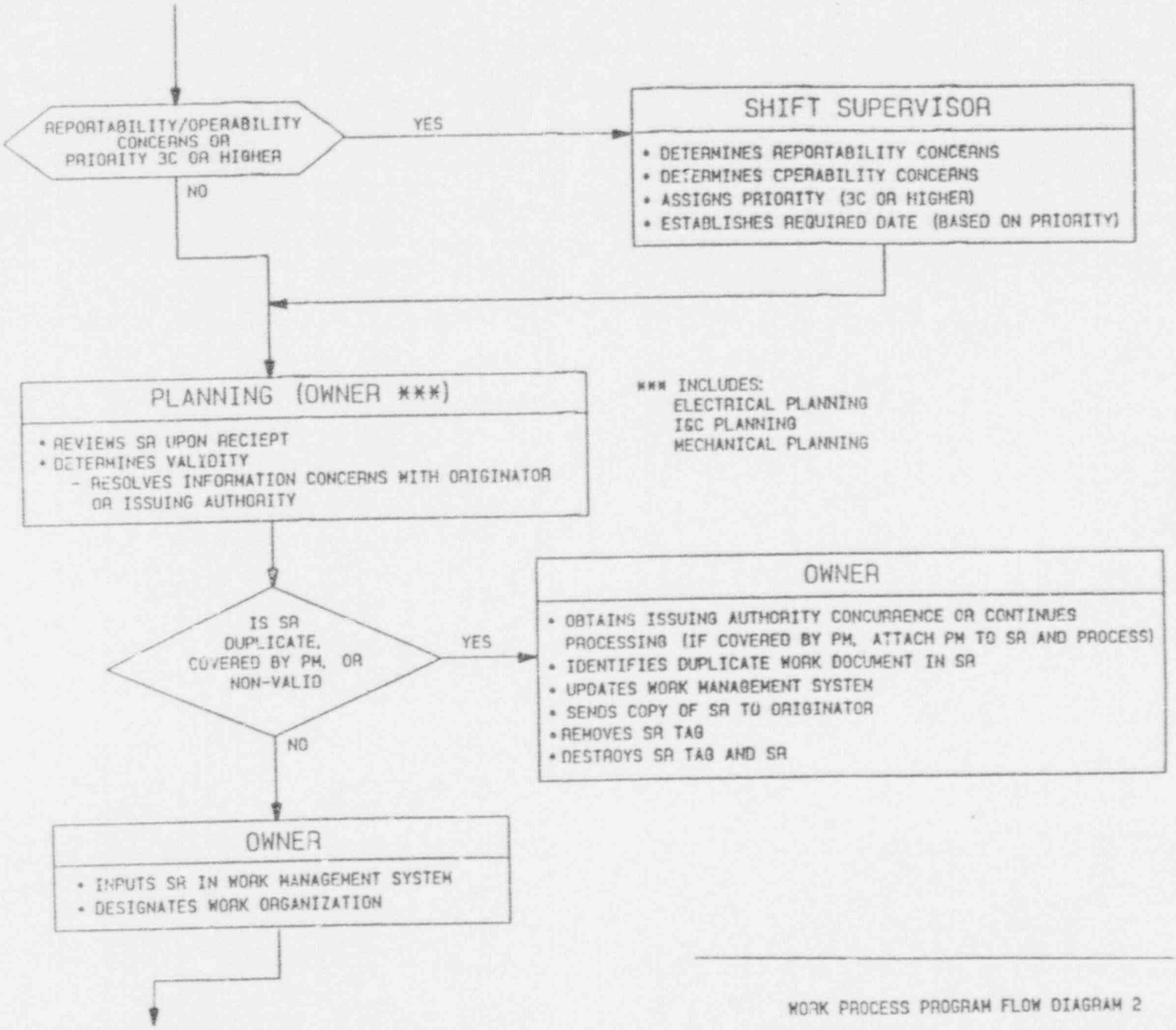
Maintenance Procedure OPMP01-ZA-0040, "Maintenance Work Practices and Requirements," Revision 0

