U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT (IE)

DIVISION OF PROGRAM DEVELOPMENT AND APPRAISAL
PERFORMANCE APPRAISAL SECTION (PAS)

Report No. 50-302/81-1 (PAS)

Docket No. 50-302 License No. DPR-72

Licensee: Florida Power Corporation
3201 34th Street, South
St. Petersburg, Florida 33733

Facility Name: Crystal River, Unit 3

Inspection At: Crystal River, Unit 3, Crystal River, Florida and
Florida Power Corporation, St. Petersburg, Florida

Inspection Conducted: February 2-13 and February 23-27, 1981

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Inspection Summary

Inspection on February 2-13 and Feburary 23-27, 1981 (Report No. 50-302/81-1 (PAS)

Areas Inspected: A special, announced inspection was performed of the licensee's management controls over selected licensed activities. The inspection (by five NRC inspectors) involved 511 inspector-hours onsite and at the corporate office.

Results: The licensee's management controls for nine areas were reviewed, and conclusions were drawn in each area based on observations presented in this report. The conclusions are presented as above average, average, or below average as follows:

Section 2, Committee Activities - average
Section 3, Quality Assurance Audits - average
Section 4, Design Changes and Modifications - average
Section 5, Maintenance - below average
Section 6, Plant Operations - above average
Section 7, Corrective Action Systems - below average
Section 8, Licensed Training - average, Non-Licensed Training - below average
Section 9, Physical Protection - below average

Additionally, a number of observations were presented to the Region II Senior Resident Inspector as potential enforcement findings for followup as appropriate. These observations were also discussed with the licensee during meetings on February 13 and 27, 1981.

Details

1. Inspection Scope and Objectives

The objective of the inspection was to evaluate the management control systems which have been established in support of licensed activities. The results will provide input to the NRC evaluation of licensees from a national perspective.

The inspection effort covered licensed activities in selected functional areas. In each of the functional areas the inspectors reviewed written policies, procedures, and instructions; interviewed selected personnel; and reviewed selected records and documents to determine whether:

a. The licensee had written policies, procedures, or instructions to provide management controls in the subject area;

b. The policies, procedures, and instructions of (a) above were adequate to ensure compliance with the regulatory requirements;

c. The licensee personnel who had responsibilities in the subject areas were adequately qualified, trained, and retrained to perform their responsibilities;

d. The individuals assigned responsibilities in the subject area understood their responsibilities; and

e. The requirements of the subject area had been implemented to achieve compliance and activities sampled had been appropriately documented.

The specific findings in each area are presented as observations which are inspection findings that the inspectors believe to be of sufficient significance to be considered in the subsequent evaluation of the licensee's management performance. The observations include perceived strengths and weaknesses in the licensee's management controls that may not have specific regulatory requirements or guidance. Where appearing, these are identified in the report by a "S" or "W" in parentheses.

The observations provide the basis for drawing conclusions in each inspected functional area. The conclusions are presented as Above Average, Average, or Below Average, and represent the team's evaluation of the licensee's management controls in each area.

Some of the observations identified as weaknesses are potential enforcement findings. These observations were discussed with the licensee and presented to the Region II Senior Resident Inspector. The followup of these items will be performed by the IE Regional Office.

2. Committee Activities

The objective of this portion of the inspection was to evaluate the adequacy of the licensee's management controls associated with

activities conducted by the Plant Review Committee (PRC) and the Nuclear General Review Committee (NGRC).

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls that may not have specific regulatory requirements but will provide the basis for subsequent performance evaluations.

(1) Interviews indicated that both the NGRC and the PRC were effective forums for discussion of pertinent issues. Members felt free to express dissenting opinions, and stated that ample time for committee business was afforded. Committee recommendations appeared to be respected by all levels of the licensee's organization.

The NGRC was found to be meeting approximately once per month, compared to the minimum of once per six months specified in the TS. Committee minutes indicated that attendance at meetings exceeded quorum requirements. One strength noted in the NGRC's activities was the practice of alternating regular meetings between the site and the corporate office. (S)

The NGRC Chairman was the Executive Assistant to the Senior Vice President, Engineering and Construction. He stated that 80 to 90% of his time was given to committee activities or plant-related matters closely involved with the committee. He also reported to the Senior Vice President, Engineering and Construction, as NGRC Chairman, along with the Director, Quality Programs; and the Assistant Vice President, Nuclear Operations.

(2) Minutes of the NGRC were observed to have been approved and forwarded by the Chairman to the Senior Vice President within 14 days as required by Section 9.0 of the NGRC charter. Records and interviews indicated that the Chairman's approval of the minutes was given after receipt of individual member responses to a draft copy of the minutes. Minutes of recent NGRC meetings gave adequate description of activities conducted at meetings of the full committee. Minor exceptions are described below. (W)

- In the minutes for NGRC meeting 78, regarding TS Change Request 67, it was not clear from the minutes which committee comments had been incorporated.

- Meeting attendees were not indicated in the minutes for the NGRC Meeting 78.

- In the minutes for meeting 72, comments incorporated into TS Change Request 63 were not indicated.

(3) The principal weakness noted in the functioning of the NGRC was in its use of subcommittees. The TS specify in Section 6.5.2.6 those items that shall be reviewed by the NGRC. These include: (1) safety evaluations for procedures, equipment, or systems completed pursuant to 10 CFR 50.59; (2) violations of codes, regulations, orders, TS, license requirements, or of internal procedures or instructions having nuclear safety significance, and (3) reports and meeting minutes of the PRC. Section 6.5.2.2 of the TS discusses the areas of experience and competence that shall be represented collectively by the committee, and Section 6.5.2.7 defines the quorum requirements for NGRC meetings.

Although the TS do not mention the use of subcommittees, this was described in Section 12.0 of the NGRC Charter, which stated in part:

> "The Chairman may, at his discretion, appoint temporary or standing subcommittees to conduct reviews and audits. (A subcommittee may consist of one or more members.) At the time of appointment, he will designate a Subcommittee Chairman who will be responsible for the review or audit function and the preparation of a report for full meeting discussion."

Most subcommittees consisted of one person. (W) Although the Audit Review Subcommittee included four or more NGRC members, all did not participate in each review. Each audit was usually reviewed by one subcommittee member and the Subcommittee Chairman. The amount of information supplied to the full committee by the Subcommittee Chairman also varied widely. The individual (subcommittee of one) who reviewed licensee event reports (LER's) and IE inspection reports summarized the information reviewed in a manner that permitted NGRC members to be aware of the principal issues and inquire further if desired. The NGRC Chairman stated that copies of all LER's were also being provided to each NGRC member.

In other areas, however, information presented to the full NGRC by a subcommittee was not adequate to permit the full committee to satisfy its review requirement. One person subcommittees pre-empted the full spectrum of technical expertise on the NGRC from participating in the review process as intended. (W)

- One NGRC member, serving as a subcommittee of one, reviewed all Modification Approval Records (MAR's), including those that were not safety-related. Completion of this review was reported in a memorandum to the NGRC Chairman that identified, by number, the MAR's that had been reviewed and stated that no unreviewed safety questions were found. No identifying title or other information on the MAR's was provided to the NGRC members unless this individual identified a potential unreviewed safety question. When

questioned by the inspector, this individual was unable to adequately define "unreviewed safety question" as set forth in 10 CFR 50.59(a).

- Although the NGRC is required by TS to review all "violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance," not all such items were being referred to the full committee for review. Violations identified in IE inspection reports and LER's were seen by the NGRC members. All violations identified in internal audits were not, however. Memoranda enclosed with the minutes for NGRC meetings 71 and 76 discussed audit findings in this category that were not referred to the full NGRC. In addition, the NGRC audit subcommittee did not review audits conducted by the onsite Compliance Section, so it was not clear that violations identified in these audits would be seen by the NGRC. The individual who reviewed Nonconforming Operations Reports (NCOR's) stated that he did not necessarily refer violation-type items to the full committee for review.

- A subcommittee of one conducted reviews of PRC minutes for unreviewed safety questions. Results of these reviews were reported to the NGRC Chairman, but the PRC Minutes were not provided to the NGRC members for review.

These observations regarding NGRC reviews were discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(4) One weakness noted in PRC activities was in review of TS violations. Section 6.5.1.6 of the TS states that the PRC shall be responsible for "Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence...." The PRC saw and acted upon most TS violations by reviewing LER's, NCOR's, responses to NRC enforcement correspondence, and other such items. The PRC did not, however, review QP audits, and those on the NGRC subcommittee reviewing these audits did not normally inform the PRC of identified TS violations. In particular, a TS violation identified in audit QP-194, was not reviewed by the PRC as required by TS. (W)

This observation was discussed with the licensee and was presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(5) Interviews indicated that, for both the PRC and NGRC, minimal committee time was given to ensuring that committee members were familiar with their review responsibilities and the methods to be used in fulfilling them. For example, most of the 18 NGRC and PRC members interviewed were asked the definition of "unreviewed safety question". Only the NGRC Chairman identified the three parts of the definition specified in 10 CFR 50.59(a). (W)

b. Conclusions

The NGRC and PRC both had programs that were well defined in their charters and in supporting instructions. Both committees had a composition of qualified members which satisfied TS requirements. Both committees also met more frequently than required by TS. Interviews indicated the committees to be effective forums for reviewing and discussing safety-related matters.

The principal weakness was the NGRC's use of one person subcommittees that pre-empted the use of the full spectrum of technical expertise on the committee from participating in the review process as intended. Another weakness was that the PRC was not reviewing all Technical Specification violations. Members of both committees needed a better understanding of review requirements, particularly the meaning of "unreviewed safety question".

Based on these considerations, management controls associated with committee activities were considered average.

3. Quality Assurance Audits

The objective of this portion of the inspection was to determine the adequacy of the licensee's management controls associated with quality assurance audit activities.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls that may not have specific regulatory requirements, but will provide the basis for subsequent performance evaluations.

(1) All TS required audits performed at the corporate offices and the facility were performed by the Quality Programs Department personnel under the cognizance of the Nuclear General Review Committee (NGRC). The NGRC did not participate in or perform any audits. The Director, Quality Programs, served as Vice Chairman of the NGRC. Another member of the NGRC was the Supervisor, Materials Technology, in the Quality Programs Department, also a qualified auditor. These individuals represented the interests and efforts of the Quality Programs Department on the NGRC.

