

7/16/85

LOUISIANA POWER & LIGHT COMPANY

WATERFORD SES, UNIT NO. 3

RESPONSE TO NOTICE OF VIOLATION

AND

PROPOSED IMPOSITION OF CIVIL PENALTIES

EA 85 - 10

DOCKET NO. 50 - 382

LICENSE NPF - 38

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EXECUTIVE SUMMARY

On May 24, 1985, the Nuclear Regulatory Commission (NRC) issued Enforcement Package EA 85-10 which contained a Notice of Violation and Proposed Imposition of Civil Penalties in the amount of One Hundred Thirty-Thousand Dollars (\$130,000). The cumulative violations were categorized as Severity Level III in accordance with 10 CFR 2, Appendix C. The Civil Penalty monetary value was derived by assessing an equal fine of \$10,000 for each of the 13 violations. EA 85-10 provided for a response time of 60 days, due July 22, 1985.

This document constitutes the LP&L response to EA 85-10. The response is divided into five sections and is outlined in the enclosed Section A and B. Many of the responses to the cited violations provided herewith are similar to those made to other NRC correspondence, including IE Reports 50-382/84-07, 50-382/84-34 and the 23 Prelicensing Assessment Issues.

* * * * *

The NRC enforcement package cover letter expressed the concern that perceived Construction QA Program weaknesses may be carried over into operations. LP&L feels that two significant points are pertinent to this concern.

First, the overall management approach taken to develop and carry out the QA Program was considerably different for construction when compared to operations. During construction, LP&L approved the Ebasco QA Program, and Ebasco approved all other contractor QA Programs. Most functional QA requirements were delegated to these contractors, while LP&L maintained a management overview using audits and reviews. Since 1979, the percentage of QA functional requirements carried out by LP&L has increased because of completed plant construction. During this period the Operational QA Program was developed and implemented as a separate and distinct entity. The QA program description was changed or upgraded to accommodate organizational and programmatic changes consistent with the protection of public health and safety. Secondly, very few changes to the Operations QA Program were required as a result of Construction QA Program concerns because of the unique differences in the programs and the fact that needed elements were already in place and functioning properly. Changes developed by LP&L management to enhance the Quality Program have been completed (See Section A).

* * * * *

Although LP&L was cited for violating 13 categories of 10 CFR 50, Appendix B criteria, each example within a violation has been responded to as a separate item. Therefore a total of 70 examples are addressed. LP&L acknowledges 49 examples as violations and denies 21. One of the thirteen violations was denied in total. The reasons for denial are explained in Section C.

Section D explains mitigating or extenuating circumstances for several admitted violations. Extensive use of manpower and resources were used throughout 1984 and into 1985 to investigate and resolve potentially significant concerns. LP&L believes that its investigative and corrective actions have been intensive, comprehensive, and in most cases, conservative. With a few noted exceptions, all actions are now complete. LP&L is requesting that NRC review these circumstances for civil penalty reduction (See Section D).

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EA85-10
STATUS SUMMARY
ADMIT/DENY

ITEM	REFERENCE	STATUS
1) I A	Issue 23 - QA Program Breakdown Between LP&L, Ebasco and Mercury	Admit
2) I B	CAT - No tracking mechanism for Additional Loads on HVAC Supports	Admit
3) I C	CAT - Care and Maintenance of Station Batteries & Motors	Admit
4) I D	CAT - American Bridge and Peden Welding Deficiencies	Admit with exception
5) I E	CAT - Clearance Between Piping & Adjacent Structures	Admit
6) I F	84-24 - 480 V Trip Coils (SCD-70)	Admit
7) I G	84-32 - T-B Hanger Audits & Surveillances	Admit - Request Mitigation
8) II A	Issue 1 - Inspection Personnel Issues	Admit - Request Mitigation
9) II B	Issue 1 - Inspection Personnel Issues	Admit - Request Mitigation
10) II C	Issue 1 - Inspection Personnel Issues	Admit - Request Mitigation
11) II D	Issue 1 - Inspection Personnel Issues	Admit - Request Mitigation
12) III A	Issue 6 - Dispositioning of Nonconformance and Discrepancy Reports	Admit - 12 Deny - 10 Mitigate all

ITEM	REFERENCE	STATUS
13)	III B Issue 6 - Dispositioning of Nonconformance and Discrepancy Reports	Admit - 6 Deny - 3 Mitigate all
14)	III C Issue 4 - Lower Tier Correction Actions are not being upgraded to NCRs	Deny
15)	IV Failure to Establish QA Program for Application of Nuclear Protective Coatings	Admit - Request Mitigation
16)	V A Issue 13 - Missing NCRs (Mercury)	Admit - Request Mitigation
17)	V B Issue 13 - Missing NCRs (Voided Ebasco NCRs)	Admit - Request Mitigation
18)	V C CBI Coatings Records	Deny
19)	V D Issue 20 - Construction Materials Testing (CMT) Personnel Qualification Records	Admit - Request Mitigation
20)	V E Missing Concrete Record	Admit - Request Mitigation
21)	V F Missing Concrete Record	Admit - Request Mitigation
22)	V G Issue 7 - Soil Densities	Admit - Request Mitigation
23)	V H Issue 12 - Lack of Inspection Documentation for Main Steamline Framing Restraints	Deny
24)	V I Missing Concrete Records	Admit - Request Mitigation
25)	V J CAT - Missing CCW Concrete Curing Records	Deny

ITEM	REFERENCE	STATUS
26) VI A	Issue 2 - Missing N1 Instrumentation Line Documentation	Admit - Request Mitigation
27) VI B	Issue 9 - Welder Certification	Admit - Request Mitigation
28) VI C	CAT - Concrete Test Records	Admit - Request Mitigation
29) VII	Issue 22 - Welder Qualification (Mercury)	Deny
30) VIII A	Issue 3 - Instrumentation Expansion Loop Separation	Admit - Request Mitigation
31) VIII B	Issue 6 - Dispositioning of Nonconformance and Discrepancy Reports (Ebasco 9.2's)	Deny
32) VIII C	Issue 4 - Lower Tier Documents Not Upgraded to NCRs	Admit - Request Mitigation
33) IX A	Issue 22 - Weld Filler Material Control Procedures (Site Wide)	Deny
34) IX B	Issue 21 - LP&L QA Construction System Status and Transfer Reviews	Admit - Request Mitigation
35) X	Issue 5 - Vendor Documentation - Conditional Releases	Admit - Request Mitigation
36) XI	CAT - Failure to Maintain Design Control (Cable Tray Loads)	Admit
37) XII A	CAT - Failure to Adequately Perform Document and Design Control Reviews (Drawing Stick Files)	Admit
38) XII B	CAT - Failure to Adequately Perform Document and Design Control Reviews (General Specification MC-1)	Admit

	ITEM	REFERENCE	STATUS
39)	XIII A	CAT - Failure to Implement on Adequate Inspection Program (Electrical Separation)	Admit
40)	XIII B	CAT - Failure to Implement on Adequate Inspection Program (T-B Hangers)	Admit
41)	XIII C	CAT - Failure to Implement on Adequate Inspection Program (HVAC Hangers)	Deny
42)	Deviation	Failure to Perform Test in accordance with FSAR Commitment (Hydro Test High Point Vents)	Admit

cc: T. F. Gerrets, L. L. Bass, G. Wuller, R. G. Bennett, R. Naylor, G. Fey, P. Caropino, J. Davis, K. Shipp, T. Heatherly, A. Areco.

A. SCOPE OF RESPONSE

This document provides a discussion of the following:

1. The methods involved in preparing the response to EA 85-10;
2. A discussion of the analysis for each Notice of Violation item;
3. Request for reduction of the civil penalties; and
4. A Summary description of the Operations QA Program with regards to 10 CFR 50, Appendix B criteria associated with the expressed items of violations.

For each of the violation items, the information required by 10 CFR 2.201 is provided in Section C.

LP&L feels that some of the items analyzed in Section C warrant consideration for reducing the proposed civil penalty associated with EA-85-10. LP&L's justification for potentially reducing the proposed civil penalty is provided in detail in section D and is based on the provisions of 10 CFR 2.205 and 10 CFR 2, Appendix C.

EA 85-10 also contains a Notice of Deviation concerning failure to perform a type of testing in accordance with FSAR commitments. The response to the Notice of Deviation was transmitted by LP&L letter W3P85-1413 dated June 21, 1985. (It is provided in Section F for ease of reference.)

During 1983 and 1984, the NRC conducted extensive inspections, assessments, and investigations of the Waterford 3 Construction QA Program. These inspections identified items of potential concern with respect to QA Program implementation for the construction of Waterford 3. The NRC findings were grouped into thirteen distinct areas for EA 85-10:

- I. Failure to take adequate corrective action.
- II. Failure to ensure qualification of QA personnel.
- III. Failure to adequately disposition conditions adverse to quality.
- IV. Failure to establish a QA program for application of nuclear protective coatings.
- V. Failure to maintain QA records.
- VI. Failure to adequately review QA records.

- VII. Improper welder certification.
- VIII. Failure to properly identify conditions adverse to quality.
- IX. Inadequate procedures to control activities affecting quality.
- X. Failure to control conditionally released equipment.
- XI. Failure to maintain design control.
- XII. Failure to adequately perform document and design control reviews.
- XIII. Failure to implement an adequate inspection program.

LP&L has analyzed the items of concern, associated corrective actions and the management controls which are in place under the Operational QA Program, and concludes the following:

1. The NRC inspection effort was intensive and thorough and brought prompt LP&L management attention to areas of concern. Corrective action was taken. Further, the Construction QA Program and implementing procedures were changed or strengthened to preclude similar violations.
2. LP&L and its contractors expended significant management time and attention to the areas which warranted special efforts to resolve.
3. The overall construction QA program was perceived by NRC as weak because of the number of potential concerns. In retrospect the Construction QA program had few significant programmatic weaknesses, but in some cases had not been adequately implemented.
4. LP&L management could have taken a more active role during the construction phase to assess activities and to assure corrective actions; however, construction activities were largely delegated to contractors who directed such activities under the LP&L approved QA Program.
5. LP&L agrees with NRC that although the number of identified items of mutual potential concern were extensive in number, the violations singularly or collectively do not appear to have lead to an end-product of unacceptable quality.

The results of startup and initial surveillance testing provide additional confidence that the safety related Waterford 3 structures, systems and components will perform satisfactorily in service.

LP&L is fully aware that the responsibility for the assurance of Waterford 3 quality does not end with issuance of the operating license. LP&L initiated its operational QA program several years prior to the issuance of the operating license. The NRC Staff evaluated the operational QA Program (FSAR 17.2) submitted January 13, 1984 and concluded in SER NO. 6, dated June 1984, that "the applicants description of the QA program is in compliance with applicable NRC regulations." This program has been inspected for implementation by NRC and for effectiveness by INPO. No significant program or implementation deficiencies have been identified as a result of these reviews. LP&L senior management is committed to maintaining high standards relative to Waterford - 3 quality.