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 1 of 7)
Typical



WORK PROCESS PROGRAM FLOW DIAGRAM 1

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 2 of 7)
Typical



WORK PROCESS PROGRAM FLOW DIAGRAM 2

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 3 of 7)
Typical

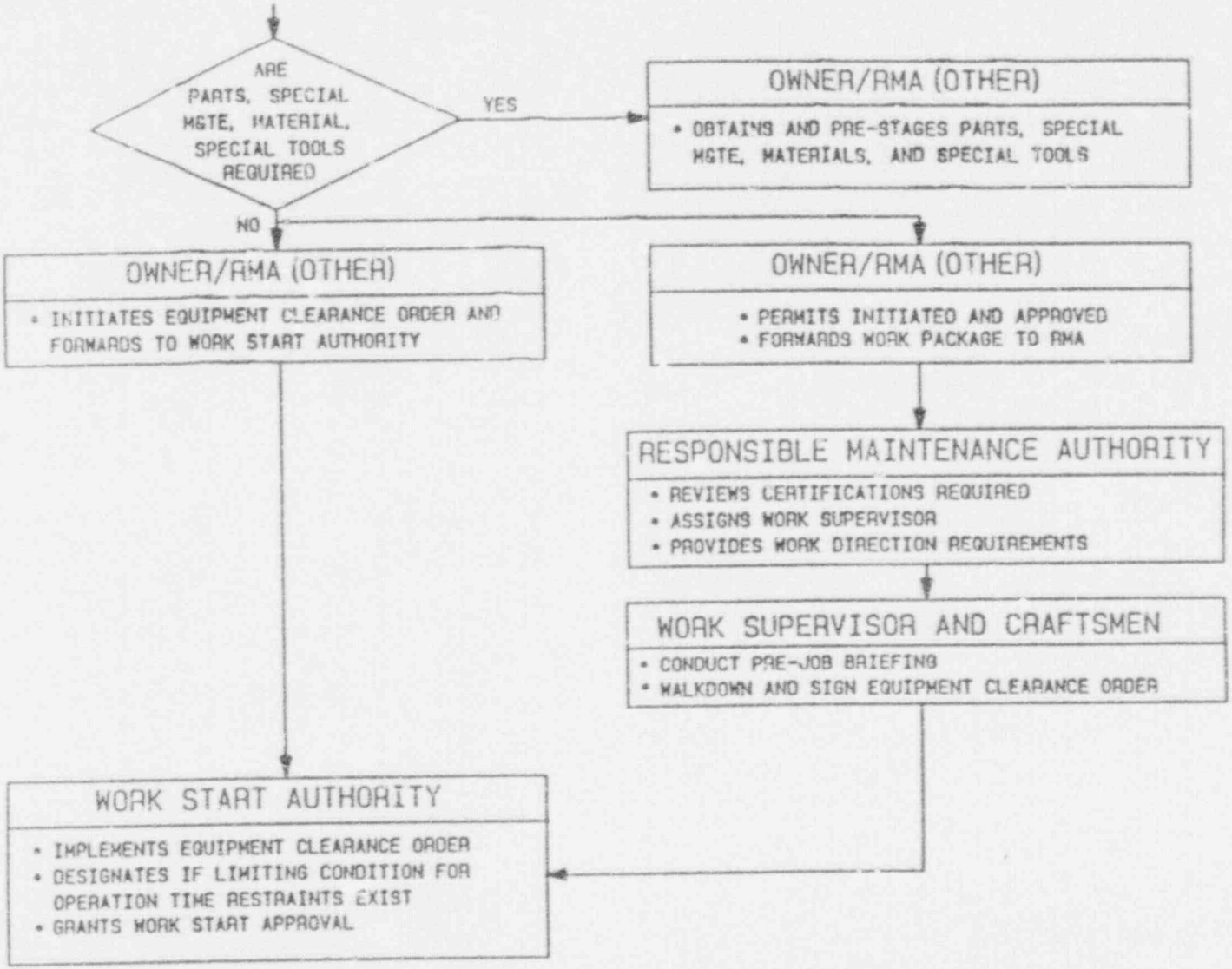
NOTE:
WHENEVER THE TERM "RMA (OTHER)" IS USED, THIS DENOTES THE PERSON RESPONSIBLE FOR PERFORMING THE DUTIES OF THE OWNER FOR DEPARTMENTS OTHER THAN THE MAINTENANCE DEPARTMENT