(2) There were actually two separate quality assurance auditing organizations working within Florida Power Corporation. The Quality Programs Department fulfilled the regulatory requirements as stated in observation (1). The second group, known as the Nuclear QA/QC Compliance Section, performed an auditing function for the Plant Manager in excess of regulatory guidelines; although, the licensee was committed to this activity through the Quality Manual, QP 18.50, Quality Audits, Reviews, and Evaluations for Operations Phase, revision 4. The principal function of this Section was to provide assurance to plant management that plant activities conformed to the requirements of the NRC, license commitments, corporate directives, and all plant procedures. The "QA" or auditing side of the organization, referred to as "Compliance," accomplished this function by conducting scheduled audits, performing activity reviews (surveillance or mini-audits), troubleshooting problem areas as directed by the Plant Manager, interfacing with NRC inspectors and Quality Programs (QP) auditors, and coordinating and tracking the status of commitments made by plant personnel on corrective action systems. The concept of a separate auditing group working directly for the Plant Manager was unique among licensees inspected by PAS. It appeared to be an effective management tool. (S)

The auditing activities of Compliance were not examined as closely by the PAS inspectors as those of Quality Programs due to the nature and number of the regulatory requirements incumbent upon each. These activities were, however, part of the licensee's management control systems, and as such, were inspected. There are several observations throughout this report section on this subject. The existence of Compliance audits was considered a strength; weaknesses attributed to this program should be viewed in that context.

(3) The licensee maintained written position descriptions and responsibilities for all supervisors and auditors in both Compliance and Quality Programs. As for most licensees previously inspected by PAS, these position descriptions stated the basic function of the position title, specific duties and responsibilities, and reporting relationships. In addition to the basics, however, the Florida Power Corporation position descriptions contained statements of the job's "major or unusual problems", "greatest challenges", quantitative data such as estimated dollars per year impact on the company's business, knowledge and skill requirements, special assignments, extent of authority as far as the position's relationship with the supervisor, and an organization chart. (S)

The principal duties of a QP auditor as listed in the position description and from interviews were preparation and conduct of internal audits and nuclear safety-related procedure reviews, in that order. There was no evidence that collateral duties or

other time consuming activities detracted from auditing responsibilities. TS auditing requirements were met in 1980 with the completion of 20 audits. Twelve of these had open items pending at the time of the PAS inspection.

The principal duties of a Compliance auditor were listed in the position description in the following order: preparation and conduct of audits; activity reviews (surveillances); review of plant documentation, including the areas of maintenance, surveillance, operations, and design changes; investigating and writing LER's; and coordinating with offsite inspection agencies such as NRC and QP auditors. Interviews indicated that time constraints had caused a shift in priorities. The largest percentage of time was spent following corrective action commitments, and investigating and writing LER's. A lesser amount of time was spent in document and activity reviews. The least amount of time was spent on auditing. A minimum goal of 52 activity reviews were planned per year; 34 were conducted in 1980. Audits were scheduled on a quarterly basis with no predetermined quantity requirement; 12 were completed in 1980.

The workload for Compliance appeared large considering the size of the staff. The manpower allowance for the auditing staff was one supervisor and four auditors. At the time of the PAS inspection, there were only three auditors, one of whom was acting as the Compliance Supervisor. (W)

QP was at their full complement of auditors: four working for the Manager, Quality Audits and Engineering; three at the site assigned to the Manager, Surveillance and Program Development; and two under the Manager, Vendor Quality Assurance. Four of these were new to the organization and not qualified as lead auditors. When qualified, a total of 13 (including managers), would be available for conducting audits. Each of the three managers under the QP Director were scheduled to either participate in or lead an audit during 1981. (S)

Audits varied widely in manpower requirements. Of the several audits examined, a rough estimate of the average man days used per audit appeared to be slightly less than ten for the actual onsite conduct of the audits, not including report writing or corrective action followup. This appeared to be about average, based on PAS inspections conducted to date.

(4) Responses to QP audits, corrective action on the audit findings, and followup by QP auditors appeared to be timely. Response dates (30 days following receipt of audit report) and agreed upon dates for completion of corrective action was met for nearly all audits examined. There were several apparent reasons for this. One of these was due to the Compliance Section whose responsibilities included following QP Audit Finding Reports (AFR's) written against the site organization,

and interfacing with the QP auditors. All QP AFR's at the site were coordinated by Compliance. Another factor contributing to the relatively small backlog of open audits was a recently lowered threshold on issuance of Nonconformance and Corrective Action Reports (NCR's) written for untimely or unsatisfactory responses to audits (see observation (13) in Section 7 of this report). At the time of the PAS inspection, there were portions of 11 audits considered open, including two "corporate" audits written by outside contractors to evaluate the quality assurance program of the licensee. Of the nine open QP audits, the oldest was conducted in June, 1980. In addition to the procedure for NCR's, QAP-8, Quality Program Audits, revision 3, provided some guidance for delayed or unsatisfactory responses to audits that consisted of a report by the team leader to the Manager, Quality Audits and Engineering, and the QP Director.

Aside from the objective management controls described above to keep the backlog of AFR's low, there appeared to be a positive attitude on the part of all licensee personnel interviewed toward quality assurance in general and to responding to QP audit findings in particular. FPC seemed to have achieved a good working relationship between auditors and other licensee personnel. QP auditors played a combination of roles with some apparent success: an adversary on one side and a helpful assistant to keep licensee personnel "out-of-trouble" on the other. (S)

Responses to Compliance audits were not as timely. Four of the six audits examined were responded to by the audited organizations after the 30 day requirement specified in procedure CP-110, Procedure for Compliance Audit of Plant Quality Assurance Program, revision 12, and the guidelines of ANSI N45.2.12. One reason for this appeared to be the lack of any established escalating mechanism or deterrent, such as Quality Programs' NCR or a PRC review, to bring the issue to a higher or broader level of management attention. Procedures contained little guidance regarding late responses. For the initial response being late, there was no guidance. For corrective action not implemented by its commitment date, CP-110 stated that the Nuclear Compliance Supervisor shall review these on a "case-by-case basis." (W)

(5) ANSI N45.2.12 states, "Personnel selected for QA auditing assignments shall have experience or training commensurate with the scope, complexity, or special nature of the activities to be audited." Interviews and auditor training records revealed that QP auditors had limited experience or training in several areas which were the subject of audits. Procurement and operations were examples of such areas. One auditor who had performed numerous procedure reviews and had a wide range of auditing experience demonstrated in an interview a weak understanding of the definition of an unreviewed safety question.

Training for auditors beyond the initial certification, which did contain general training in a wide range of quality assurance programs, was conducted only as needed, based on the annual management appraisal of each auditor. This provision was specified in procedure QAP-12, Certification of Audit Personnel, revision 3; however, for the past several years for which training records were examined, it had apparently never been "needed." The auditor records examined exhibited no evidence of any refresher training on the TS, FSAR, regulatory guides, QP Department procedures, or plant procedures. (W)

The QP Department recognized part of this training deficiency and had started a program of biweekly staff meetings for the purpose of upgrading the training level of their auditors. A February 4, 1981, memorandum to the QP staff from the QP Director described the program, the main purpose of which was to assure that all auditors were trained in QP policies, procedures, and administrative procedures. These meetings would also serve as the annual review of these documents. Although not stated in the memorandum, a licensee representative stated that it was their intention for these meetings to serve as the training forum for specific areas and issues, such as recent developments or problems in procurement.

(6) QAP-8 provided guidance for preparation and conduct of audits. In general, it was detailed and assigned responsibility for all aspects of the audit process. Administration of the QP audit program as far as scheduling, documentation, records, and organization exhibited few weaknesses. Records were adequate and easily accessible. They were also easy to understand. Nearly every aspect of the audit process was formalized with standard forms: the Audit Plan, the Audit Notice, the checklist format, each page of the audit report, AFR's, the report transmittal letter, an audit followup letter, and the audit closure letter. (S)

(7) Most QP audits appeared to be relatively detailed and most contained substantial findings. The audits, however, were inconsistent in their quality. There were numerous areas requiring some management attention.

One of these areas was checklists. These were prepared for each audit by the audit team leader using the guidance of QAP-8. For each audit a new checklist had to be developed. Standardized checklists were not used. There was no requirement for any supervisor to review or approve checklists; although the Manager, Quality Audits and Engineering, stated he read each one prior to conduct of the audit. (At least one audit checklist had not been seen by any supervisor prior to its use due to a logistics problem: the auditor was a contractor employee who went from his normal place of employment directly to the plant without submitting his checklist for review). This lack of guidance provided no assurance that identified problem areas

would be audited or that the depth or scope of checklists was adequate. There were no minimum requirements on the content of checklists and no guidance on sample sizes. Although auditors were given wide latitude to perform their assigned tasks, one of the problems with the lack of guidance was that the basic elements generic to successive audits in a given area were not assured of coverage. Evidence demonstrated that the continuity between successive audits was weak. Repeat findings or repeat violators were not identified, for instance. (See observation (11) in this report section).

Many of the checklists examined exhibited weaknesses. Some appeared to lack adequate scope and depth. Few of the checklists, for example, made any attempt to evaluate the effectiveness of the program elements audited. Most were restatements of facility procedures in the form of checklist questions. They verified compliance to the procedures but failed to evaluate those same procedures. Audits in maintenance, for instance, did not evaluate Work Requests, they verified that all the blanks were signed and dated. Audits on corrective action systems, such as NCOR's, did not evaluate the quality of the recommended corrective action or the qualifications of the persons making such decisions. (See a related concern in the next observation). Some checklist requirements were not well written, or had not kept up with program changes. One example stated "Verify the audit transmittal letter requests corrective action of audit findings within 30 days." First, the transmittal letters for both QP and Compliance audits did not require this; only that the recipient respond in 30 days stating corrective action completed or the scheduled date for completion of corrective action. Second, transmittal letters were standard forms, all were absolutely identical except for the date and title of audit.

Another concern related to the scope and depth of audits was that the checklists for the six month audits of "the results of actions taken to correct deficiencies" did not include all corrective action systems; nor was there any procedural guidance to suggest the frequency at which all these systems (NCOR's, NCR's, FUR's, SIR's, and others see Section 7 of this report) might eventually be addressed. The same observation could be made for the audits on the conformance of facility operations to the TS. There was no assurance that specific TS requirements or even entire TS sections would ever be examined by a Quality Programs audit. Policy in this area appeared to require further management attention.

Minimum or recommended sample sizes required to adequately respond to checklist questions were not specified in the checklists; and correspondingly, sample sizes were not often presented as evidence in the audit reports. Statements such as the following were common: "Review several work requests."