Subsequent to NRC acceptance of the LP&L operational QA Program description, FSAR 17.2, Amendment 34 (without written comment or request for additional information), LP&L made several organizational and programmatic changes which enhanced the Operational QA Program. These enhancements are described below.

LP&L strongly believes the Operations QA Program exceeds regulatory requirements and standards. The operational staff has continually refined programs in the interest of meeting the highest plant safety and reliability performance standards. Although some of these refinements were made as a result of construction lessons learned, several others were initiated because of management's recognition and desire to enhance the overall program. The following provide some examples of actions taken over the past three years to enhance the effectiveness of the Operations QA Program:

1. Licensing Condition 17c required that the recommendations of the Task Force on Prelicensing Issues be addressed. The recommendations have been addressed and appropriately implemented by LP&L management.
2. A Nuclear Operations Management Manual (NOMM), was written to implement a recommendation of the Task Force on Prelicensing Issues for Waterford 3 (See 1. above). The NOMM is a summary document of the operational QA Program. It defines the responsibilities, interfaces, and authorities of LP&L personnel, contractors, vendors, and suppliers during the operation and testing phases of Waterford-3. In this manual the LP&L Quality Program is documented as Nuclear Safety Quality Policies, Special Scope Quality Policies and Management Standards. The Nuclear Safety Quality Policies define LP&L's requirements to implement 10 CFR 50, Appendix B, Regulatory Guides, and NRC endorsed ANSI Standards which are listed in FSAR Table 17.2-1. Special Scope Quality Policies define the Quality Assurance Program for certain quality related items and activities where LP&L management desires to apply selected quality assurance measures. Special Scope Quality Policies may be issued to

supplement the Nuclear Safety Quality Policies. These Policies define areas where unique programmatic requirements are instituted, (e.g., Fire Protection, Radiological Environmental Monitoring and Security). The Management Standards provide a process overview of complex areas where the need for support of plant operations is most prevalent. They define responsibilities, interfaces, and requirements where such documentation provides for coordinating selected management activities.

3. Key operations, maintenance, plant modification, and corrective action procedures have been continually refined.
4. The LP&L Commitment Tracking System and the Validation Program were established prior to plant licensing to ensure proper tracking of LP&L commitments and to verify the accuracy of enforcement responses transmitted to NRC during the preoperational and operational phases.
5. The QA Group prepares and issues a monthly newsletter to Nuclear Operations personnel that discusses Quality Program information. The Lessons Learned from the NRC concerns with the Construction QA Program is typical of the information provided to LP&L personnel.
6. The procedures which define the activities of the QA Group have been reviewed and upgraded as appropriate for operational activities.
7. The reorganization of the QA Group into three sections: Operations QA, Systems Development/Analysis QA, and Vendor QA, provides for additional management attention to such areas as vendor audits and surveillances, analysis of QA program trends, and an increased overview of plant quality activities.
8. LP&L established a Management Standard, contained in the Nuclear Operations Management Manual, for handling quality concerns during the operations phase. The Standard applies to any Waterford 3 employee, direct or contract, currently or formerly employed, who has concerns related to the quality of work or safety in the design, procurement, construction, maintenance, modification, or operation of Waterford 3. The Standard provides for a Quality Team, reporting to the Senior Vice President, to investigate and disposition concerns received; provides feedback to executive and senior management on status and trends of concerns received; and provides feedback to the individual on the resolution of his concerns. The program provides for maintaining the confidentiality of individuals expressing concerns. The Quality Team Program was established during July 1984.

9. For the operations phase, LP&L is responsible for QC inspections of maintenance and modifications. Contract organizations, when used to supply inspection services, perform such activities directly under the control of the Site Quality Manager who reports to the Plant Manager.

At the request of LP&L Management, INPO and Middle South Services (MSS) conducted evaluations of the implementation of the lessons learned from the 23 Prelicensing Assessment issues. At the time of the INPO evaluation, LP&L had fully addressed the lessons learned from construction issues, with the exception of formal training of the plant staff in the construction lessons learned and full implementation of the deficiency trending program. Subsequent to the INPO visit, Nuclear Operations Department personnel received the subject training and trend reporting to senior management was initiated. INPO noted that corrective action programs had received management support at the highest levels. MSS reported that the requirements of the Nuclear Operations Management Manual and the lessons learned were being effectively implemented.

B. DEVELOPMENT OF RESPONSES

This Section outlines the methodology by which this response was prepared.

Upon receipt of the enforcement package (EA 85-10), LP&L began its review and analysis of the NRC Violations identified in EA 85-10, referenced inspection reports, other NRC documentation, and LP&L responses to previous NRC requests. This review included the NRC Inquiry Team and Construction Appraisal Team reports and NUREG-0787.

In the transmittal letter for EA 85-10, NRC requested that LP&L discuss the confirmation of the completeness of the actions taken to correct the examples cited in the violations and changes or strengthening of LP&L's quality assurance program and implementing procedures that were effected to ensure that there would not be similar violations in these subject areas during future modification or maintenance activities. Additionally it was requested that a discussion be provided of the steps taken to ensure that a similar process failure in the LP&L Quality Assurance Program for operations would not occur, and the continuing attention by management provided to prevent recurrence of these failures.

In order to address these NRC requests, this response is structured in Sections A thru E as shown in the Table of Contents.

Section A and B provide a brief discussion of the overall enforcement package and the manner in which this response was developed.

Section C provides for a statement or explanation in reply to each violation item, including: (1) admission or denial of the alleged violation; (2) the causes for the violation, if admitted; (3) the corrective steps that were taken and the results achieved (This part of the response also includes, when appropriate, a discussion of the completeness of the action taken to correct the cited examples.); (4) the corrective steps that were taken to avoid further violations (This part of the response includes a discussion of changes to the quality assurance program and implementing procedure which will prevent similar violations during future modification and maintenance activities.); and (5) the date when full compliance was achieved.

A request for reduction of the civil penalties is provided in Section D. The five factors contained in section V.B of 10 CFR 2.205 are appropriately addressed.

Section E includes a discussion of the Operations QA Program. It is scoped to overview selected elements of the Program that relate to NRC concerns expressed in EA 85-10.

Criterion XVI of 10 CFR 50, Appendix B requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Louisiana Power and Light (LP&L) Quality Assurance (QA) Manual Section QR 16.0, Revision 2, "Corrective Action," paragraph 16.3, requires, in part, that LP&L and its major contractors implement procedures for correction of significant conditions adverse to quality which include determining the cause(s) of the significant adverse conditions, taking prompt corrective action to prevent repetition of the adverse conditions, and documenting and reporting the adverse conditions along with their determined cause(s) and corrective actions to appropriate levels of management for review and assessment.

- A. LP&L failed to adequately determine the cause and extent of the partial QA breakdown between Ebasco and Mercury as described in NRC Inspection Report No. 50-382/82-14, issued December 6, 1982. Specifically, LP&L failed to implement comprehensive and periodic audits of the Mercury and Ebasco QA program after identifying the partial QA breakdown. This failure is illustrated by the fact that LP&L did not identify the following Mercury and Ebasco Company QA audit deficiencies that existed prior to December 6, 1982, and continued until Mercury's departure from the site in 1984.

Mercury Company had not audited Mercury Quality Assurance Manual (QAM) Section 5 from 1978 through 1982; QAM Sections 12, 17 and 18 in 1980; and QAM Sections 12, 14 and 16 in 1981. Even though Ebasco identified these deficiencies in Audit No. SW-82-6-1, previous Ebasco Audits NB-78-9-5, NB-80-8-3, and NB-81-5-1 of Mercury did not identify these deficiencies. The NRC staff discovered that Mercury had not audited QAM Sections 5, 11, 12, 13, 14, 15 and 16 in 1983. Secondly, Mercury Company had not audited the following Mercury Company Procedures during the life of the project: MCP-2140, 2170, 2175; SP-650, 651, 652, 653, 654, 655, 656, 657, 658, 661, 662, 663, 668, 670, 672; WPS-B, P, G; B-1; and WPS-WE-4. Ebasco Audit SW-82-6-1 does document the finding that Mercury procedures had not been audited up through 1982.

Ref: NUREG-0787, Supp. 7, "Safety Evaluation Report related to the Operation of Waterford Steam Electric Station Unit No. 3," Allegation No. 48 (SSER 7:A-48)

VIOLATION I
(Continued)

- B. LP&L failed to take adequate actions to address concerns identified in the Notice of Violation issued on April 13, 1985 and described in NRC Inspection Report No. 50-382/83-13 which identified heating, ventilation, and air conditioning (HVAC) supports that had additional loads attached that were not shown on detail drawings. In addition, the allowable load capacity calculations were not performed for the additional loads. Even though LP&L responded to this violation on May 17, 1983, and corrective action was initiated, a subsequent inspection by the NRC revealed that 18 electrical cable trays and HVAC supports carried loads not shown on detail drawings. Six cable tray supports contained loads in excess of the stated allowable with no evidence of the required engineering analysis.

Ref: NRC Construction Appraisal Team (CAT) Report No. 50-382/84-07, Section VIII.B.4 (CAT: Section VIII.B.4)

- C. LP&L failed to take adequate corrective actions to address concerns identified in the Notice of Violation issued on October 14, 1981 and described in NRC Inspection Report 50-382/81-23 which identified problems with the care and maintenance of station batteries and safety-related motors. Even though LP&L responded to this violation on November 13, 1981, and corrective action was initiated, a subsequent Notice of Violation was issued in NRC Inspection Report 50-382/82-05 on April 7, 1982, regarding the maintenance of safety-related motors. Notwithstanding, a subsequent inspection by the NRC identified that LP&L was still not maintaining electrical motors in accordance with the required preventative maintenance procedures for equipment transferred to plant operations.

Ref: CAT, Section VIII.B.4.

- D. LP&L failed to take adequate actions to correct two Significant Construction Deficiencies (SCD) 73 and 78 which they issued on April 11, 1983, and April 28, 1983, respectively, to address welding deficiencies by American Bridge in the Reactor Containment Building and the Reactor Auxiliary Building. A comprehensive reinspection program was initiated by LP&L and rework has been completed. A subsequent inspection by the NRC of approximately 380 welds fabricated by Peden Steel Company, which was an American Bridge subcontractor, revealed several welds which did not meet the specified acceptance criteria.

Ref: CAT, Section VIII.B.4.