WORK PROCESS PROGRAM FLOW DIAGRAM 3

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 4 of 7)
Typical

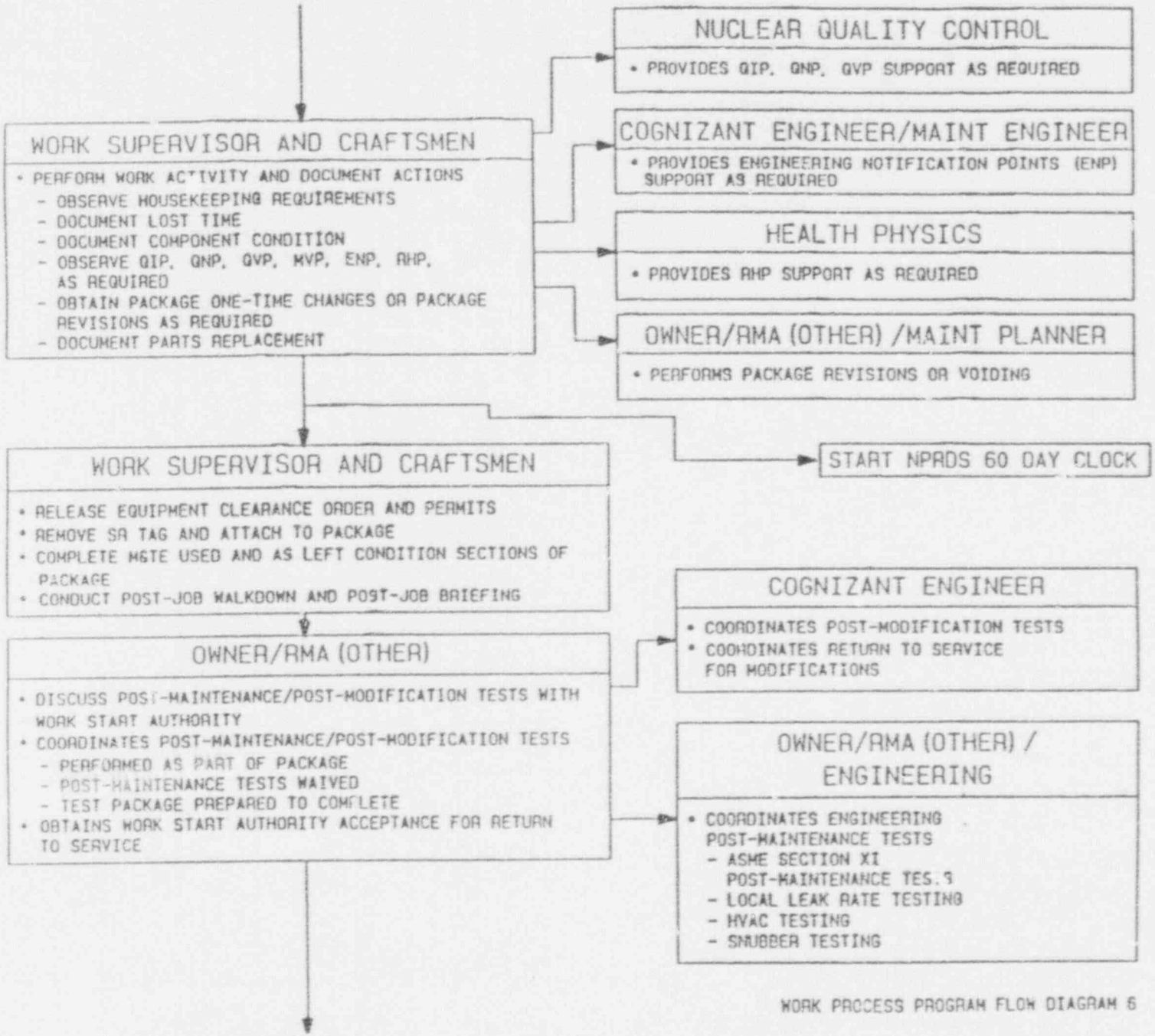
WORK PROCESS PROGRAM FLOW DIAGRAM 4

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 5 of 7)
Typical



WORK PROCESS PROGRAM FLOW DIAGRAM 5

ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 6 of 7)
Typical



WORK PROCESS PROGRAM FLOW DIAGRAM 6

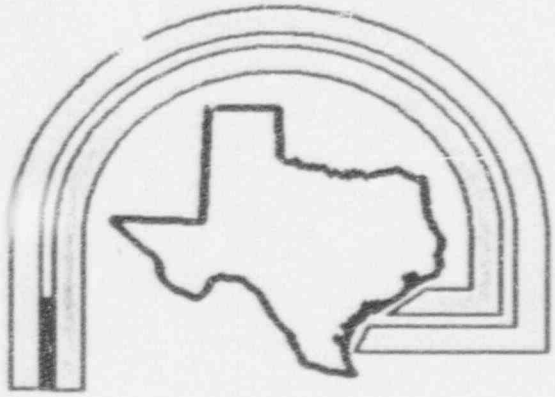
ADDENDUM 1
WORK PROCESS PROGRAM FLOW CHART
(Page 7 of 7)
Typical

WORK PROCESS PROGRAM FLOW DIAGRAM 7

SOUTH TEXAS PROJECT
ELECTRIC GENERATING STATION

HL&P - NRC
MANAGEMENT CONFERENCE

APRIL 14, 1992



Excellence
Through

SERVICE, TEAMWORK, PRIDE

ATTACHMENT 5

AGENDA

OPENING REMARKS	D. P. HALL
MAINTENANCE	J. D. SHARPE
SECURITY	R. L. BALCOM
CONCLUSIONS	D. P. HALL

MAINTENANCE

- ALLEGATIONS REVIEWED BY LICENSING AND SPEAKOUT
- NO SAFETY SIGNIFICANT FINDINGS
- TRAINING ON WORK PROCESS IS ADEQUATE
- ADDITIONAL TRAINING PLANNED FOR WORK PROCESS CONTROL (INDEPENDENT OF THIS REVIEW)

SECURITY

- ALLEGATIONS REVIEWED BY NUCLEAR SECURITY, LICENSING AND SPEAKOUT
- NO SAFETY SIGNIFICANT FINDINGS
- VISITOR CONTROL REQUIRES IMPROVEMENT
- SECURITY OFFICERS BRIEFED ON ESCORT TRANSFER
- PLANT BULLETIN ISSUED ON ESCORT REQUIREMENTS
- IMPROVEMENTS IN VISITOR ESCORT REQUIREMENTS ARE UNDER REVIEW

CONCLUSIONS

- ALLEGATIONS TAKEN SERIOUSLY - THOROUGHLY INVESTIGATED
- 4 CONCERNS SUBSTANTIATED OUT OF TOTAL OF 16 INVESTIGATED
- NO SAFETY SIGNIFICANT FINDINGS
- MAINTENANCE AND SECURITY PROGRAMS ARE SOUND