"Verify the compliance audit log shows a history of audits performed." (W)

(8) ANSI N45.2.12 requires that an audit report provide "a summary of audit results, including an evaluation statement regarding the effectiveness of the quality assurance program elements which were audited."

One audit (QP-203) had no summary statement as described. For all others examined, the requirement was addressed by the completion of a section provided in the standardized audit report format; however, nearly all of these audits examined failed to accomplish this adequately. (W)

The interpretation of the ANSI requirement by the licensee, as evidenced in the audit reports, was that this statement should summarize the audit findings and evaluate the effectiveness of the program implementation, not of the program itself. One audit report (QP-202) stated that implementation and activities were being performed in an effective manner. Another (QP-196) referred to the program being effectively conducted and personnel being qualified and certified. Only one audit (QP-184) of those examined fulfilled the requirement, and it did so excellently. This audit summary statement addressed the effectiveness of both QP Department and Production Engineering Department management control systems, including current procedures, the need for new procedures, management reviews, tracking systems, manpower allotments, and training programs. Interviews with licensee management representatives resulted in varied opinions on the interpretation of the ANSI requirement. Both auditors and some management persons expressed hesitation in making "subjective" statements in audit reports. Statements on the effectiveness of program elements or management control systems based on well prepared, well managed, thorough audit investigations did not appear to the PAS inspectors to be subjective. It was the opinion of the PAS team that licensee management should direct further attention to this requirement in audits.

(9) Audit findings were one of the program's stronger points. AFR's routinely addressed substantial safety related issues. All of the auditors and QP supervisors interviewed gave a strong impression of being aggressive in pursuing safety problems and having a healthy independence from site management. (S)

(10) Reviews of the QP audit program by groups or individuals outside the Department had several weaknesses. Licensee representatives stated that there were two principal external review programs: one was by the NGRC, the other by an outside consultant.

The NGRC review was conducted every six months by a single committee member who reported the results to the NGRC Chairman. Interviews indicated that this review was principally a verification that the audit schedule was meeting the TS requirements; and

the program itself was not reviewed in depth. The NRC reviewer had been the previous QP Director, and in this capacity had been largely responsible for developing the audit program. Thus, while the NGRC reviewer was well qualified to examine the estent of implementation of the QP audit program, his previous close association with their program could preclude and objective review of its real effectiveness. (W)

NGRC reviews of individual QP audit reports were coordinated by this same member as Chairman of the NGRC Audit Subcommittee. Membership on this subcommittee required the periodic reviewing of audit reports as sent out by the Chairman. The NGRC membership did not routinely see audit reports; usually the reports were reviewed by the NGRC Chairman, the Audit Subcommittee Chairman, the QP Director, who was Vice Chairman, and at most one other member. An Audit Review Checklist was used to help Subcommittee members in their review of audits. Although one question addressed the quality of the audit program (Is there "sufficient depth of audit with regard to standards?"), one subcommittee reviewer stated that he did not assess the adequacy of audits, only the responses to the audit findings. Even this kind of review was limited. They had to be completed within three to six months of receipt of the audit report; and for many audits, this policy prevented the NGRC Subcommittee members, and certainly the NGRC membership, from reviewing corrective actions to audit findings. (W)

QP audit reports were not reviewed by the Plant Review Committee (PRC). This posed a problem since the PRC did not review TS violations reported on the QP audit reports, unless these violations were also reported in some other document. (W)

The second external review program was the periodic "Corporate Audit" by a consultant firm whose mission was to evaluate the licensee's quality assurance program. One concern with this program was the infrequent and irregular schedule. The last two were separated by 21 months. More significantly, however, the last audit report by the consulting team did not address the adequacy or effectiveness of the audit program. Licensee representatives stated that the audit program was examined by these consultants even though such an evaluation did not appear in their report. This consultant's ability to make any objective criticism of the licensee's audit program was highly questionable. It appeared that two of the three member team had been periodically employed by the licensee to serve as audit team members and team leaders, augmenting their QP staff, in the conduct of the audit program. (W)

(11) Mechanisms for the review of audit reports both within the QP Department and external to it lacked the ability to trend audit results and determine the generic aspects of findings. The NGRC reviews did not do this, and could not under the organizational structure which existed. A Subcommittee member

reviewed whatever audit was routed to him or her. There were no connective links between reports reviewed by one Subcommittee member and others, between earlier reports reviewed by a member and later reports, or between a specific reviewer and a single audit area. (W)

Auditors preparing for an audit reviewed the previous audit in the area to be examined. They could not easily review the entire audit history for a given subject, or review all other audits that could have related areas of concern. An example had occurred recently with nearly identical findings on two different audit areas. The findings both concerned inadequate labeling on radioactive material. One audit (QP-204) was on Radiation and Chemical-Radiochemical Control; the other (QP-198) on Radioactive Waste Management, Transportation, Packaging, and Radiation Safety. The auditors on QP-204 would not have been required to read QP-198; nor would they have necessarily been aware of the earlier findings. Procedural guidance for AFR's did not require the auditors or QP managers to evaluate the impact of their findings in consideration of any previous findings.

Auditors relied on memory for trending. The only tracking performed was through the monthly Audit Status Report. This report listed audits started and closed for the month, plus the status of all open findings. A licensee representative described their plans for developing an elaborate computer system for tracking and trending all audit findings as well as all other corrective action system findings, such as NCOR's and NCR's. This system could, according to the licensee representative resolve the radioactive labeling problem described above by having a key search phrase such as "radioactive labeling" coupled with an extensive cross-referencing system built into the computer program. There was no projected completion date for this proposed system and no interim plans established. (W)

b. Conclusions

The auditing activities of the Compliance Section comprised one of the strongest statements that site management could make to its commitment to the concept of quality assurance. This program exhibited some of the same weaknesses as the Quality Programs audit program, particularly in the area of checklists, as described in this section. It also showed significant improvement over the past year and gave evidence of still further improvement.

The most significant weaknesses of the Quality Programs audit function were checklist inadequacies, the failure of auditors to assess the effectiveness of various program elements, and inadequate audit program reviews. The greatest strength was in the positive attitude displayed by the auditors and corporate level managers to achieve the best program possible. Corrective action was proposed for the majority of weaknesses identified by the PAS inspectors by the end of the inspection.

Management controls in the area of quality assurance audits were considered to be average.

4. Design Changes and Modifications

The objective of this portion of the inspection was to determine the adequacy of management controls associated with engineering, design changes, and modifications.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls which may not have specific regulatory requirements but will provide the basis for subsequent performance evaluations.

(1) The Nuclear Operations Engineering Department procedures for processing, preparing instructions, review and approval for modifications and design changes were contained in a series of SREP's. Specifically the SREP's provided for the following.

- Safety Identification and Design Input Requirements
- Design Development
- Interface Design Control
- Design Verification
- Document Approval and Control
- Preparation and Control of Modification Approval Record (MAR)

The SREP's, were comprehensive and provided a good management tool for controlling Nuclear Operations Engineering performance. One exception was SREP-14, Quality Material Problem Report, revision 0, which provided for processing of quality material problem reports. This procedure did not include provisions for potential 10 CFR Part 21 items. (W) A licensee representative stated that this would be added to the procedure.

(2) Design changes and modifications were processed by means of Modification Approval Records (MAR's) in accordance with SREP-6, Preparation and Control of a Modification Approval Record, revision 1, and CP-114 Procedure and Preparation and Control of Permanent Modifications, Temporary Modifications, Deviations, and MAR Functional Test Procedures, revision 31. Design changes and modifications were initiated by either the plant technical staff, Nuclear Operations Engineering (NOE), Babcock and Wilcox (B&W), or the architect/engineer, Gilbert Associates (GAI). The proposed change was documented on a MAR. The concept for proposed changes was approved by the Plant Manager and forwarded to Nuclear Operations Engineering for preparation of the modification package. MAR packages normally contained procedures for accomplishment of the modification, applicable drawings and test requirements. MAR's were independently verified and approved by the NOE Department. The MAR package was subsequently sent to the plant for review and approval by the Technical

Specification Coordinator, Quality Control (QC), Plant Review Committee (PRC), and Plant Manager. A Nuclear Modification Specialist coordinated and tracked the MAR's.

Normally, major modifications were processed by GAI and reviewed and approved by NOE. Modifications initiated by B&W were processed, reviewed, and approved by NOE.

(3) 10 CFR 50.59 modification safety evaluations were performed for each MAR either by NOE or GAI. The safety evaluations were subsequently approved by the Nuclear Technical Specification Coordinator.

10 CFR 50.59 requires that the holder of a license authorizing operation of a production or utilization facility may make changes in the facility as described in the safety analysis report without prior commission approval unless the proposed change involves an unreviewed safety question. FSAR Figure 4-5 shows seven auxiliary feedwater lines to each steam generator. FSAR Paragraph 10.2.1.2 describes the emergency feedwater system including emergency feedwater head requirements. FSAR Paragraph 10.2.1.2 also indicates that emergency feedwater piping is designated to seismic category 1.

MAR 79-5-62A contained a modification safety evaluation that was prepared by NOE and approved by the Nuclear Technical Specification Coordinator. The modification involved removal and plugging of one of seven Emergency Feedwater (EF) system pipe runs between each EF and each Steam Generator. The modification safety evaluation indicated that B&W had advised NOE that "sufficient EF can be injected through 6 nozzles (rather than old 7)." No written confirmation from B&W was available. No documented NOE verification of this was available. (W)

These observations were discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(4) IE Bulletin 79-14 paragraph 4.a requires that nonconformances between the actual piping installation and the seismic analysis be evaluated for its effect upon system operability under specified earthquake loadings, and comply with the applicable statement in the TS. Paragraph 4D of Attachment 1 of Florida Power Corporation letter 3-0-3-a-3, September 12, 1979, to Director IE:RII regarding IE Bulletin 79-14 states that system modifications are forwarded to GAI for evaluation of its effects on seismic analysis. TS 3.7.1.2 states that two independent steam generator emergency feedwater flow paths shall be operable during modes 1, 2, and 3.

MAR M-79-5-62 showed that emergency feed piping to both steam generators were modified on July 15, 1980, but the effect on the seismic analysis of the system had not been reviewed. This MAR had not been sent to GAI for evaluations and re-analysis.

The plant was in operation between July, 1980 and February, 1981. The seismic analysis for the Emergency Feedwater system was not representative of the as-built system configuration. Operability of the emergency feedwater system during a seismic event had not been confirmed. (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(5) 10 CFR 50 Appendix "B" Criterion V, as amplified by the FSAR requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings.