VIOLATION I
(Continued)

- E. LP&L failed to take adequate corrective actions to address concerns identified in the Notice of Violation issued on April 13, 1983 and described in NRC Inspection Report 50-382/83-13, which identified the lack of acceptance criteria for potential clearance problems between piping and adjacent structures. Even though LP&L responded to this violation on May 17, 1983, and corrective action was initiated, a subsequent inspection by the NRC identified several instances where clearance between piping and adjacent structures did not meet the criteria specified in Design Change Notice (DCN) NY-MP-804. Twelve selected piping isometric drawings were reviewed for approximately 1000 feet of Class 2 and 3 piping and inspected for conformance to design requirements.

Ref: CAT, Section VIII.B.4

- F. Significant Construction Deficiency (SCD) 70 was issued on February 18, 1983 to address deficiencies with General Electric (GE) 480-V switch gear trip coils not dropping out after tripping. The licensee reported by letter to the NRC dated December 2, 1983 (W3K83-1881) that all corrective action and testing had been completed and NCR No. W3-5737 had been closed. The NRC inspector reviewed NCR No. W3-5737 and determined that the breakers included in the NCR had in fact been re-examined and modified. However, the licensee failed to follow through on corrective action to modify three breakers that were not included in the above NCR. Thus, the wiring changes specified in DCN 1425R2 had not been incorporated. These breakers are as follows:

<u>Cabinet</u>	<u>Cubicle</u>
3B31	6C
3B31	7B
3A31	7B

Ref: NRC Inspection Report No. 59-382/84-24, paragraph 2.C.

- G. LP&L failed to take adequate corrective actions in response to the Notice of Violation issued on August 13, 1984 and described in NRC Inspection Report 50-382/84-32 which identified that the licensee had not implemented the corrective actions as described in their January 4, 1983 response letters to the Notice of Violation and Proposed Imposition of Civil Penalty described in NRC Inspection Report 50-382/82-14 in that there was no documentation to demonstrate the performance of audits by Tompkins-Beckwith of hanger reinspection and/or hanger inspection on a monthly basis. There were no individual audit plans (Forms GP-723-28 and GP-723-29) or audit reports (Forms

VIOLATION I
(Continued)

GP-723-30, GP-723-31, and GP723-58) as prescribed by Tompkins-Beckwith QA Procedure TBP-8, "Quality Assurance Audit," Sections 6.2 and 6.4, respectively. In addition, the licensee could not demonstrate the surveillance of hanger installations by Tompkins-Beckwith that were to continue through the system release and turnover process.

Ref: NRC Inspection Report 50-382/84-32

VIOLATION I
(Continued)

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

As a result of the Stop Work Order (SWO) issued to Mercury in June 1982, a number of corrective actions were identified and implemented by LP&L. Certain generic actions involved all contractors and subcontractors performing quality activities. Actions included significant program revisions and added manpower requirements. The LP&L QA organization was enlarged and supplemented with contract personnel in order to provide broader QA coverage. LP&L developed procedures and conducted reviews to verify system configuration and documentation prior to system turnover to the LP&L Start-up Group. Other actions, such as the system walkdowns by Plant Staff and the start-up engineers were performed to verify system status. LP&L is confident that corrective action commitments resulting from Enforcement Action 82-109 were effectively implemented to assure quality hardware installations. The Mercury problem did not persist, however, the NRC raised the concern that "LP&L, Ebasco, and Mercury failed to audit the entire QA program as required (LP&L only performed one-third of their scheduled audits for a five year period). The audits that were conducted identified some problems, however, the required corrective actions were not completed."

LP&L committed to perform a documented schedule of audits based on the status and safety importance of the activities to be audited. The audits were to be initiated early enough to assess and assure effective control of quality. LP&L maintained a monthly audit schedule and revised it as necessary to assure that the coverage and schedule reflected current activities and delays in construction scheduling. In the case of Mercury, during the life of the Mercury contract (approximately 4 years) LP&L scheduled twenty-eight audits of the contractor. Twenty-four of the audits (85% of those scheduled) were completed. Although not a commitment in the QA program, thirteen unscheduled surveillances of the Mercury program were also conducted. LP&L delegated the routine auditing of the Mercury QA program to Ebasco Services.

The Ebasco QA program was structured with an audit schedule based upon a yearly audit of applicable 10CFR50, Appendix B criteria. Over the course of the contract, Ebasco went beyond the minimum requirement in performing 114 audits of Mercury. Surveillances which supplemented the audit program were also performed on Mercury activities.

VIOLATION I
D.
(Continued)

RESPONSE 3.
(Continued)

This reinspection was completed. Approximately 170 Deficiency Reports (DR) were generated to document deficiencies or concerns. Deficiencies generally consisted of lack of material identification, loose bolts, incorrect bolting material, slotted holes, and oversize holes. LP&L chose to take the conservative approach and replace approximately 750 bolts.

The scoping of American Bridge work was completed. A review of the reinspections performed under SCD No. 78 showed reinspection was completed in accordance with the corrective action stated in SCD No. 78 with the exception of the Steam Generator Framing.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

To preclude the omission of items within the scope of SCDs, a joint effort in scoping of SCDs was performed by Quality Assurance, ESSE, Construction, and Construction Engineering when a deficiency was determined significant. This scoping was documented and included in the SCD Documentation Packages.

5. Date when full compliance will be achieved.

RESPONSE

LP&L is now in full compliance.

VIOLATION I
(Continued)

A.

In consideration of these activities and corrective action taken, LP&L now has a high degree of confidence in the adequacy of the Mercury installations.

The following is a brief discussion of some of the significant LP&L and Ebasco verification activities with respect to Mercury installations.

1. A direct result of the Stop Work Order, was the initiation in July 1982 of joint Mercury and Ebasco walkdowns of instrumentation installations on a startup system basis. LP&L QA and Startup were involved in the initial phases of the program. Walkdown results were documented on punch lists and evaluated for nonconforming conditions and establishment of corrective action. The walkdowns were conducted in two phases. The first phase consisted primarily of tubing along with the associated tubetrack and clamps. The second phase consisted of a walkdown of supports. The walkdowns resulted in a large number of NCRs and rework.
2. In addition to LP&L QA participation in the corrective action walkdowns discussed above, LP&L QA performed a status review at the time of system turnover in accordance with LP&L procedure QASP 17.5. This review consisted of a minimum 10 percent review of the documentation, and a random field sampling of hardware versus as-built drawings.

As a result of these reviews LP&L concluded that the as-built conditions generally reflected the system drawings and no significant hardware deficiencies were identified.

3. Ebasco conducted various other field verification activities relative to Mercury installations. These are summarized as follows:
 - a. Inclosing SCD 57, Ebasco QA initiated a corrective action supplement which consisted in part of a sample field inspection of various attributes related to Mercury installations. This inspection took place in February, 1984.

VIOLATION I
(Continued)

A.

- b. Ebasco engineering performed a plant walkdown to identify and correct miscellaneous hardware deficiencies which normally result from ongoing construction activities. This walkdown was performed in accordance with Ebasco procedure ASP-IV-141 and included all safety related areas of the plant. Deficiencies, along with QA/QC verification of corrective action on safety related items, were documented on punch lists. The program was established in support of the area closeout and transfer process, which took place from March through May 1984. This walkdown provided another level of assurance pertaining to Mercury installations.
- c. Since August, 1982 the Ebasco QA Surveillance Group has conducted 48 documented surveillances of Mercury hardware and documentation. All findings were resolved and, when necessary, NCRs initiated to evaluate potentially significant discrepancies. Generally, this in-process surveillance program provided another means of monitoring Mercury activities, thus ensuring the adequacy of the installations.

- 4. The most significant activity, aside from the corrective action walkdown discussed in Item 1, involved the Ebasco QA records review of Mercury documentation. This review was necessary due to the demobilization of Mercury in August of 1983 without the completion of the Mercury records review. The review commenced in November, 1983 and was completed in March, 1984. A group of 46 QA reviewers, inspectors, supervisors and clerical staff was assembled for this effort. The review was conducted in accordance with QA instruction QAI-23. As deficient or missing documents were identified QC inspectors were dispatched to re-verify the installations. As a result, approximately 67% of tube track installations were reinspected; and approximately 35% of Seismic Category 1 supports were reinspected; and approximately 24% of the Mercury installed anchors were reverified for proper torque. Available records indicate that an insignificant amount of rework resulted from the reinspection process.

VIOLATION I
(Continued)

- A. There is no further corrective action outstanding for this issue. The Mercury corrective actions were extensive and effective in preventing the continuation of the partial QA program breakdown. Corrective actions for other identified Mercury concerns (e.g., Prelicensing Assessment issues 1 and 6) were documented in responses to those concerns. Lessons learned from this issue have been factored into the post-SWO corrective actions and are reflected in the present QA Program.
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

LP&L has established a comprehensive program for quality assurance during the operating phase of Waterford 3. The QA Program, which includes provisions for requisite staffing and program audits, is described in Chapter 17.2 of the Waterford FSAR and within the Nuclear Operations Management Manual. Control of all quality related work, a key element of the QA Program, includes use of the Condition Identification and Work Authorization (CIWA) procedure. This procedure applies whether work is conducted by LP&L employees or vendors. Procedure implementation was initiated several months ago, along with appropriate training, to ensure worker and supervisor familiarity and capability to maintain the tight quality control required in an operating environment. Due to tighter quality controls and direct LP&L authorization, review and closure of CIWA items, there is reasonable assurance that a partial QA program breakdown of the Ebasco/Mercury type will not occur during plant operations.

NOTE: A more detailed description of how the QA program and procedures function and reflect lessons learned during the construction phase and from resolution of the twenty-three NRC issues was identified in the "Collective Significance" response of the Prelicensing Assessment.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION I
(Continued)

B.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L did not have a proper tracking mechanism to monitor and follow-up on the subject HVAC supports that had additional loads attached. Proper documentation required by procedure ASP-IV-58 was not completed. However, the structural integrity of the seismic supports was not jeopardized.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Final corrective steps were taken in April 1984 by a walkdown and evaluation effort for the HVAC cable tray seismic supports. This effort created a file for each HVAC cable tray seismic support that documented miscellaneous attachments (conduits, I&C supports, field routed pipes). A comprehensive discussion of the actions taken is contained in LP&L response to CAT Item No. II.A.II-4, II-5, Item 1.3.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification maintenance activities):

RESPONSE

Future seismic support attachments will be approved by LP&L Engineering prior to installation. Ebasco procedure EMP-1.08W3 is the control mechanism for seismic support attachments and tabulation of cumulative load on each support. This EMP is considered to be a design input document and would be used during the initial development of Station Modifications relative to support modification. (See LP&L's response to Violation XI).

LP&L is developing an integrated ongoing compliance management program, "Commitments Management System (CMS)." The control point of this program is a computerized database which ties all applicable regulatory requirements to their implementing media and assures maintenance of its implementation.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved with the exception of fully developing the CMS program. Full implementation is scheduled for December 31, 1985.