MAR M-80-02-72B required pipe support EFH-64 to be modified in accordance with GAI drawing 32064. This drawing required the installation of a 12" square baseplate perpendicular to the pipe run and a 12" x 19" baseplate in line with the pipe. Drawing 32064 required bolt to bolt spacing of 8" for baseplate "D". It also required installation of grout under the baseplates.

Installation records for pipe support EFH 64 showed that the baseplates were reversed. The records also showed that minimum bolt spacing for baseplate "D" was 7-3/8 inches. The baseplates were grouted without a written procedure for grouting. There was no record of an engineering evaluation and acceptance of these conditions. (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(6) Review of MAR 80-2-72B revealed that concrete expansion anchors had been installed during a modification of pipe supports. Holes were drilled into existing concrete for installation of the expansion anchors. However, the site had no instructions available addressing the possibility of cutting re-enforcing bars during drilling of concrete, a relatively common occurrence. Guidance should have been provided for the identification, reporting, and evaluation of these conditions. (W)

(7) A majority of the modifications and design changes were accomplished by an on-site contractor, Catalytic Incorporated. Safety-related MAR's were reviewed by QC for identification of QC hold points. Modifications were inspected by QC at these hold points. Interviews revealed that periodic surveillances were also performed. QC and the Compliance Section QA group reviewed the completed MAR packages for proper documentation and completeness. (S)

b. Conclusion

The licensee established and implemented a program to control safety-related design changes and modifications. Management controls for two completed MAR's appeared inadequate. A review

of additional MAR's; however, did not indicate that this was a generic condition. Additional management attention appeared to be needed to ensure adequate 10 CFR 50.59 reviews and adequate maintenance procedures. The Nuclear Operations Engineering Department SREP's appeared to be an adequate management tool for control of the department's work.

The management controls associated with safety-related modifications and design changes were considered average.

5. Maintenance

The objective of this portion of the inspection was to determine the adequacy of the licensee's management controls associated with corrective and preventive maintenance activities.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls which may not have specific regulatory requirements but will provide the basis for subsequent performance evaluations.

(1) The Plant Manager was responsible for overall plant maintenance and reported directly to the Assistant Vice President, Nuclear Operations. The Maintenance Section was under the supervision of the Nuclear Maintenance Superintendent whose staff included a Maintenance Staff Engineer, Mechanical Supervisors, Electrical Supervisors, Technical Support Supervisor (Instrument and Control), Planning Engineer, planners, technicians, electricians, mechanics, and building servicemen. Neither the FSAR nor the TS reflected the present maintenance organization. The last revision to the FSAR was June, 1978; a proposed revision to the TS was in progress. (W)

(2) A contract labor force was maintained on site to augment the electrical section staff. During refueling and maintenance outages, contract labor was assigned to other departments. Additional maintenance workers were provided, when needed, from the fossil facilities' mobile maintenance crew. Typically, these additional maintenance personnel did not perform safety-related work.

The Maintenance Department had been reorganized in October, 1980. At the time of the inspection, the Department was understaffed by nine craftspersons. In addition, many personnel had limited experience in their new positions. The Maintenance Supervisor, for example, had two months experience; the Electrical Supervisor, one month; three Planners, an average of six months each. (W)

(3) Maintenance personnel met the requirements of ANSI N18.1-1971. Craftsmen and planners received General Employee Training. On-the-job training was accomplished for craftsmen by performing Preventive Maintenance (PM) as described in PM Procedures. (See observation (11) of this section).

Interviews indicated that an individual's ability to perform a given assignment was based solely on the subjective judgements of the supervisor, not the craftsperson's technical expertise. Craftspersons and planners received only limited technical training. (W)

(4) Morale appeared high in the Maintenance Department. Each section exhibited a competitive attitude. This positive attitude appeared to be the result of the attitudes and actions of the Plant Manager and Assistant Vice President. (S)

(5) All corrective maintenance was performed using Work Requests (WR's). Detailed instructions were provided in CP-113, Handling and Controlling Work Requests, revision 24, for preparation and disposition of WR's. WR's could be initiated by any member of the plant staff or any of the following mechanisms.

- Modification Approval Records (MAR's)
- Nonconformance Operations Reports (NCOR's)
- Material Disposition Forms (MDF's)

WR's were the only adequate maintenance history records in existence; other records were not adequately defined as maintenance histories, and were inconsistently collected and filed. Many WRs had deficient descriptions of cause, condition, or method of detection. (W)

Due to the overlap between WR's used to perform maintenance and their use as a corrective action system, there are several detailed observations given in Section 7 of this report pertaining to WR's.

(6) Quality Program Policy 16.1, Corrective Action and Action Items, revision 4, section 4.1(6), required that repetitive minor problems or defects symptomatic of larger problems be reviewed and considered for corrective action. Trending of single point or human induced failures and repetitive minor problems or defects identified on WR's was not accomplished. The most recent edition of the WR form described in CP-113 did not require the consideration of long-term corrective action to prevent recurrence. (W) Examples are given in observation 7.a(3).

(7) Quality control of maintenance activities was the responsibility of the QC group in the Nuclear QA/QC Compliance Section who reported to the Plant Manager.

Section 1.7.6.7.1.s of the FSAR committed the licensee to ANSI N18.7-1976. Paragraph 5.2.27 requires procedures to be followed. Procedure QC-200, Training and Qualification of Nuclear QA/QC Inspection Personnel, revision 0, paragraph 6.3.1, required upon completion of the QC training course, that the NQA/QC Compliance Manager and NQA/QC Compliance Supervisor determine the proper qualifications for QC personnel. These qualifications were to be documented on the Quality Control Personnel Qualification Certificate. Contrary to this, none of the four Quality Control inspectors had completed the training course delineated in QC-200, yet all were certified on August 5, 1980, to have been evaluated and qualified to perform the tasks of Quality Control Inspector. (W)

Additionally, QC-200 established requirements for QC training files to be maintained in the Nuclear QA/QC Compliance Manager's files. Contrary to this, the files were maintained in the Nuclear QA/QC Compliance Supervisor's office in a cabinet, which did not meet the requirements of ANSI N45.2.9. (W)

These observations were discussed with the licensee and presented to the Senior NRC Resident Inspector as potential enforcement findings.

(8) In accordance with CP-113, evaluation of WR's was normally accomplished by the Planning Section. Included in the evaluation were the determinations of whether the work was safety-related and required QC review. If either condition existed, the WR was forwarded to QC for concurrence. Section 6.0 of QC-1700, Review and Control of Quality Work Documentation, revision 1, required all work packages to be reviewed by QC prior to implementation. This review was to ensure the proper safety designation and the identification of hold points.

QC-1700 was in apparent contradiction to CP-113. There were several WR's examined in which QC was by-passed either because a safety determination had been made in error or the Planner had decided QC was not required. Interviews indicated that adequate training had not been provided to planners. (W)

This observation was discussed with the licensee and was presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(9) Completed records were required to be stored in accordance with ANSI N45.2.9-1974. Contrary to this, completed WR's and MAR's were held for extended periods of time in the QC inspector's trailer. CP-113 required QC to perform timely reviews of completed WR's. This was not being done. The records were filed in cardboard boxes or metal "in" baskets. (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(10) ANSI N18.7-1976 requires a PM program. AI-600, Conduct of Maintenance, revision 14, required the Maintenance Engineering Section to develop and implement a PM system. PM procedures had been developed, approved, and implemented; however, the program was inadequate. The Program had not been upgraded based on past equipment failures and was implemented differently by each maintenance section within the Maintenance Department. For example, the mechanical section performed visual inspections only, while the electrical section removed equipment from service and performed tests. There did not appear to be a strong commitment to PM. An excerpt from a PM document stated, "It should be pointed out that the PM system is not required in order to assure successful plant operation and, as such, the extent of implementation of the system is up to the discretion of the Maintenance Engineer and will depend on, for the most part, the magnitude of the existing work load." (W)

(11) AI-600, paragraph 1.12, required that excessive failure rates on individual components or high maintenance items be evaluated for possible replacement or modification. The Planning Section was required to review history files yearly and propose changes in the PM Program to the Maintenance Engineering Section. Contrary to this, interviews revealed that Planners had not performed yearly work history reviews (See observation (5) of this report section). (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(12) WR's were reviewed by the Performance Section for input to the Nuclear Power Reliability Data (NPRD) system; however, the information was not factored into the PM system. (W)

(13) A program was established for the control and calibration of measuring and test equipment. A computerized test equipment list, however, indicated there was a backlog of approximately 100 instruments due for calibration in addition to several instruments awaiting repair. Interviews revealed there were no permanant technicians assigned to the calibration laboratory. (W)

Another problem was that the standards calibration laboratory was located on the main turbine deck. The location was not conducive to handling delicate instruments due to the continual vibration present. (W)

(14) Controlled vendor manuals were found to be located in the vault library and instruction book library. Uncontrolled vendor manuals were located in the instrument repair shop and secondary standards laboratory. These appeared to be the ones used in the performance of maintenance. (W)

b. Conclusions

The program to control safety-related maintenance activities appeared to have numerous significant weaknesses. The Work Request system was inadequate in several areas including inadequate descriptions, trending, and corrective actions. Maintenance histories, other than Work Requests, were not adequately defined or controlled. Training for craftspersons, planners, and QC inspectors appeared weak. Uncontrolled vendor manuals were apparently used to perform maintenance. The PM Program was poorly defined, inconsistently applied, provided no feedback to a maintenance history, and did not reflect maintenance history, such as in changes due to equipment failures.

The reasons for these weaknesses appeared due in part to recent organization changes resulting in a significant lack of experience of supervisory personnel in maintenance, and being understaffed. It was also due to a lack of action by management. A Compliance Activity Review in October, 1980, revealed numerous problems with the PM program, but no action was taken. The Activity Review, in fact, recommended that no action be taken due to changes underway in the PM program. What those changes were, was not specified. The Quality Programs audits examined program implementation and not program adequacy, and thus to some extent was incapable of finding many of these weaknesses.

Based on the above, the management controls in the area of safety-related maintenance were considered below average.

6. Operations

The objective of this portion of the inspection was to determine the adequacy of management controls governing plant operation.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls which may not have specific regulatory requirements but will provide the basis for subsequent performance evaluations.

(1) The overall morale and attitude of licensee personnel, at both the plant staff and corporate levels, was strongly positive. Employees interviewed expressed effective support for company policies that gave first priority to safety. (S)

(2) The licensee had a current organization chart. Responsibilities, lines of authority, and communications were defined. Several significant organization changes during the previous 18 months appeared to have made the organization more effective. These changes included (1) the placement of almost all nuclear-related functions under a new Assistant Vice President, Nuclear Operations, and (2) the assignment of responsibility for most administrative and training matters

to other managers to permit the Nuclear Plant Manager to focus more directly on plant operation and maintenance. Organization changes appeared to have been documented in administrative directives in a timely and effective manner. The changes had generally been covered in TS change requests, although changes to the TS had not yet been issued.

One exception was TS Section 6.4, which states that the retraining and replacement training program and the fire protection program shall be maintained under the direction of the Plant Manager. Although these training functions were no longer the direct responsibility of the Plant Manager, TS change requests submitted to date apparently had not included a proposed change to TS Section 6.4. (W)

This observation was discussed with the licensee and referred to the Senior NRC Resident Inspector as a potential enforcement finding.

(3) AI's defined the qualifications and responsibilities of plant staff positions. Interviews showed that those assigned to these positions appeared to meet the required qualifications, and disclosed no problems in understanding their responsibilities. There was one exception. An interview with the individual assigned as Performance Engineering Supervisor indicated that he had less than seven years of power plant experience, compared to the eight years required by paragraph 7.2.2.1 of AI-200, Organization and Responsibility, revision 18. This paragraph also specified "advanced training in Nuclear Engineering, including studies in core analysis." The individual stated that his advanced training in Nuclear Engineering had consisted of a two-week B&W course. This did not appear to satisfy the intent of "advanced training in Nuclear Engineering". AI-200 did not provide for waivers by management from the specified requirements. (W)

(4) Observation of control room activities and interviews with operators revealed the following.

- Operators showed high morale and an attitude which was strongly supportive of safety and other company policies. (S)

- Although TS (per pending amendment) require two licensed Senior Reactor Operators (SRO's) and two licensed Reactor Operators (RO's) per shift, the licensee had adopted a position that a minimum of five licensed operators should be assigned to each shift. (S)

- Licensed operators were working a four-shift rotation, due in part to the company's policy of assigning five licensed operators per shift, although licensee management had authorized six shift crews. When combined with time

required for the operator requalification training program, this resulted in licensed personnel working considerable overtime. Several operators reported that they were awaiting replacements to accept off-shift positions elsewhere within the FPC organization. An apparent tendency toward attrition at the RO/SRO level (due to intra-company transfers) could become a problem if not addressed. (W)

One Nuclear Shift Supervisor (NSS) stated that he and the Assistant Nuclear Shift Supervisor (ANSS) did not normally have time to tour the plant. Although AI-500, Conduct of Operations, revision 39, indicated that the ANSS should tour the plant each shift, it appeared that this was not being accomplished. (W)

(5) Examination of the facility's AI's and CP's demonstrated an effective system of management controls over plant operation. Responsibilities and administrative processes were well defined and appeared to be understood and implemented. (S)

One exception was noted in the implementation of the facility's clearance (tag-out) procedure, CP-115, In-Plant Equipment Clearance and Switching Orders, revision 33. Section 5.10.2 of CP-115 stated, "Do not authorize any clearance that will place any part of both emergency core cooling system (ECCS) subsystems in an inoperable status." Examination of the Clearance Log and Clearance Orders 1-94 and 1-95 showed that the "Authorized by" block for clearances affecting both diesel generators had been signed at the same time on January 22, 1981. Concurrent inoperability of both diesel generators was not intended, and did not occur; the clearance for the "B" diesel generator was retained in the control room "hold" basket pending work on and restoration of the "A" diesel generator. However, the possibility of both diesel generators being inadvertently disabled at the same time was increased by the premature affixing of the authorization signature for the second unit. The "A" diesel generator was removed from and restored to service on January 23; however, the authorized but unexecuted clearance (1-95) for the "B" diesel generator had remained in the control room "hold" basket for more than a week. (W)

The observation regarding authorization of clearances for both diesel generators was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(6) Examination of the electrical panel in the control room showed both safeguards buses to be normally supplied from the Unit 3 startup transformer, with an alternate offsite feed from the Units 1/2 startup transformer. Section 3.8.1.1 of the TS specifies that "two physically independent circuits between the offsite transmission network and the onsite class 1E distribution system..." shall be operable at all times (except as allowed in action statements) in modes 1 through 4. Discussions

with operators and examination of surveillance procedures showed proper concern for operability of two independent offsite transmission lines. However, the licensee's interpretation of TS 3.8.1.1, as reflected in approved procedures (for example, Surveillance Procedure SP-321) was that either the Unit 3 or the Units 1/2 startup transformer satisfied the TS requirement. Examination of the clearance log showed that the feeder to the safeguards buses from the Units 1/2 startup transformer had been removed from service for approximately two hours on February 2, 1981. As a result of the incorrect interpretation of TS 3.8.1.1 requirements, the operability of remaining A.C. sources was not demonstrated within one hour as required by Action Statement a. of TS 3.8.1.1 (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(7) Examination showed distribution control for approved procedures to be effective. Of 31 procedure revisions selected from the master index, all had been filed in the control room working copies within one to four days after approval. (S)

(8) Control of temporary changes to operations-related procedures was found to be effective due to the small number of outstanding temporary changes. Examination showed that effective temporary changes were filed in front of the working copy of affected procedures, as required by AI-400, Plant Operating QA Manual Control Document, revision 28. Discussion with the Operations Superintendent and licensed operators indicated that no temporary changes were in effect for OP's, AP's (Abnormal Procedures), or EP's (Emergency Procedures). Temporary changes to surveillance and other procedures used by operations personnel were so few that some operators apparently knew without reference to an index which procedures were affected. This was attributed to a policy of issuing permanent procedure revisions whenever possible and limiting the lifetime of temporary changes. (S)

(9) Although the licensee's audit programs had identified a previous failure to perform required periodic reviews of approved procedures, examination of review records showed periodic reviews for late 1980 and early 1981 to be on schedule.

The only weakness noted was that refueling procedures were included in the two-year review cycle, although they were required by AI-400 to be reviewed prior to each refueling. No required reviews for these procedures had been missed, but the potential existed for this to happen. (W)

(10) Section 5.1 of CP-114 defined the term "jumper" as applying to "temporary modifications." While further definition of "temporary" was not given, review of the Jumper Record Index showed 21 jumpers to have been in place in excess of 6 months.

This situation represented considerable improvement compared to 1979, when enforcement action had been taken by Region II. Examination of CP-114 and outstanding Jumper Records did not indicate any safety problems with control of jumper placement or removal; however, an effective system for addressing jumpers that had been in place for an excessive period did not exist. (W)

b. Conclusions

Licensee personnel were found to have a safety-conscious attitude, good morale, and strong support for company policies. Organization and responsibilities were clearly defined in written documents, and individuals interviewed were found to understand their job requirements. The staff included adequate numbers of licensed operators and senior operators. The shift complement maintained an extra licensed operator over the TS requirements.

Several organization changes during the past 18 months had strengthened corporate and site management effectiveness. These organization changes had been incorporated into facility procedures. Technical Specifications did not yet reflect all of these changes, however, owing partly to delays in amendment issuance.

The licensee had implemented a clear and an effective written program for controlling plant operation. Exceptions included a misinterpretation of TS requirements regarding A.C. power supplies and improper authorization of a safety-related equipment clearance, a program to ensure timely elimination of jumpers. Distribution control for approved procedures and temporary changes was good.

Management controls in the area of plant operations were considered above average.

7. Corrective Action Systems

The objective of this portion of the inspection was to determine the adequacy of the licensee's management controls over the corrective action systems.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls which may not have specific regulatory requirements, but will provide the basis for subsequent performance evaluations.

(1) In the fall of 1980, the licensee streamlined the corrective action process at the plant site by eliminating the use of Work Requests as a corrective action system, a system to document a deficiency in a procedure, document, or equipment that renders the item inoperable or the quality of an item unacceptable. By this change, Work Requests were restricted principally to

maintenance activities as defined in the latest revision to CP-113. Nonconforming Operations Reports (NCOR's) were re-defined by an August, 1980, revision to CP-111, Procedure for Documenting, Reporting, and Reviewing Nonconforming Operations Reports, revision 16, as the means "by which all nonconforming occurrences are documented, evaluated for reportability, and reported to the plant management for disposition of corrective action." These "nonconforming occurrences" included defects; equipment failures; inadequate documentation; and deviations found in processes, inspections, and the conduct of procedures.

Interviews indicated that not all licensee personnel were fully aware of these changes in procedure and policy. Recent Work Requests, written after the described changes, were still found to report discrepant conditions with no apparent NCOR as backup documentation. (See observation (3) in this report section.) Several craftspersons interviewed indicated the Work Request was the only means available to document discrepancies found at the plant. Licensee representatives indicated that some training in the use of Work Requests and NCOR's was given to all licensee personnel through General Employee Training (GET). It appeared from interviews that an increase in both the initial GET and refresher training in these areas was warranted. (W)

(2) The procedures describing the use of NCOR's and Work Requests (CP-111 and CP-113) were comprehensive. They included sufficient detail to adequately describe the responsibilities of all plant personnel who had a role in the documentation of nonconformances or maintenance items. CP-111 stated as its purpose "the mechanism by which all nonconforming occurrences are documented...." This appeared misleading, however, since there were other mechanisms available to accomplish this objective. Examples were Quality Program audits, Compliance Section audits and activity reviews, Nonconformance and Corrective Action Reports (NCR's) by Quality Programs personnel, and Followup Reports (FUR's) by Chem-Rad personnel. (W)

(3) As mentioned in observation (1) of this report section, some recent Work Requests reported discrepant conditions that were apparently not backed up by NCOR's; and consequently, were not reviewed by the Plant Review Committee (PRC). When CP-113 was revised, a section of the Work Request form, entitled "Corrective Action," was removed. This section included blocks for the responsible superintendent's and Plant Manager's signatures. The following examples, therefore, appear to have received no reviews or evaluations commensurate with a nonconforming condition in accordance with plant procedures. (W)

(a) Work Request 20957, written in January, 1981, reported corrosion had caused a one-half inch gap between the flow divider and the tube sheet of salt water heat exchanger 1B, the tube side of which is safety related. Repairs were made using this Work Request.

(b) Work Request 20729, written in December, 1980, reported a malfunctioning relay in the reactor building pressure sensing channel. The relay was removed. tested, and replaced using this Work Request.