VIOLATION I
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

Electrical Maintenance Department did not always properly document decisions to not conduct a particular preventive maintenance item if the maintenance item could not be performed or was not necessary. The specific incidence of this problem deals directly with the meggering of motors in accordance with procedures ME-4-702 and ME-4-703.

Two (2) procedures were in effect for essentially the same purpose. They were:

- ME-4-702 Routine Electrical Maintenance During Construction Phases
ME-4-703 Routine Electrical Equipment Inspection and Maintenance

These procedures were designed to comply with construction standards for motors in storage or in extended lay up. They were not originally designed for a plant in an operating status.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Electrical Maintenance Procedure ME-4-703 provided for performing preventive maintenance on motors. Included as a part of the PM Program was a megger test if the motor had not been run within the last 30 days. During the period of 10/83 to 1/84 a conscious decision was made to not megger the motors, but this decision was not documented. This decision was not detrimental to the motors.

Megger data for safety-related motors was compiled and reviewed for potential long-term detrimental affects. This included motors powered from 1E switchgear, motor control centers and power distribution panels. The data reviewed was verified to include recent readings in accordance with current preventive maintenance periodicity. The review indicated that no long-term detrimental problems existed with respect to motor insulation and grounding in that the megger readings were above minimum acceptable standards as delineated below:

VOLTAGE LEVEL

MINIMUM MEGGER READING

480V
4160V
6900V

2 Megohms
5 Megohms
8 Megohms

VIOLATION I
(Continued)

C.

Maintenance personnel in the Electrical Department were counseled and trained on the appropriate methods for documenting the results of preventative maintenance to include those cases where maintenance is intentionally not performed/rescheduled.

Subsequent performance of ME-4-703 on the six (6) safety-related pump motors referenced by the CAT Team confirmed that the motors were acceptable and did not suffer degradation.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Maintenance personnel in the Electrical Department were counseled and trained on the appropriate methods for documenting the results of preventative maintenance to include those cases where maintenance is intentionally not performed/rescheduled.

ME-4-703 was revised and will continue to be performed as part of the permanent preventive maintenance program. The procedure now requires that meggering inspections of plant equipment be performed prior to Hot standby - Mode 3 after planned outages and/or extended shutdowns in excess of 30 days. An attachment to the procedure specifies the equipment. The intent of this inspection is to verify equipment operability and condition prior to equipment energization in mode 3. Monthly meggering will now be required for motors in storage.

The program outlined above will be followed in the future. Emphasis will be placed on properly documenting decisions to reschedule or not perform maintenance activities.

VIOLATION I
(Continued)

- D. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation as stated with the following exceptions. LP&L denies that corrective actions for SCD-73 were incomplete. SCD-73 was retracted by LP&L and became a subset of SCD-78. Actions were completed for SCD-73 under the scope of SCD-78. Additionally, Peden Steel was not a subcontractor of American Bridge. Therefore, the scope of both SCD's did not include Peden Steel activities. LP&L admits that corrective actions were incomplete for SCD-78. The NRC identified that the scope of SCD-78 (which included a total 100% reinspection effort) did not, but should have, included the American Bridge work on the missile framing for both steam generators.

2. Reasons for the violation, if admitted:

RESPONSE

Although the need for reinspection of the steam generator missile framing had been noted by Ebasco, no formal mechanism was used to track the need for future reinspection. LP&L and Ebasco believe that the Ebasco Quality Assurance Inspection Review Group (QAIRG) would have ultimately discovered this problem.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

As a result of the discovery of the omission of the Steam Generator Framing Reinspection, Nonconformance Report No. 7736 was issued to control this deficiency. The plan of corrective action required action in three areas.

First, Ebasco Quality Control performed a 100% reinspection American Bridge related work for the Steam Generator Framing. These inspections were performed and documented in accordance with procedures developed under the corrective action committed to in SCD No. 78.

Second, Construction Engineering reviewed the scope of the American Bridge work. This scoping was compared to the reinspections performed under SCD No. 78 to assure no other American Bridge work had been omitted from the re-scoping of SCD No. 78.

Third, a review of existing documentation was performed by Quality Assurance. This review determined whether connections had been completed by American Bridge, Ebasco Force Account or Tompkins-Beckwith.

VIOLATION I
D.
(Continued)

RESPONSE 3.
(Continued)

This reinspection was completed. Approximately 170 Deficiency Reports (DR) were generated to document deficiencies or concerns. Deficiencies generally consisted of lack of material identification, loose bolts, incorrect bolting material, slotted holes, and oversize holes. LP&L chose to take the conservative approach and replace approximately 750 bolts.

The scoping of American Bridge work was completed. A review of the reinspections performed under SCD No. 78 showed reinspection was completed in accordance with the corrective action stated in SCD No. 78 with the exception of the Steam Generator Framing.

Although Peden Steel was not part of the American Bridge Contract, Peden's work was inspected. An inspection of 1240 welded connections was performed by Ebasco in accordance with ASP-IV-142. Approximately 3% exhibited minor deviations or were not accepted upon initial examination. However, all were accepted by Engineering. Approximately 380 welds were inspected by the NRC. Less than one percent did not meet acceptance criteria. All were found to be acceptable based on structural adequacy.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

To preclude the omission of items within the scope of SCDs, a joint effort in scoping of SCDs was performed by Quality Assurance, ESSE, Construction, and Construction Engineering when a deficiency was determined significant. This scoping was documented and included in the SCD Documentation Packages.

5. Date when full compliance will be achieved.

RESPONSE

LP&L is now in full compliance.

VIOLATION I
(Continued)

- E. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The cause was identified as inadequate engineering supervision/enforcement of the erector's personnel. Failure to fully implement the criteria for interdisciplinary clearance was identified by an internal QA Surveillance Report (HC-1).

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Corrective action was being implemented during the NRC CAT Audit and was acknowledged in the NRC CAT Report Section III.B.1.b.

- (a) Personnel involved in Construction Engineering were reinstructed in interdisciplinary clearance requirements.
- (b) Walkdowns were performed, potential criteria violations reanalyzed and modifications made as required to ensure that sufficient clearance exist. 2664 potential interactions which were reviewed and evaluated, only 17 minor modifications were required.
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Any new installations will be performed under the Station Modification Package Program (SMP) using approved procedures. These procedures list design considerations needed during the design and modification package preparation. A checklist entitled "Engineering SMP Design Data Worksheet" is the document which verifies that interdisciplinary clearance requirements have been considered in the design. This form is signed by the preparer as well as by the Lead Engineer and becomes part of the SMP.

VIOLATION I
(Continued)

E. Procedures do not allow construction deviations from design, without engineering approval. Personnel involved in design, review, quality assurance and those performing construction reviews have been instructed in the SMP procedures.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION I
(Continued)

F.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

NOTE: The violation refers to breaker 3B31-6C. The correct designation is 3B31-5C.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L did not assure that all corrective action and testing was complete. Scoping of corrective action documents was inadequate to include all 480V switchgear breakers and spares requiring modification.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

After it was identified by NRC that six breakers had not been modified, CIWAs 006876 and 828091 were used to inspect and retest breakers. Subsequently, two of the six breakers were determined to have been modified. One breaker had been scrapped. Work for the three remaining breakers, 3B31-5C, 3B31-7B and 3A31-7B was completed and was documented on the above CIWAs.

To assure no other breakers were inadvertently missed, the content of SCD #70 was revalidated in accordance with QASP 19.13. This review documented additional discrepancies which required resolution to properly close this issue. Tracking and resolution of these discrepancies was accomplished in accordance with Corrective Action Request No. OQA-85-004 which was closed May 28, 1985.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

The following specifications have been revised per letter ES-10357-85.

- 1) LOU-1564.261A - Non-Class IE Buses 3A21, 3B21, 3A22, 3B22, 3A23, 3B23, P.O. #NY-403456
- 2) LOU-1564.261B - Class IE Buses 3A31-S, 3B31-S, 3AB31-S, P.O. #NY-403455

VIOLATION I
(Continued)

- F. The referenced specifications are designated in our purchase requisitions to obtain G.E. 480V switchgear breakers. The G.E. breakers are manufactured in accordance with the above mentioned specifications. The revision should assure accurate modification of breakers prior to delivery.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION I
(Continued)

- G. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L could not provide adequate documentation to prove that the corrective action commitment made in response to violation 8214-A was implemented. Based on discussions with the T-B personnel involved, it was determined that T-B had performed surveillances of hanger installations on a regular basis. These surveillances were documented on memos addressed to the QA supervisor. When T-B was demobilized from the site (December 1983), these memos were treated by Ebasco as non-essential records and destroyed.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

At this point no additional corrective action can be taken concerning T-B since T-B is no longer on site. Extensive efforts were conducted by LP&L during the NRC Inspection (May-June, 1984) to obtain copies of the reports from T-B's home office. Efforts were unsuccessful.

Subsequent to the LP&L commitment for T-B to perform audits/surveillances, other inspections and audits were performed which gave LP&L assurance that T-B had adequately installed pipe hangers. Ebasco records reviewers reviewed hanger documentation packages and Ebasco QA surveillance group performed some hanger installation surveillances. In addition, LP&L's Construction QA Group reviewed hanger documentation packager and performed hanger inspections on a sampling basis. SCD 60 pertained to T-B hangers welding problems. This SCD was one of the bases for closure of violation 8214-A in NRC Inspection Report 84-46.

VIOLATION I
(Continued)

- G. 4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

LP&L has initiated a formal commitment tracking program which includes verification of implementation of corrective action. This program should preclude recurrence of this type of problem.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved with the exception of the CMS program which is scheduled for full implementation by December 31, 1985.

VIOLATION II Failure to Ensure Qualification of QA Personnel

Criterion II of 10 CFR 50, Appendix B requires that the applicant establish at the earliest practical time, consistent with the schedule for accomplishing the activities, a QA program which complies with the requirements of this appendix. The program shall be documented by written policies, procedures, or instructions, and shall be carried out throughout plant life in accordance with these policies.

LP&L QA Manual Section QR 10, Revision 2, "Inspection," paragraph 10.6, requires that inspections be performed by qualified individuals who are independent of the individuals or groups performing the activity being inspected. Inspectors shall be qualified through experience, education, and training to perform the assigned inspection tasks. Where required by code, inspectors shall be formally examined and certified. A current file shall be maintained of the credentials for each inspector.

- A. Mercury Quality Control Procedure QCP-3050, "Qualification of Inspection, Examination, and Test Personnel," paragraph 5.1, describes the educational and experience requirements for the three levels of inspector qualification. These factors are not absolute when other factors provide reasonable assurance that a person can competently perform a particular task.