(4) Some Work Requests written under the earlier revision of CP-113 were found deficient in their handling of nonconforming items. Several of these involved safety-related malfunctions or deteriorating conditions that appeared to meet the licensee's guidelines for an NCOR, but were not marked as discrepancies and did not have associated NCOR's or review by the PRC. An example was Work Request 15934 which reported a burned-out relay coil in a safety related engineering safeguards relay cabinet. No corrective action was reported to investigate, determine the cause, or prevent a recurrence. (W)

(5) Work Requests written under either the previous revision of CP-113 or the new revision were not trended, catalogued, or reviewed for generic considerations. This was considered a significant weakness. The principal means of recalling past maintenance problems or discrepancies involving Work Requests appeared to be personal memory. (W)

(6) Numerous Work Requests described "found" conditions with vague and undefined terms. Typical were those reporting "excessive leakage" on a safety related pump seal or valve packing. There were no NCOR's written on any of these Work Requests, but perhaps there should have been. What is excessive? Is it a generic problem? Has it occurred previously? These questions were neither asked nor answered on a Work Request. The NCOR form provided the only document where such an evaluation was considered. The inadequate descriptions allowed on Work Requests was considered a weakness in the licensee's program. (W)

(7) Contrary to CP-113, it appeared that some safety-related work was performed without the use of Work Requests. Interviews with various plant personnel indicated that this was not uncommon.

Work Request 19687 provided authorization and instructions to adjust the lift set point on a main steam safety relief valve (MSV-33) that had lifted following a reactor trip on September 30, 1980. The data sheet for surveillance procedure SP-650, Main Steam Code Safety Valves Test, revision 2, revealed the work was performed and inspected on September 30, 1980. There was no entry in either the Operator's Log or the Shift Supervisor's Logbook to indicate that such work was required, authorized, or in progress at any time. Work Request 19687 was dated October 1, 1980, by the originator and October 2, 1980, by the Shift Supervisor authorizing the work to be performed - two days after its completion. (W)

This observation was discussed with the licensee and was presented to the Senior NRC Resident Inspector as a potential enforcement finding.

There was also evidence that fuses had been replaced in engineering safeguards buses without Work Requests. The practice of replacing components in electrical panels, troubleshooting electrical or mechanical problems, or doing work of an emergency nature without a Work Request was not addressed in any licensee procedure. (W)

(8) Observations similar to those made on Work Requests were equally applicable to NCOR's. A significant weakness in this program was that NCOR's were not adequately trended for repetitive or generic problems. (W)

The Compliance Section, under the Plant Manager, maintained a complete file of all NCOR's categorized by year, closed or open, and reportable or nonreportable. They also tracked commitments made on NCOR's on a Corrective Action Tracking List. This listed such items as the date when a corrective action was due for completion by the Maintenance Department, for example. The list was computer generated and contained numerous commitments by licensee personnel. It was printed every two weeks and distributed to the responsible individuals with outstanding commitments. The Corrective Action Tracking List appeared to be a very effective document, but it did not serve to trend or evaluate NCOR's (See observation (12) in this report section).

CP-111 instructed the Nuclear Operations's Technical Advisors (NOTA's) to complete the section of the NCOR form entitled "Event Evaluation Summary," which included a subsection entitled "Failure History/Previous Occurrence Review."

> "The NOTA shall thoroughly investigate the backgound and conditions surrounding the subject NCOR and document the investigation results on the NCOR and additional attachments to the NCOR where necessary... This should include product history, operating history, maintenance history, and evaluation and effectiveness of previous activities on the identified nonconformance."

To assist the NOTA in performing the above tasks, an "NCOR Evaluation Sheet" was developed in February, 1981. This sheet listed several questions that the NOTA's should ask for all NCOR's, such as "Did this NCOR involve....a plant transient? ...a concern which could be generic in its scope?...Is this a repetitive failure?"

The Event Evaluation Summary and NCOR Evaluation Sheet were an apparent attempt to trend NCOR's, but proved inadequate. The only method available for a NOTA to obtain failure history information was to personally examine all previous NCOR's for each new NCOR written. According to a licensee representative 1626 NCOR's had been written from issuance of the operating license, in 1976, through 1980. The 1980 closed, nonreportable NCOR's alone filled three, three inch binders. Interviews and records indicated failure history analysis was marginal. (W)

The NOTA's possessed a NCOR Summary which was intended as a trending and tracking log for all NCOR's from the commencement of plant operations in 1976. It listed each NCOR number, event date, a system code, a cause code, component description, operational mode at time of occurrence, LER number and type, closure date, synopsis of the event, and associated Work Request number. For 1980, virtually all entries in the Summary were blank; the Summary had not been maintained current. (W)

A licensee representative stated that a computer tracking program for all NCOR's and LER's was planned for completion within a few months. This program would initially cover only those NCOR's as far back as 1979. The program would be able to recall NCOR's by the following: NCOR number, affected system, component tag number, and reportability requirement (if applicable). As planned, this system appeared that it would do much to make the NCOR a more useful and meaningful document.

(9) Some of the observations on NCOR's can best be described by the following examples.

(a) NCOR 80-248, September 30, 1980, reported that a main steam safety relief valve (MSV-33) failed to reseat properly following a reactor trip.

- There was no direct indication as to whether the valve was considered operable or inoperable. The main steam header pressure was maintained below 980 psig to prevent lifting the safety until a surveillance procedure could be performed to reset the valves's lift setpoint.

- If considered inoperable, no LER was issued as required by TS 6.9.1.8.i; and the NCOR gave no information on the time the action statement required by TS 3.1.1 (inoperable MSV) was entered or left.

- The Work Request authorizing the resetting of the valve was signed two days after the work was performed (see observation (7) in this report section).

- The allowable blowdown or reseating pressure of the valve was not listed on the NCOR, the Work Request, or the surveillance procedure. (W)

(b) NCOR 80-286, November 3, 1980, indicated that a non-Q relay coil had been used to replace a failed Q coil in an engineering safeguards cabinet. The relay coil was not identified by name or part number. (W)

(c) NCOR 80-245, September 23, 1980, reported that a 15 amp fuse failed, resulting in a trip circuit actuation of RB-2 on ES matrix 'B' (an engineered safeguards feature). On October 16, 1980, NCOR 80-271 reported that "a fuse in Channel RB-2 blew..."

- There was no indication that Work Requests were used to document replacing the fuses.
- NCOR 80-271 indicated that the failed fuse was apparently due to a failed relay. Neither fuse nor relay were identified by component number or specific name.
- The "failure history/previous occurrence review" section of NCOR 80-271 stated "first reportable occurrence of this type," which may not have been inaccurate, but was certainly incomplete and misleading without referencing the occurrence less than a month earlier. (W)

(10) In the Event Evaluation Summary of the majority of NCOR's examined, the "Corrective Action" portion was completed with "N/A" (not applicable) or contained remedial action statements such as "calibrated temperature indicators" or "cleaned orifice and calibrated." On many of those examined that had the corrective action completed the section for "remedial action" was marked "N/A". Few of the NCORs examined had written corrective action which specified actions to prevent recurrence. CP-111 instructed the Compliance Section in paragraph 5.5.4 to "review the Event Evaluation Summary for completeness..." The quality of this review was found to be inadequate. The records indicated that the PRC had reviewed all NCOR's; however, judging from the NCOR documents above, it appeared the PRC review was a token review and not effective. (W)

At the end of the third quarter for 1980, Compliance reported to plant management only ten NCOR's in an "open" status. Considering an average of over 400 NCOR's written per year, this number of open NCOR's appeared to reflect a considerable effort to close out NCOR's and a very efficient corrective action system. The NCOR's examined, however, suggested this low number of open NCOR's may have been due to ineffective or incomplete corrective action, hastily performed to reduce the NCOR backlog. (W)

(11) The Training Department was not on the distribution for NCOR copies, and there appeared to be no effective mechanism to incorporate lessons learned from NCOR's into any training program. (W)

(12) Trending on LER's was limited. They were categorized by TS reference only, not by affected system, type of failure, component number, or any other cross-referencing method. This TS trending had definite disadvantages. An LER reporting a problem with a leaking valve could be listed under the TS reference for valve operability. A second identical LER could be trended under the TS reference for leakage rate allowance. This actually occurred and was discovered by a licensee representative. A different type of cross-referencing problem was also evident. A valve failure in mode 5 would not necessarily result in an LER if the valve was not required to be operable in that mode. In another mode, when the valve was required, an LER would be written, but the two separate failures would not be connected through this trending method. (W) The proposed computer tracking program for NCOR's and LER's, referenced in observation (8) in this section, was intended to alleviate these weaknesses.

(13) Nonconforming and Corrective Action Reports (NCR's) were utilized as a corrective action system to escalate QP audit or surveillance findings in order to elicit greater management attention when the findings had not been resolved in a timely manner. There were several concerns associated with the use of NCR's.

The NCR was apparently the only documented means available to escalate an internal corrective action problem; and it appeared limited in scope, dealing only with Quality Programs audits and surveillance findings. There was no written mechanism to escalate problems with repetitive NCOR's, for instance, or in dealing with repeat quality programs violators. (W)

Until recently, the threshold for issuing an NCR was extremely high. In four years of commercial operation, only nine NCR's had ever been issued. The licensee's policy was to issue an NCR only when a new resolution date for corrective actions could not be mutually agreed upon by the audited organization and Quality Programs personnel. There were, therefore, few justifications for a written NCR. The threshold showed recent signs of being lowered; nearly half of all the NCR's written (four out of nine) were issued since Decmeber 31, 1980, three of them during the PAS inspection.

Another problem that appeared to be largely due to an administrative oversight was that recent NCR's were not distributed directly to the Senior Vice President, Engineering and Construction, and the Vice President, Nuclear Operations. Both individuals stated they were receiving the reports from other sources such as the NGRC or Plant Manager. During the inspection, a licensee representative changed the NCR cover letter format to include those individuals in the permanent distribution. QP 15.53, Documentation and Control of QP Nonconformances During Operations Phase - Power Production Department Actions, revision 2, did not list distribution requirements. (W)

(14) The Corrective Action Tracking List maintained by the Compliance Section listed commitments made by any licensee representative to the following documents or activities: Quality Program audits and surveillances; Compliance audits; NRC Bulletins, Circulars, and Information Notices; NRC items of noncompliance, unresolved items, and inspector followup items; NCOR's; LER's; HP Appraisal concerns; NRC correspondence; Unusual Operating Event Reports (UOER's); and the Nuclear Procurement Task Force.

In addition to the type of commitments listed the computer program contained the responsible individual, the commitment date, and a remarks section used to report status. The computerized list was generated every two weeks and sent to each responsible manager who had outstanding commitments. (S)

(15) There was no current, comprehensive list of regulatory documents and correspondence to which the licensee was committed. Interviews revealed that many members on the licensee's staff were unsure as to which documents they were actually committed and those they followed in principle only. An example was ANSI N45.2.12 on quality assurance auditing.

Some Quality Programs auditors interviewed were sure that the standard was used as a guide but didn't know that the licensee was committed to it. An NGRC member responsible for reviewing the QP audit program responded to an interview question that he did not know if the licensee was committed to the provisions of ANSI N45.2.12. Some auditors and licensee supervisory personnel did not know to which revision of ANSI N18.7 they were committed, 1971 or 1976. Many persons interviewed on this subject were not aware of their commitment to ANSI N45.2.9-1974 for management of plant operating records.

Those interviewed cited paragraph 1.7.6.7.1.s. of the FSAR as the effective list of commitments. This proved to be inadequate, however, for several reasons. It was over two and one-half years old (June 30, 1978), and not a complete list. It did not contain all of the commitments referenced in the Quality Programs Manual, Regulatory Guide 1.30, 1972, for instance. Some of the referenced "daughter" documents in ANSI N18.7-1976 were listed; others were not. This appeared misleading.

In September, 1978, Southern Science Applications, Incorporated, issued for Florida Power Corporation a "Nuclear Quality Assurance Program Summary" listing some commitments and cross-referencing between sections of the FSAR, ANSI N18.7-1976, Quality Programs Manual, and selected plant procedures. This Summary was a useful document, but like the FSAR section refererenced in the foregoing paragraph, it was not current and not complete.

Quality Programs maintained an Audit Planning Matrix that listed scheduled audit titles versus the ANSI N18.7-1976 referenced "daughter" documents. This served to demonstrate those ANSI N18.7-1976 documents that were affected in some way by the audit program. This "matrix" was not a complete list of commitments, nor was it intended to be.

The above listed documents were the only ones made known to the PAS inspectors listing commitments or cross-referencing commitments to licensee documents and procedures. Absence of such a list and cross-reference was considered a significant weakness. (W)

(16) Although not a corrective action system, the licensee effectively utilized several methods to exchange information with utilities and nuclear suppliers concerning generic problems. Four of these methods are described as follows. (S)

(a) TAP - Transient Analysis Program. This was a system sponsered by B&W that was developed in the summer and fall of 1980 to provide improved information flow in the form of concise, written reports on lessons learned from operating plant experience. Of primary concern in this program were operating transients involving the NSS, steam system, or condensate/feedwater systems. The reports generated by this program had wide distribution at Crystal River, including the Nuclear Plant Training Manager for incorporation into the training program.

(b) SEE-IN - Significant Event Evaluation and Information Network. This was a program sponsered jointly by the Institute of Nuclear Power Operations (INPO) and the Nuclear Safety Analysis Center (NSAC) of EPRI. This program screened the LER's generated by all nuclear power plants in the nation, selected the most significant of these, and generated Significant Operating Event Reports. These were received by the licensee, as the TAP reports were, and distributed to various company persons including Training.

(c) NOTEPAD - This program was part of the INPO/NSAC information sharing network. It was a telecommunications system utilizing telephone/typewriter terminals to which information on LER's, significant events, NRC rulings, and numerous other issues were voluntarily submitted and received by the participating organizations.

(d) Other reports from INPO and NSAC on various generic issues which did not fall into one of the preceding categories were also periodically received by the licensee.

b. Conclusions

The management controls for corrective action systems exhibited numerous significant weaknesses. Both work requests and NCORs were found to be inadequately trended, not reviewed for their generic implications, poorly tracked and followed up, contained descriptions that lacked detail, received token reviews, and contained corrective action proposals that seldom specified actions to prevent recurrence. Work Requests that reported discrepant conditions were not considered a part of the corrective action system, and these items were not followed up by a corrective action system as required. Some work had been performed without a Work Request. Failure history analysis was cumbersome using the existing system, and therefore, was seldom accomplished. NCR's had historically been used in very limited situations, and had not been an effective system; although, this showed recent signs of improving. LER's received only limited trending. Aside from corrective actions, another weakness was the lack of a current, comprehensive list of regulatory commitments.

There were some strengths. The most signficant was a computer generated Corrective Action Tracking List for commitments and followup requirements of senior plant personnel. Another was the use and distribution of industry provided information exchange systems. Several improvements were planned, most notable of which was the proposed computer tracking of all LER's and NCOR's.

Based on the inspection findings, the management controls in this area were considered below average.

8. Training

The objective of this portion of the inspection was to determine the adequacy of management controls in the area of training.

a. Observations

The following observations include the perceived strengths and weaknesses in the licensee's management controls which may not have specified regulatory requirements but will provide the basis for subsequent performance evaluations.

(1) Licensed Training

(a) Quality Program Policy Statements, approved by the Senior Vice President for Engineering and Construction and issued by the Director of Quality Programs, provided the organization structure for the Nuclear Operations Department and functional responsibilities for the quality program. The Nuclear Operations Training Manager position was described and its functional responsibilities outlined. In addition, the Vice President for Engineering and Construction issued a memorandum on December 13, 1979, to the Assistant

Vice President for Power Production to provide a policy for the nuclear plant training program and emphasized the commitment for meeting the training needs of the plant staff and all activities affecting safety. This corporate policy statement on training resulted from the Nuclear General Review Committee (NGRC) actions that were based on a QP audit (QP-176) of the training program conducted during August 16-21, 1979. Six Audit Finding Reports AFR's) were issued, four on licensed training. The audit conclusion was that training manpower was insufficient.

Prior to issuance of the December 13, 1979, memorandum, the Training Department consisted of a Training Supervisor, three Training Specialist positions (one was vacant), and a Training Records Clerk. At this time the Training Supervisor reported to the Administrative Supervisor and the Nuclear Plant Manager. The Training Department was strengthened during 1980; however, the QP Audit (QP-196) conducted in August, 1980, indicated continuing weaknesses in the training program. Subsequently. a new Nuclear Operations Training Department was established, with the Manager reporting directly to the Assistant Vice President, Nuclear Operations. (S)

(b) MI-02, Organization and Responsibilities, revision 0, described the Nuclear Operations Training Department organization and responsibilities. AI-200 described a training section and a Nuclear Plant Training Manager position that was part of the plant staff. The AI-200 description was not in accordance with policy statement 1.1 and MI-02. AI-200 had not been revised to reflect the current organization structure. (W)

(c) The Training Manager, located at the plant site, was responsible for developing and maintaining an effective training program to meet the training needs of all nuclear operations employees. The Training Department staff had increased from four members during August, 1979, to seventeen members at the time of the inspection. There were plans for an additional instructor to be added to the staff. The training staff, at the time of the inspection, consisted of a Manager, an Operations Training Supervisor, a Technical Training Supervisor, a Training Specialist, and a Training Records Clerk. Each supervisor (Operations and Technical) was responsible for six instructors. The Manager, both Supervisors, and the Training Specialist were licensed Senior Reactor Operators. Additionally, five of the instructors reporting to the Operations Training Supervisor were licensed Senior Reactor Operators. (S)

Requalification training, to meet the requirements of 10 CFR 55 and ANS 3.1, was the responsibility of a licensed instructor. Replacement Operator Training, for personnel to obtain an NRC operator's license, was conducted by four licensed instructors. The one non-licensed instructor, under the Operations Training Supervisor, was for Non-licensed Operator Training of CR-3 personnel, as needed, to allow them to progress to Replacement Operator Training. This training was also utilized for other non-licensed personnel for knowledge of plant operations.

(d) Records of training for individuals were maintained by the Training Department. Completed records were not stored as specified by AI-1400, Conduct of Training, revision 4, or in accordance with ANSI N45.2.9-1974. (W)

This observation was discussed with the licensee and presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(e) The Modified Amended Security Plan, Chapter 1.3.2.2, states, "All personnel before being allowed unescorted access shall be given a security briefing. Personnel requiring unescorted access will be rebriefed on these security subjects on an annual basis." AI-1400, incorporated this requirement in the General Employee Training program.

The review of licensed operator training records revealed that licensed personnel had not received General Employee Training (GET); and therefore, had not received the security briefings as required. (W)

This observation was discussed with the licensee and was presented to the Senior NRC Resident Inspector as a potential enforcement finding.

(2) Non-licensed Training

(a) AI-1400 described the General Employee Training (GET) program for the plant staff and other personnel requiring unescorted access. Other than GET, training requirements for non-licensed personnel were limited in scope. For example, courses for systems familiarization, and codes and standards were minimal. Systems training for the month of February was made available to only eight non-licensed people from the plant staff. (W)

(b) Craft personnel received on-the-job training in addition to GET. On-the-job training was informally controlled by each craft supervisor. MP-601, On-the-Job Training of Maintenance Shop Personnel, revision 0, described minimal on-the-job training requirements. It did not outline objectives, methodology, or acceptance levels. (W)

(c) Training records were maintained by the Nuclear Operations Training Department. A checklist of the training completed by plant staff individuals was sent to the plants files. This was not a documented training record; it did not indicate the course content, instructor, or grade received. The checklist was not current; for example, it showed that one senior staff member had not received training on Emergency Procedures, Radiation Health, and Industrial Safety. The Nuclear Operations Department had records that showed that training for this individual had been performed. The Nuclear Operations Training Department records were not stored in accordance with ANSI N45.2.9-1974 requirements. (W)

(d) A review of other areas in this inspection revealed several weaknesses in non-licensed training. Observation 9.a(10) describes inadequacies that existed in the training of guard force personnel. Training for QP auditors, beyond initial certification, as indicated in observation 3.a(5), was virtually non-existent. The need for training of personnel in the use of NCOR's and Work Requests was indicated. Technical training of various craftspersons needed to be increased. The inspection team concluded that the issue of non-licensed training for each of the areas inspected and for the various personnel groups extensively interviewed should be given management attention. (W)

c. Conclusions

(1) Licensed Training

Corporate management was supportive of the nuclear training function for licensed personnel. The Nuclear Training Manager had the confidence and support of the corporate managers. Communications between corporate management and site management appeared adequate. The recent growth of the Nuclear Training Department reflected the licensee's commitment to the training function.

Weaknesses existed in meeting ANSI N45.2.9-1974 records storage requirements and the absence of security briefings for licensed personnel.

Based on the foregoing, management controls over licensed training were considered average.