Contrary to Mercury QC Procedure QCP-3050, the following were instances identified where Mercury quality control (QC) inspectors did not meet the described requirements. In addition, documentation was not available to verify capability in a given job through previous performance or satisfactory completion of proficiency testing.

1. Twelve Mercury QC inspectors were incorrectly certified due to insufficient education or experience.

Ref: SSER-7:A01, 02.

2. Three Mercury Company Level III QC inspection personnel lacked the necessary prior experience to qualify as candidates for Level III certification.

Ref: SSER-7:A-57.

- B. Tompkins-Beckwith (T-B) Procedure TBP-4, "Indoctrination, Training, and Certification of QA/QC Personnel," paragraph 6.2, states that the level of certification for inspection personnel shall be as defined in ANSI N45.2.6-1973. Section 3 of this ANSI standard describes the educational and experience requirements for the three levels of inspector certification unless other factors demonstrate capability in a given job through previous performance or satisfactory completion of proficiency testing.

VIOLATION II
(Continued)

Contrary to ANSI N45.2.6, 1973, 14 T-B QC inspectors were certified to levels of capability for which they were not qualified. LP&L was unable to produce documentation that showed capability through previous performance or satisfactory completion of proficiency testing.

Ref: SSER-7:A-02, 28.

- C. Fegles QA Procedure QAP 303-21, "Qualification of Inspection Personnel," paragraph 6, describes the educational and experience requirements for the three levels of inspector qualifications.

Contrary to Fegles Procedure QAP 303-21, two Fegles QC inspectors did not meet the qualification requirements. The first Fegles QC inspector was certified as a Level III QC inspector without the necessary experience. The second Fegles QC inspector performed the duties of the Project QA Manager (PQAM) while certified as a Level II inspector. To serve as the PQAM, the Fegles requirement is that the individual must be a certified Level III inspector.

LP&L could not produce documentation to show that either QC inspector was qualified to perform the assigned work, based on previous experience or completion of proficiency testing.

Ref: SSER-7:A-110.

- D. J. A. Jones Procedure PCP-N-702, "Personnel Training, Qualification, and Certification," paragraph 6.3.1, requires that all training and certification be in accordance with J. A. Jones Construction Company's QA personnel training and certification program. This program describes the educational and experience requirements for each level of inspector certification.

Contrary to the J. A. Jones QA Program, five J. A. Jones QC inspectors did not meet the certification requirements.

One J. A. Jones inspector was not properly certified as a Level I QC inspector; however, he was performing the duties of the PQAM while the original PQAM was absent from the site. J. A. Jones Company requires that the individual performing the duties of the PQAM be a certified Level III inspector.

Three of the five J. A. Jones QC inspectors were certified as Level I inspectors even though they lacked the required experience, while one of these inspectors had not completed the formal classroom training and passed the proficiency exam.

VIOLATION II
(Continued)

The fifth inspector who was certified as Level II did not have the required experience and there was no record of passing the proficiency exam.

Ref: SSER-7:A-110, 160.

VIOLATION II
A & B

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

ANSI N45.2.6-1973 allows substitution for education and experience levels by stating "... education and experience requirements specified for the various levels should not be treated as absolute when other factors provide reasonable assurance that a person can competently perform a particular task." Waterford 3 contractors, used these substitutions in certifying their QA/QC personnel. However, the verification program revealed that background verification data was not always adequate or well documented. Documented justification for substitution was not always provided or lacked depth, and/or was not always in accordance with contractor procedures or the ANSI Standards, as currently interpreted.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

A verification program was implemented to review the professional credentials of 100% of the site QA/QC personnel who may have performed safety-related functions at Waterford 3. The program covered all LP&L and contractor inspection personnel and included supervisors, managers and non-supervisory QA/QC personnel.

VIOLATION II

A & B

(Continued)

RESPONSE 3.

(Continued)

Education and work experience was verified by researching Waterford 3 contractor records and by contacting schools, former employers and others. This effort for site subcontractor personnel was performed by LP&L/Ebasco. LP&L performed the background verification for its own and Ebasco employees. Ebasco personnel were used in our effort but under the overall control of LP&L. LP&L also audited and sampled the background verifications performed by Ebasco.

An LP&L Review Board compiled a list of "unqualified" inspector personnel for each contractor which performed safety related work. Corrective Action Requests (CAR) were written to formally track and disposition potential deficiencies. Disposition required research into inspections performed by individuals; further research into an individual's background; reinspection; engineering evaluation; analysis of previous reinspections or proof tests (NDE, hydrostatic tests); and statistical analyses or rework in order to assure acceptability of the plant components inspected by the personnel in question. Dispositioning methods were made on a contract-by-contract or individual-by-individual basis. This additional information revealed that many individuals were qualified for the work performed or did not perform safety related inspections.

The disposition of deficiencies generally did not require a large degree of reinspection for most contractors who performed safety related work. In Mercury's case, a reinspection program was initiated, consisting of N1 instrumentation tubing installations. However, the entire QC inspector Verification Program showed that no significant rework was required.

Our results further confirm the many other methods (including independent inspection, nondestructive testing, prerequisite/preoperations/integrated testing, and special analyses) which were employed at Waterford 3 to gain adequate confidence that the Waterford 3 systems, structures, and components will perform satisfactorily in service.

VIOLATION II
A & B
(Continued)

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

During the operations phase LP&L and contractor inspection personnel will be certified to ANSI N45.2.6-1978 and Regulatory Guide 1.58 Rev. 1. Prior to certification a background investigation will be satisfactorily completed documenting a candidate's education and employment experience.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

NOTE: The response to Violation II A & B contains excerpts from the response to the prelicensing assessment - Issue No. 1 which should be referenced for further detail.

VIOLATION II
(Continued)
C & D

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

ANSI N45.2.6-1973 allows substitution for education and experience levels by noting that "... education and experience requirements specified for the various levels should not be treated as absolute when other factors provide reasonable assurance that a person can competently perform a particular task." J. A. Jones and Fegles these substitutions in certifying their QA/QC personnel. However, the LP&L directed verification program revealed that background verification data was not always adequate or well documented. Documented justification for substitution was sometimes not provided or lacked depth, and/or was not always in accord with J. A. Jones/Fegles procedures or the ANSI standards, as currently interpreted.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

A verification program was implemented to review the professional credentials of 100% of the site QA/QC personnel who may have performed safety-related functions at Waterford 3. The program covered supervisors, managers and non-supervisory QA/QC personnel.

The education and work experience of 100% of the J. A. Jones and Fegles QA/QC personnel was verified by researching Waterford 3 contractor records and by contacting schools, former employers and others. The background verification effort for J. A. Jones and Fegles personnel was performed by LP&L/Ebasco.

VIOLATION II
C & D
(Continued)

RESPONSE 3. QA/QC personnel data were evaluated in order to classify
(Continued) individuals as either having verified qualifications or not.
Training, education and work experience were of primary concern.
They were verified against the following criteria:

- (1) Inspectors - ANSI N45.2.6-1973
- (2) Other QA/QC Personnel - QA Program requirements

Initial qualification determinations for J. A. Jones and Fegles QA/QC personnel were performed first by Ebasco and then separately by an LP&L review group. Approved procedures were used to control the consistency of determinations. Determinations related primarily to balancing education, experience and training factors.

For J. A. Jones and Fegles, the LP&L Review Board compiled a list of "unqualified" inspector personnel. Corrective Action Requests (CAR) were written to formally track and disposition potential deficiencies.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

During the operations phase, LP&L and contractor inspection personnel will be certified to ANSI N45.2.6-1978 and Regulatory Guide 1.58 Rev. 1. Prior to certification a background investigation will be satisfactorily completed documenting a candidate's education and employment experience.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

NOTE: The response to Violation II C & D contains excerpts from the response to the prelicensing assessment Issue No. 10, which should be referenced for further detail.

VIOLATION III Failure to Adequately Disposition Conditions Adverse to Quality

Criterion XVI of 10 CFR 50, Appendix B requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

LP&L QA Manual Section QR 16.0, "Corrective Action," paragraph 16.2, requires in part that the major contractors and their suppliers establish written procedures for identifying, for determining the cause of, for evaluating, and for correcting conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances.

- A. Ebasco Procedure ASP III-7, Issue K, "Processing of Nonconformances," paragraph 4.3, defines a nonconformance as a condition in characteristics, documentation, or procedure which renders the quality of the item or service unacceptable or indeterminate. Attachment 7.1, Item 15, requires that the recommended disposition provide specific resolution to correct the nonconforming condition, including program changes necessary, i.e., revision to specifications, procedures, retraining of personnel, etc. In addition, Item 20 requires that a separate individual evaluate the disposition to ensure that the recommended disposition provides justification as applicable to support and document compliance with applicable codes and standards or makes reference to the appropriate analysis reports.

Contrary to the above, the disposition for the following examples of Ebasco NCRs was not adequate to resolve the identified nonconformance.

NCR-7139 - Involved field inspections of horizontal seismic supports for radiation monitors RE-HV 5021S, and RE-HV 0200.65. Only the data for the RE-HV 5021S support was the correct attachment.

NCR-3912 - Fit-up inspection for the nine 23J-2 type supports was bypassed. The original NCR disposition failed to address the actions required to prevent the reuse of the items.

VIOLATION III
(Continued)

NCR-5563 - Identified that a J. A. Jones QA inspector trainee dispositioned NCR-W3-1728 regarding the fuel handling building crane for J. A. Jones QA department. The inspections in question were signed off on August 27, August 28 and November 6, 1979, and then by a co-signature on February 4, 1983, by a QA inspector who claimed to be present at the first inspection. This co-signature of the inspections in question eliminated the requirement for a reinspection called for in the recommended disposition.

NCR-6159 - Inspection of tubetrack welding identified that prior to July 1982, an unknown quantity of welding was performed using WPS-"B" procedure without backing plates. Traceability problems were not identified and addressed by the NCR-6159. In addition, the sample used for tensile testing the welds should have been representative of the weakest weld joint in lieu of the strongest (i.e., worst cause example should have been used to conduct tests).

NCR-3919 - A tubing crack discovered during a system hydrostatic test of instrument line PT-RC-0173, system 52A2 (reactor coolant) resulted in Significant Construction Deficiency (SCD) No. 61 being issued. The tubing failure was a result of a manufacturing defect (process, not metallurgical), and an attempt was made to ascertain that all tubing of this specific heat number was reinspected.

Corrective action was to reinspect all tubing installations to locate this heat of defective tubing. The reinspection reportedly located all installation locations. Review of this NCR revealed that Operational Control Record (OCR) installation packages indicated that approximately 530 feet more tubing was installed than was received on site. This was also verified by a review of warehouse issuance records. The "Requisition on Warehouse" form had been changed using liquid paper and a subsequent entry had been crossed out with ink.

NCR-7547 - Noted discrepancies against OCR-1830 and Mercury NCR-0806. The disposition was based on passing hydrostatic test for acceptability of fit-up discrepancy between the union and tubing. The disposition does not account for the effects of service conditions such as vibration and cyclic loads; and an engineering evaluation was not performed.

NCR-1650 - Identified that the pressure gauge on the anchor bolt tension tester was out of tolerance, reading +450 psi higher than actual. The NCR disposition was to retest all anchor bolts installed prior to the date the tension test gauge was determined to be out of calibration. However, the affected bolts cannot be identified since the torquing procedure QCP-309, did not require the recording of the tester serial number.

VIOLATION III
(Continued)

NCR-6623 - Identified that a heat number and a signature had been falsified. The tubing in question was removed and replaced in accordance with Mercury NCR 3696. The NCR's disposition did not address why the heat number and signature had been falsified.

NCR-5586 - Weld Testing Laboratory was not surveyed (audited) and placed on the Approved Vendors List by Mercury prior to welder performance qualification taking place. This item was not addressed in the NCR disposition. Also, the statement provided by the test lab that "a Mercury inspector reviewed all tests" is not adequate.

NCR-6165 - States "...welder R-1 is not qualified to this procedure..." The disposition states, "...Measures taken to preclude recurrence is required..." No indications of the actions taken could be located.

NCR-7099 - Identified improper weld on cabinets 48A and 48B. FCR-IC-P-416, Revision 1, Sk-1, called for a fillet weld where a flare bevel weld was required. Weld size and length were not adequately addressed. The evaluation of disposition by Ebasco states, "Evaluation indicates that the stresses are low." There is no documentation indicating what stresses are low." There is no documentation indicating what stresses were being referred to. In addition, the recommended disposition "that ESSE (Ebasco Site Support Engineering) evaluate the cabinet base metal cracks" was not addressed.

NCR-4137 - Identified material and weld problems on supports on SCR-238. This NCR was closed out but failed to have 3 of 4 required welds on "M" gusset plates completed.

NCR-4088 - (Mercury-491) - This NCR identified numerous discrepancies found during a walkdown performed against drawing 160-T-035-A. No documentation was available that verified work had been accomplished or completed.

NCR-5974 - Identified a problem with loss of heat number traceability for safety and non-safety grade related materials. This NCR was used to disposition approximately 150 to 200 DN's with "Q" prefix. The disposition did not address the possibility that safety and non-safety grade materials could have become mixed.

VIOLATION III
(Continued)

NCR-6786 - Identified that many Mercury NCRs were issued concerning the lack of heat numbers. These NCRs were closed by referencing a generic series of Ebasco NCRs. The Ebasco disposition stated that the possible heat numbers will be documented on the Mercury as-built drawings. This data is not recorded on the as-built drawings. However, the Mercury Company NCRs have been closed. The disposition of this NCR does not address where the required heat numbers were recorded or how traceability was maintained.

NCR-7177 - Fischbach and Moore (F&M) violated Procedure QCP-309, 6.3.2.4, that is, they failed to test three additional expansion anchors for every anchor that failed. In addition an uncalibrated pressure gauge was used on the tension tester and tension tester serial numbers were not recorded. The NCR disposition stated that "QCP-309 did not require recording of serial numbers"; this violates ANSI N45.2, Section 13, that requires the traceability of measuring and test equipment to point of usage. F&M should have written an NCR. Inspection Report (IR) 311-06-70 and IR 310-36-43 identified bolt failure due to excessive slippage. Dispositions prescribed by these IRs were in violation of QCP-309, Section 6.3.2.2(d) and 6.4.3.

NCR-W3-5564 - Involved lack of records to verify the inspection of bolting and welding by J. A. Jones on Seismic Category I stairs between elevations -34.75' and -8.0' in the fuel handling building. The recommended disposition included inspection of welds and bolted connections by Ebasco QC. Welding repairs for four welds were completed and inspected on July 26, 1983. Dispositioning of the NCR was not acceptable with regard to inspection of welds without removing the paint. The paint precludes adequate visual inspection of the welds.

NCR-W3-5565 - Involves witnessing and acceptance of reeving of the FHB bridge crane by a QC inspector trainee who was not certified as a Level 1 inspector at the time of inspection. The recommended disposition was for Ebasco QC to reinspect the work by a certified inspector and process that required documentation. Records were not available to verify that the required reinspection had been performed by a qualified QC inspector.

NCR-7182, NCR-7180, NCR-7181, NCR-7184, NCR-6723 - These NCRs also involve a violation of ANSI N45.2, Section 13 requirements in that QCP 309 did not require the tension testing equipment's serial number, calibration date, and pressure gauge number to be recorded.

VIOLATION III
(Continued)

NCR-6514* - The problem of traceability for the weld being performed was still in question; not addressed. The NCR also questioned use of some Bergen-Patterson designed supports installed by Mercury without traceability. This problem was also not addressed by referenced attachment.

NCR-3941-RI - Identified that support number one fitup inspection was bypassed and the support had been completely welded out with only the welder's ID.

NCR-6621 - Identified that weld control records were signed off by an individual who was not a certified Level II inspector. Sign-off was based on Letter of Designation. The NCR disposition referred to the T-B (April 1, 1980) Quality Manual that was not in effect at the time the Letter of Designation was written (January 8, 1979). Also, a reference given in the Letter of Designation did not allow designee sign-offs and was in effect as of March 15, 1983; the Letter of Designation also failed to meet the requirements of ANSI N45.2.6.

NCR-6511 (Mercury-3336) - Stated that "during final inspection of installed I-beam for support 1117-1114m weld to existing beam 1A was rejected." The NCR only addressed the fact that the maximum gap was violated, but the weld was rejected for: (1) undersize, (2) lack of fusion, (3) arc strikes, and (4) undercut. Mercury NCR-3336 recommended weld removal and rework. This recommendation was crossed out and only the nonconforming fitup gap is addressed. There were no records of rework or reinspection, and only copies of Mercury's NCR were attached to Ebasco's NCR.

NCR-4219 (Mercury 614) - Identified a violation of QCP 3110.4, paragraph 6. The sample system piping had been bent downward causing a low point in the piping. The piping was being forced down by support SLRR-188. QCP-3110.4 stated that "tubing must be properly routed." This disposition stated that "...tubing was reevaluated after support SLRR-188 and sample line were installed, after completion of Penetration 29 work." There were no records for rework or reinspection to indicate satisfactory reinstallation of supports and sample lines.

VIOLATION III
(Continued)

NCR-7432 - Identified a problem with concrete preplacement and post-placement documentation. The documentation could not be matched because the identification of the various placements were on different QC forms. Also, this NCR was dispositioned by stating "...this problem was addressed on other NCRs and therefore voided..." No specific references were used; therefore, this disposition is unacceptable. Also, a QA engineer approved the recommended disposition and then voided the NCR.

Ref: SSER-7:A-33 (applicable to all above NCRs).

NCR-7724 - Addressed problems with the qualification of Mercury welders. Ebasco's disposition of this NCR failed to determine if (1) welder M-109 had performed welds to WPS-Y for which he was not qualified; (2) welder M-101 had performed welds to WPS-Y for which he was not qualified; (3) welder M-85 had performed welds to WPS-D after his qualifications record had been voided.

Ref: SSER-7:A-215.

NCR-6234 - Identified problems with the sampling frequency of cadwelds for tensile testing for all positions and bar sizes after a cadweld was visually rejected. The data presented in the NCR was not sufficient to determine if the required tensile test sampling frequency was resumed after each visual reject.

Ref: SSER-7:A-146.

NCR-6719/R1 - Identified problems with Mercury hydrostatic test conditions. The Ebasco disposition of the NCR was based on analyzing the "worst case" hydrostatic test conditions; however, only one test was reviewed by Ebasco.

Ref: SSER-7:A-49.

NCR-5997 - Identified problems with the certification of personnel inspecting the clam shell filler blanket under the nuclear plant island. Ebasco's response to the NCR was that the J. A. Jones QC inspector cited was qualified when he performed the inspection although his employer certification did not exist. This response was determined to be incorrect because the J. A. Jones QC inspector had no testing or inspection experience prior to coming to Waterford 3.

VIOLATION III
(Continued)

NCR-1579 - Documented the heat numbers, after paint was removed, for 1" to 1½" adapters. The closure of the NCR documented heat numbers for 1½" to 1" reducers on the same instrument installation. A visual inspection of the installation by the NRC inspectors did not reveal the heat numbers. The disposition of this NCR is questionable based on how the QC inspector was able to verify the heat numbers.

Ref: SSER-7:A-220.

*These NCRs were closed out by referring to Ebasco letter F-61147E. The problem is that this letter did not close out these or other NCRs.

- B. Mercury Procedure SP-669, "Procedure for Handling of Nonconformances and Corrective Action," paragraph 4.2, defines a disposition as, "Those actions required to resolve a nonconformance."

Contrary to the above, the recommended disposition for the following examples of Mercury NCRs was not adequate to resolve the identified nonconformance.

NCRs 313, 322, and 337 - Identified seven ½" stainless steel lines for P2 instruments that were damaged by weld spatter. The NCR stated that the lines were replaced and documented as such in operational control record (OCR) 995 and OCR 1020, but it could not be ascertained from these rework packages that the repair and reinspection was either started or completed. There was no documentation with these NCRs to prove that corrective action was completed.

NCR-363 - Indicated a problem with fitup of emergency diesel generator fuel oil tank "A". This was a safety-related system; therefore, an authorized nuclear inspector (ANI) review should have been performed, but was not.

NCR-554 - Noted numerous problems with supports during a walkdown. There was no proof of work being performed to correct these problems other than a memo (Form 211) stating that work was performed.

NCR-658 - Identified problems with OCR 1671 seismic Category I support, B-430-x23-J-42. The NCR stated "the disposition has been completed, all rework documented." There was no other documentation in the package other than the NCR W3-7317 acceptance letter.

VIOLATION III
(Continued)

NCR-572 - Noted that the weld on support location #26 was undersized. The NCR stated that weld was reworked and weld metal added to bring weld to sufficient size. There was no reference as to what OCR was issued to perform this rework or traceability of weld metal used in the performance of this job. Also, there were no inspection reports identified or contained in the package.

NCRs 673-678 - These NCRs were closed out by the statement: "Administratively closed B31.1 to be tracked and resolved by Mercury Engineering Department." This resolution was unacceptable as the requirements of 10 CFR 50, Appendix B apply to safety-related installations as committed to by LP&L. (Also, all of these NCRs were reviewed by Ebasco under NCR W3-7317 and accepted "as-is")

NCR-673 - Identified problems with instrument tubing installed by OCR #723.