(2) Non-licensed Training

The training program did not adequately provide for non-licensed training. The weaknesses in this program were generic throughout the FPC organization. The initial GET was limited in scope, and there was little additional training by FPC management to supplement the GET. Non-licensed training was frequently controlled informally, as were training records.

Management controls over non-licensed training were considered below average.

9. Physical Protection

The information in this section is exempt from public disclosure in accordance with 10 CFR 2.790(d). This section is included as Attachment A to this report.

10. Management Exit Interview

Exit meetings were conducted on February 13, and February 27, 1981 at the Crystal River Nuclear Plant with licensee representatives (denoted in Attachment B). The method of handling the appraisal report and significant observations were discussed. The Team Leader indicated that the inspection was continuing with data review and analysis in the IE Regional Offices by the team members.

Attachment B

A. Persons Contacted

The following lists (by title) the individuals contacted during this inspection. The table to the right of the listing indicates the areas (the numbers correspond to paragraph numbers in the report) for which that individual provided significant input. Other individuals were also contacted during the inspection including technical and administrative personnel.

Title of Individual	2	3	4	5	6	7	8	9
Corporate Office								
President	X	X			X	X		
#Senior Vice President, Engineering and Construction	X	X	X		X	X	X	
*#Chairman NGRC	X	X	X			X	X	X
#Director, Quality Programs	X	X	X	X	X	X	X	X
Manager, Nuclear Support Services	X		X		X		X	X
Manager, Nuclear Engineering			X				X	
#Manager, Quality Audits and Engineering		X	X			X	X	X
Manager, Surveillance and Program Development		X	X			X	X	X
Vice President, Administrative Services							X	X
Director, Safety and Security							X	X
Corporate Security Specialist							X	X
Senior Nuclear Licensing Engineer					X		X	X
Nuclear Licensing Supervisor							X	X
Manager, Vendor Quality Assurance			X					
Mechanical Engineer (2)			X				X	
Electrical Engineer			X				X	
Senior Quality Auditor (2)		X				X		
Quality Engineer (2)		X				X		
Director, Environmental Licensing Affairs	X							
Director, Generation Projects	X	X	X			X		
Supervisor, Material Technology	X							
Principal Electrical Engineer	X							
Project Manager	X	X	X			X		
Site								
#Assistant Vice President, Nuclear Operations	X	X	X	X	X	X	X	
*#Nuclear Plant Manager	X	X	X	X	X	X	X	X

Site (Continued	2	3	4	5	6	7	8	9
Manager, Nuclear Operations Administration			X		X		X	
Manager, Nuclear Operations Training			X	X			X	X
Technical Assistant to Nuclear Plant Manager	X	X	X		X	X	X	
*#Nuclear Technical Services Superintendent	X	X	X		X	X	X	
*#Nuclear Operations Superintendent	X	X	X		X	X	X	X
Nuclear Maintenance Superintendent	X	X	X	X		X	X	
*#Nuclear QA/QC Compliance Manager	X	X		X	X	X	X	X
Mechanical Supervisor			X	X			X	
Electrical Supervisor			X	X			X	
#Nuclear QA/QC Supervisor		X	X	X		X	X	
Quality Program Site Supervisor		X	X			X	X	
Nuclear Shift Supervisor (3)		X	X	X	X	X	X	
Nuclear Operator (4)		X	X	X	X	X	X	
Assistant Nuclear Shift Supervisor					X		X	
Chief Nuclear Operator (2)		X			X	X	X	
Assistant Nuclear Auxiliary Operator					X		X	
Management Specialist	X				X			
*#Nuclear Operations Engineer	X			X	X			
#Document Control/Records Management Supervisor					X			
Nuclear Operations Training Supervisor					X		X	
Procedure Specialist					X			
*Chemical/Radiation Protection Manager	X							
Nuclear Technical Support Engineer	X				X			
Nuclear Technical Specifications Coordinator					X	X		
Performance Engineering Supervisor		X		X	X	X		
Electrician			X	X		X	X	
Technical Training Supervisor							X	
Mechanic (3)		X		X		X	X	
Fire Brigade Chief							X	
*Maintenance Engineer (3)				X				
Planning Engineer				X				
Planning Coordinators (3)								
Technical Support Technician (3)				X			X	
Nuclear Plant Health Physicist				X				
QA/QC Inspector (2)				X			X	
Surveillance Program Clerk				X				
*#Acting Nuclear QA/QC Compliance Supervisor	X	X	X	X	X	X	X	X
*#QA/QC Compliance Auditor (3)		X				X	X	X
Security Officer							X	X
#Officer of the Guard							X	X
Senior Quality Auditor (2)		X	X			X		
Nuclear Technical Support Supervisor			X	X			X	

Site (Continued)	2	3	4	5	6	7	8	9
Nuclear Modifications Specialist			X					
Contractor Personnel								
Pinkerton								
Vice President, Southeast Region							X	X
Manager, Tampa Office							X	X
Supervisor, Site Security							X	X
Administrative Aide							X	X
Lieutenant (5)							X	X
Sargeants (5)							X	X
Guards (6)							X	X
Watchman							X	X
B&W								
Site Representative			X					
Catalytic								
Site Manager			X				X	
Electrical Engineer			X					
Mechanical Engineer			X					

*Attended meeting on February 13, 1981
#Attended meeting on February 27, 1981

B. Documents Reviewed

The following lists those documents reviewed by the inspection team members to the extent necessary to satisfy the inspection objectives stated in Stecion 1 of the report. Those specific procedures and instructions referenced in the report are listed by title and revision number where they first appear.

(1) Technical Specification (TS), Section 6.0, Administrative Controls
(2) TS Section 3/4.8.1, Electrical Power Systems - AC Sources
(3) Final Safety Analysis Report (FSAR)
(4) NGRC Charter, revision 3
(5) NGRC Organization Chart, revised Nobember 30, 1979
(6) Selected PRC Meeting Minutes for 1980 and 1981
(7) Selected NGRC Meeting Minutes for 1980 and 1981
(8) NRGC Member appointment documents and qualification records
(9) NGRC Manual of Operations
(10) Quality Program Policy Statements
(11) Quality Programs Administrative Procedures (QAP's)
(12) Quality Program Procedures (QP's)
(13) Quality Control Procedures (QC's)
(14) Management Instructions (MI's)

(15) Compliance Procedures (CP's)
(16) Administrative Instruction (AI's)
(17) Training Instructions (TI's)
(18) Document Control Procedures (DC's)
(19) Safety Related Engineering Procedures (SREP's)
(20) Chemistry and Radiation Protection Procedures (RP's)
(21) Site Security Procedures (SS's)
(22) Emergency Plan Procedure (EM's)
(23) Maintenance Procedures (MP's)
(24) Preventive Maintenance Procedures (PM's)
(25) Surveillance Procedures (SP's)
(26) Selected Work Requests (WR's) and MAR's for 1980 and 1981
(27) Position descriptions for various corporate and site licensee personnel
(28) Nuclear Quality Assurance Program Summary, September 1, 1978
(29) Nuclear QA/QC Compliance Audit Reports
- 80-1, Housekeeping, January, 1980
- 80-2, Review of Plant Operating Quality Assurance Manual, January, 1980
- 80-8, Maintenance of Manufacturer's Manuals, May, 1980
- 80-13, Plant Startup and Power Operations Procedures, October, 1980
- 80-15, Master Surveillance Plan, October, 1980
- 80-16, Retraining Non-licensed Craft Personnel, December, 1980

(30) Nuclear QA/QC Compliance Activity Reviews
- 80-28, July 3, 1980
- 80-30, August 26, 1980
- 80-31, September 26, 1980
- 80-32, October 3, 1980
- 80-34, October 27, 1980
- 81-01, January 14, 1981
- 81-02, January 14, 1981
- 81-03, January 19, 1981
- 81-05, January 23, 1981
- 81-06, January 22, 1981
- 81-08, February 2, 1981
- 81-09, February 9, 1981

(31) QP Audit Reports
- QP-163, November - December, 1978
- QP-168, May, 1979
- QP-176, Training, August, 1979
- QP-178, Inspection and Maintenance Activities, November, 1979
- QP-184, Nonconformance Control and Corrective Action, December, 1979
- QP-191, June, 1980
- QP-193, Results of Actions to Correct Deficiencies, June, 1980
- QP-194, Conformance to Technical Specifications and Applicable License Conditions, July, 1980
- QP-195, Fire Protection, August, 1980
- QP-196, Personnel Training and Qualification, August, 1980
- QP-198, Radioactive Waste Management, Transportation and Packaging, and Radiation Safety, August - September, 1980

- QP-202, Nonconformance Control and Corrective Action, December, 1980
- QP-203, Results of Actions to Correct Deficiencies, December, 1980
- QP-204, Radiation and Chemical-Radiochemical Control, January, 1981

(32) QP Activity Report 80-SQPD-004, August 8, 1980
(33) Audit of FPC QA Program for Nuclear Operations, November 20, 1980
(34) Audit Status Report for January, 1981
(35) Memorandum to the Quality Programs staff from Q. B. Du Bois, Department Training and Procedure/Policy Reviews, February 4, 1981
(36) Jumper Records (all outstanding jumpers)
(37) Shift Work Schedules, weeks of February 23 and March 2, 1980
(38) Clearance Log, November, 1980, through February 25, 1981
(39) Nuclear Shift Supervisor Turnover Sheets, February 26, 1981
(40) Control Center Equipment Status Board, February 26, 1981
(41) Selected Nonconformance Operating Reports (NCOR's) for 1980 and 1981
(42) NCOR/LER Index (a log of NCOR's and LER's)
(43) NCOR Summary (a log of NCOR's)
(44) Nonconformance and Corrective Action Report (NCR) Log
(45) Selected NCR's for 1979, 1980, and 1981
(46) Operator's log
(47) Shift Supervisor's Logbook
(48) Selected LER's for 1980 and 1981
(49) Unusual Operating Event Report (UOER) 80-11
(50) Corrective Action Tracking LIst (Compliance Section)
(51) Training Objectives, Schedules and Records
(52) Nuclear Power Station Security Plan Evaluation Report
(53) Nuclear Power Plant Modified Amended Security Plan, revision 2, effective November 10, 1978
(54) Nuclear Plant Security Training and Qualification Plan, submitted August 16, 1979
(55) Nuclear Plant Security Safeguards Contingency Plan, submitted March 22, 1979
(56) Nuclear Quality Assurance Program Summary, September, 1978
(57) QP Audit Planning Matrix