NCR-674 - Identified problems with the electromagnetic control panel worked by OCR #1246.

NCR-675 - Identified problems with instrument tubing installed by OCR #720.

NCR-676 - Identified problems with instrument tubing installed by OCR #720.

NCR-677 - Identified problems with instrument tubing installed by OCR #1332.

NCR-678 - Identified problems with instrument tubing installed by OCR #723.

NCR-888 - Indicated problems with personnel qualifications; e.g., "Several QC type personnel have been certified Level II without documented indications of qualification requirements per QCP 3110, paragraph 1.4 and ANSI N45.2.6." Recommended disposition was marked "N/A" yet the recommended disposition as completed stated "This NCR not processed:

- (1) Initiator not a Mercury employee at time of writing;
- (2) QCP-3110-...does not apply to W3; (3) ANSI N45.2.6 previously incorporated by QCP 3050 is approved. All M Co. QC techs are trained and tested per QCP 3050 prior to performing inspection or tests."

VIOLATION III
(Continued)

NCR-889 - Indicated problems dealing with piping supports installed by Mercury in that the installed hangers were different than those noted in Mercury's QC support installation documentation. As with NCR 888, the recommended disposition was marked "N/A" and the recommended disposition was completed by saying "This NCR not processed:

(1) Initiator not a Mercury employee at time of writing;
(2) QCP 3110-...does not apply to W3; (3) ANSI N45.2.6 previously incorporated by QCP 3050 is approved. All Mercury Company QC techs are trained and tested per QCP 3050 prior to performing inspection or tests."

NCR-3149 - Indicated that there was no documented indications that welder M-343 was qualified to welding procedure specification D (WPS-D). Disposition of this problem was by use of a weld test coupon subsequently found on April 27, 1983, but no longer available. No documentation existed on the qualification of this welder or on his retest. Thus, all welds made by this welder were suspect.

Ref: SSER-7:A-232.

- C. Ebasco Procedure ASP-IV-70, "Handling of Engineering Discrepancy Notices," in paragraph 4.1 defines a discrepancy as "A deviation from the specified requirements (including procedures) than can be readily corrected in accordance with standard approved operating procedures or specifications based on good engineering practices. Discrepancies do not require an elaborate engineering evaluation or disposition for correction. They are deviations from good engineering practice and procedures."

Contrary to the above, LP&L and its contractor Ebasco demonstrated a pattern of dispositioning EDNs "accept as is" or "use as is" when Ebasco Procedure ASP-IV-70, "Handling of Engineering Discrepancy Notices," did not allow this disposition. The correct disposition of an EDN is to bring the subject item into conformance or generate a nonconformance for disposition.

Examples of EDNs dispositioned "accept as is" are:

1. EDN-EC-1648 Arc strike and undercut
2. EDN-EC-1618 Procedural violations on rework of emergency diesel generator component.
3. EDN-EC-1476 MT or PT on the weld root pass was bypassed.

Ref: SSER-7:A-302.

VIOLATION III
(Continued)

- A. NCR-7139 - Involved field inspections of horizontal seismic supports for radiation monitors RE-HV-5021A and RE-HV 0200.65. Only the data for the RE-HV 5021S support was the correct attachment.

NOTE: *Correct designation for support should be RE-HV 5031S, not RE-HV 5021S (Reference SSER 7 page 85, NCR 7139).*

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation for the following reasons:

The disposition was properly implemented in accordance with the nonconformance report, a minor revision was required only to substitute the documentation for support 35E089 (RE-HV 0200.5S) with the documentation for support 35E088 (RE-HV 0200.6S). The disposition was unaffected by this revision.

VIOLATION III
(Continued)

- A. NCR-3912 - Fit-up inspection for nine 23J-2 type supports was bypassed. The original NCR disposition failed to address the actions required to prevent the reuse of the items.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The LP&L NCR review program verified that deficiencies were generally processed in accordance with the site procedures. However, those procedures did not provide adequately specific guidelines for the implementation of procedural requirements which led to excessive need for judgments and interpretations. This program weakness led to the inconsistencies in handling deficiencies at Waterford 3 which have been identified by LP&L and the NRC.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The following corrective action was initiated:

1. Support #8 was not removed because of HVAC interferences. This support was properly tagged as "not to be utilized-nonconforming." (Identified on CIWA 011994)
2. Support #13 (angle to plate) would be acceptable for reuse in its intended design application since it would not be possible to cluster enough tubing attachments to reach the yield point of the structure. (Identified on Attachment #16, NCR 3912)
3. The remainder of the supports (angle to existing steel) were removed. Since the material is traceable by heat number, it is approved for safety-related applications. (Identified on Attachment #12, NCR 3912)
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

VIOLATION III
(Continued)
NCR-3912

A.

Under the operations phase QA Program, in order to provide standardization, hardware deficiencies are identified through use of the LP&L CIWA (plant identified) or DN (receipt inspection identified).

All quality related deficiencies identified during the operations phase undergo verification review of the corrective action and disposition prior to closing out the deficiency. The deficiency identification and resolution mechanisms are described in Sections II.B.1.a-f, in the "Collective Significance", document of the Prelicensing Assessment Response. As part of the semi-annual audit of the corrective action process, the QA Program includes a field verification audit of the CIWA closure process. In addition, the QA Group utilizes a QA Trending program to identify adverse quality trends and generic quality problems.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

A. NCR-5563 - Identified a J. A. Jones QA inspector trainee dispositioned NCR-W3-1728 regarding the Fuel Handling Building Crane for J. A. Jones QA department. The inspections in question were signed off on August 27, August 28 and November 6, 1979, and then by a co-signature on February 4, 1983, by a QA inspector who claimed to be present at the first inspection. The co-signature of the inspections in question eliminated the requirement for a reinspection called for in the recommended disposition.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

NCR-5563 was reopened and CIWA #011340 was written to reinspect the Fuel Handling Building Crane (subject of trainee's inspection). A certified Level II inspector reinspected the trainees' work and documented the inspection on the CIWA. The installation was found to be acceptable and NCR-5563 was redispotioned and closed using the above corrective action.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has now been achieved.

VIOLATION III

(Continued)

- A. NCR-6159 - Inspection of tubetrack welding identified that prior to July 1982, an unknown quantity of welding was performed using WPS-"B" procedure without backing plates. Traceability problems were not identified and addressed by the NCR-6159. In addition, the sample used for tensile testing the welds should have been representative of the weakest weld joint in lieu of the strongest (i.e., worst case example should have been used to conduct tests).

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation.

Traceability was not a subject or a concern of this NCR, however, all tubetrack materials were purchased, received and maintained by Ebasco's QA program. Material was requisitioned by subcontractors from the Ebasco warehouse.

The tensile test specimen to which the violation refers was designed to obtain tensile strength of the welded joint, which converted to stress in PSI. Subsequent calculations using this stress took into account geometries of real joints and manner of load application. (Identified on NCR-6159 and SCD #84 for tensile tests and evaluation).

VIOLATION III
(Continued)

- A. NCR-3919 - A tubing crack discovered during a system hydrostatic test of instrument line PT-RC-0173, system 52A2 (reactor coolant) resulted in Significant Construction Deficiency (SCD) No. 61 being issued. The tubing failure was a result of a manufacturing defect (process, not metallurgical), and an attempt was made to ascertain that all tubing of this specific heat number was reinspected.

Corrective action was to reinspect all tubing installations to locate this heat of defective tubing. The reinspection reportedly located all installation locations. Review of this NCR revealed that operational control record (OCR) installation packages indicated that approximately 530 feet more tubing was installed than was received on site. This was also verified by a review of warehouse issuance records. The "Requisition on Warehouse" form had been changed using liquid paper and a subsequent entry had been crossed out with ink.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The review program verified that deficiencies were generally processed in accordance with the site procedures. However, those procedures did not provide adequately specific guidelines for the implementation of procedural requirements which led to excessive need for judgments and interpretations. This program weakness led to the inconsistencies in handling deficiencies at Waterford 3 which have been identified by LP&L and the NRC.

3. Corrective steps that will be taken and the results achieved (Includes confirmation on the completeness of the actions taken to correct the cited examples):

RESPONSE

Review of the nonconformance found that 6,461 feet of the suspect tubing had been received on site as documented on MRR-104601 dated May 28, 1981 (NCR Attachment #2, page 4 of 5). This tubing was issued to Mercury Company on August 10, 1981 as documented on ROW-53402 (NCR Attachment #2, page 5 of 5).

The corrective action for NCR-3919 was initiated with an attempt to conservatively identify all possible locations of installation of this heat of tubing. This was difficult due to the current problem of $\frac{1}{2}$ " tubing heat traceability (reference SCD 101). In June 1984, it was identified that the initial approach was inadequate. NCR-3919 and SCD-61 were reopened, additional evaluation was performed and both reports reclosed.

VIOLATION III
(Continued)

A. Requisition on Warehouse forms are not quality records and as such are not required to meet ANSI N45.2.9 requirements.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

A.

NCR-7547 - Noted discrepancies against OCR-1830 and Mercury NCR-0806. The disposition was based on passing hydrostatic test for acceptability of fitup discrepancy between the union and tubing. The disposition does not account for the effects of service conditions such as vibration and cyclic loads; and an engineering evaluation was not performed.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation. The disposition was based on field inspection and rework of connections, not on passing hydrostatic test for acceptability. The disposition included a wall thickness measurement for F.W.-7 (Attachment 6, NCR 7547) and weld build-up for F.W.-9 to correct undersized weld (Attachment 4, NCR 7547). F.W.-5 which was previously accepted by Mercury Q.C. (Attachment 3, NCR 7547), was subsequently inspected by Ebasco Q.C. which determined fit-up unacceptable due to coupling and tubing being out of square. Ebasco Engineering field inspected the connection and stated that tubing was bent slightly external to the fitting and this condition would have no affect on the instrument operation (Attachment 3, NCR 7547). To further assure fit-up was acceptable, F.W.-5 was radiographed to determine engagement. Ebasco specification LOU 1564-100 requires minimum engagement of $\frac{1}{8}$ " where as actual was 5/16", therefore, fit up was acceptable. (Identification CIWA 0011620).

VIOLATION III
(Continued)

- A. NCR-1650 - Identified that the pressure gauge on the anchor bolt tension tester was out of tolerance, reading +450 psi higher than actual. The NCR disposition was to retest all anchor bolts installed prior to the date the tension test gauge was determined to be out of calibration. However, the affected bolts cannot be identified since the torquing procedure, QCP-309, did not require the recording of the tester serial number.

1. Admission or denial of the alleged violations:

RESPONSE

LP&L denies the violation. The disposition as given on attachment #3A to the NCR is as follows:

"All anchor groups represented by the random samples tested using this gage since last calibration shall be retested. Specific bolt tested may or may not be the one previously selected to represent the group. Test frequency shall be in accordance with Ebasco Specification LOU-1564.468 paragraph 7.01."

This disposition does not require identification of the specific bolts tested, only that a bolt shall be retested from each representative group. (QCP-309 requirements are discussed for NCRs 7180, 7181, 7182, 7184 and 6723). These NCRs described why recording tension tester serial numbers were not required.

Corrective action taken for this NCR required each contractor that had been issued the gage to establish the extent of usage. Retests were provided where applicable and other usage was dispositioned "accept-as-is" by ESSE on a case-by-case evaluation.

The LP&L/Ebasco review of this NCR as a result of the NRC disposition concern, identified that corrective action had not been implemented on all anchor groups identified. Attachment #15 was added to the NCR to provide an acceptable engineering evaluation. LP&L recognizes that this deficiency may not have been identified without review for the NRC concern, however, the deficiency had no safety significance and was evaluated "accept-as-is."

VIOLATION III
(Continued)

- A. NCR-6623 - Identified that a heat number and signature had been falsified. The tubing in question was removed and replaced in accordance with Mercury NCR 3696. The NCR's disposition did not address why the heat number and signature had been falsified.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Only the most immediate steps taken at the time of discovery could have determined why the heat number was falsified. It is not possible at this late date to determine who falsified the information nor the intent in doing so. It should be noted however that the disposition of this NCR was adequate to resolve the identified nonconformance. Corrective action was directed to assure that no other heat numbers were falsified and that acceptable material was installed in the field. This was accomplished through the Ebasco QAIRG and LP&L review.

Ebasco Quality Assurance Inspection Review Group (QAIRG) performed a review of all installed process tubing records back to their applicable Certified Mill Test Report (CMTR). In addition, each reviewer was required by procedure to review the Mercury QA records for authenticity (signature) during the review cycle. This review was a viable program as evidenced by this NCR.

In addition to Ebasco QAIRG review, LP&L QA reviewed approximately 15% of Mercury Company's safety related QA documentation per QASP 17.5. During this review no instances of attempted record falsification were identified either in an isolated or generic case. LP&L QA also walked down approximately 150 safety related instrument installations for conformance to installation documentation. No cases of questionable material traceability were identified.

VIOLATION III
(Continued)
NCR-6623

- A. 4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-5586 - Weld Testing Laboratory was not surveyed (audited) and placed on the Approved Vendors List by Mercury prior to welder performance qualification taking place. This item was not addressed in the NCR disposition. Also the statement provided by the test lab that "a Mercury inspector reviewed all tests" is not adequate.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The following actions were taken to substantiate the NCR disposition:

1. Mercury audits of Welders Test Lab for years 1979, 1980, 1981 and 1982 were added as information to verify Mercury surveillance of supplier's activities.
2. Statements from present and former contractor employees and corporate officials were added to support the fact that qualified contractor personnel reviewed all tests.
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-6165 - States "...welder R-1 is not qualified to this procedure..." The disposition states, "...Measures taken to preclude recurrence is required..." No indications of the actions taken could be located.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

This disposition as originally written on the face of the NCR was adequate to resolve the identified nonconformance. Corrective action based on the disposition was carried out properly with the exception of action to prevent recurrence. Before this action could be implemented, it was discovered that R-7 was the welder, not R-1 as identified on the nonconformance (Identified on Attachment #2, page 1 of 3 to NCR 6165). A review of T&B timesheets verified that welder R-1 was not employed during the time the weld was made. Welder R-7 was qualified to the procedure so a nonconforming condition never existed. Therefore, action to preclude repetition was not necessary.

VIOLATION III
(Continued)

- A. NCR W3-5564 - Involved lack of records to verify the inspection of bolting and welding by J.A. Jones on Seismic Category I stairs between elevations -34.75' and -8.0' in the Fuel Handling Building. The recommended disposition included inspection of welds and bolted connections by Ebasco QC. Welding repairs for four welds were completed and inspected on July 26, 1983. Dispositioning of the NCR was not acceptable with regard to inspection of welds without removing the paint. The paint precludes adequate visual inspection of the welds.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The Fuel Handling Building stairs were downgraded from Seismic Class I to Seismic Class II eliminating the requirements for visual inspection.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR W3-5565 - Involved witnessing and acceptance of reeving of the FHB bridge crane by a QC inspector trainee who was not certified as a Level 1 inspector at the time of inspection. The recommended disposition was for Ebasco QC to reinspect the work by a certified inspector and process the required documentation. Records were not available to verify that the required reinspection had been performed by a qualified QC inspector.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation. The disposition of the NCR was adequate to resolve the non-conformance; however, the corrective action was not completed prior to initial NCR closure.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The Fuel Handling Building crane was turned over to LP&L with subsequent testing and reinspection performed by LP&L on 1/29/83 per procedure SPO-40-002. The testing and inspection data performed by LP&L has been referenced on the NCR for closure. It should be noted that all testing of the FHB crane subsequent to the trainees' inspection has been acceptable and that the original disposition was used for the above corrective action.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-7182, NCR-7180, NCR-7181, NCR-7184, NCR-6723 - These NCRs involve a violation of ANSI N45.2, Section 13 requirements in that Ebasco procedure QCP 309 did not require the tension testing equipment's serial number, calibration date, and pressure gauge number to be recorded.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation on the basis that the dispositions were in fact adequate to resolve all nonconformances that were identified. No additional corrective action was required as a result of either the LP&L or NRC review of the stated dispositions. Additionally, LP&L denies that the NCRs involve a violation of ANSI N45.2, Section 13 in that QCP 309 did not require the tension testing equipment's serial number, calibration date and pressure gauge number to be recorded. LP&L admits that QCP 309 did not require recording of the above information; however, the Ebasco M&TE program did meet the intent of ANSI N45.2, Section 13 which states:

"Measures shall be established and documented to assure that tools, gages, instruments, and other inspection, measuring, and testing equipment and devices used in activities affecting quality are of the proper range, type and accuracy to verify conformance to established requirements. To assure accuracy, inspection, measuring and test equipment shall be controlled, calibrated, adjusted and maintained at prescribed intervals or prior to use against certified equipment having known valid relationships to nationally recognized standards."

During the time frame involved, only two (2) pressure gauges/tension testers were utilized sitewide, QC 4.2.1 and QC 4.2.2. These gauges were maintained and controlled under Ebasco's M&TE procedure WQC-4 and were issued to subcontractors on an as-need basis, (Reference Ebasco procedure CP-309, 6.3.2). Issuance of the gauges was documented on Ebasco's M&TE log and the gauges were calibrated at prescribed intervals. If a gauge was found out of calibration, a DN or NCR was initiated for determination of use (Reference NCR-1650). Although it may have been good practice to have required the recording of serial numbers and calibration dates on the tension testing checklist, Ebasco's M&TE program provided all controls necessary to meet ANSI N45.2, Section 13.

VIOLATION III
(Continued)

- A. NCR-6514* -- The problem of traceability for the weld being performed was still in question; not addressed. The NCR also questioned use of some Bergen-Patterson designed supports installed by Mercury without traceability. This problem was also not addressed by referenced attachment.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

Traceability of welds was never a subject or concern of this NCR. The questionable use of some Bergen-Patterson designed supports installed by Mercury without traceability was dispositioned properly on Attachment #6 to the NCR. The disposition accepted the supports as installed based on the following:

- 1) A review of all heat numbers for all structural shapes drawn by Mercury Company revealed that only one type of steel was drawn from other than Ebasco sources. The Requisition on Warehouse (ROW) was from T&B and for a non-seismic B31.1 installation. Subject material was 100' of 2"x2"x1/4" C/S angle, PO WP3-2135, MRR-900282, ROW 62484 of February 12, 1982. All of this steel is accounted for and supports are installed in the Turbine Generator Building. Otherwise no unqualified steel has been used by Mercury Company to fabricate supports.
- 2) The affected supports were not required to be fabricated in accordance with ASME Section III subsection NF.
- 3) The structural members supplied originally by Bergen-Patterson were received with only a Certificate of Compliance and without CMTR's or heat numbers. Thus B-P furnished material would not be stamped with heat numbers and is the probable cause of Mercury's documentation not noting heat numbers.

This NCR was found acceptable by LP&L and the NRC with no further corrective action required.

VIOLATION III
(Continued)

- A. NCR-3941-RI - Identified that support number one fitup inspection was bypassed and the support had been completely welded out with only the welder's ID.

NOTE: The correct NCR number is 3947 R1. NCR-3941 R1 concerns recorders for CP-14 cabinets. This NCR was reviewed by LP&L and found acceptable.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The welder's ID on the support is M-142 and is traceable to an acceptable Filler Metal Withdrawal Authorization (FMWA No. 6818 dated 1/23/81). An acceptable heat number (15537) is on the material along with the unique I.D. # 975-12. This information is documented on Mercury Form 211 dated 6/10/83 which is attached to NCR-3947 R1. A subsequent final visual inspection was performed by Ebasco verifying the above information and also determined that the weld was acceptable to AWS D1.1. This documentation was added to the NCR as Attachment #7 to support closure.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-6221 - Identified that weld control records were signed off by an individual who was not a certified Level II inspector. Sign-off was based on Letter of Designation. The NCR disposition referred to the T-B (April 1, 1980) Quality Manual that was not in effect at the time the Letter of Designation was written (January 8, 1979). Also, a reference given in the Letter of Designation did not allow designee sign-offs and was in effect as of March 15, 1983; the Letter of Designation also failed to meet the requirements of ANSI N45.2.6.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

LP&L QA evaluated inspectors experience, education, and training and determined the inspector was qualified to perform the designated activities.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our responses to NCR-3912 and Violation II.

5. Date when full compliance will be achieved.

RESPONSE

LP&L is now in full compliance.

VIOLATION III
(Continued)

- A. NCR-6511 (Mercury 3336) - Stated that "during final inspection of installed I-beam for support 1117-1114 weld to existing beam 1A was rejected." The NCR only addressed the fact that the maximum gap was violated, but the weld was rejected for: (1) undersize, (2) lack of fusion, (3) arc strikes, and (4) undercut. Mercury NCR 3336 recommended weld removal and rework. This recommendation was crossed out and only the nonconforming fitup gap was addressed. There were no records of rework or reinspection, and only copies of Mercury's NCR were attached to Ebasco's NCR.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Support 1117-1114m was reinspected by Ebasco QC and As-built data including weld defects was supplied to ESSE. ESSE accepted the support "as-is" based on the low loads on the support. NCR 6511 was reclosed based on ESSE's evaluation and supporting documentation was attached. Mercury's installation documentation was updated with the as-built information.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

LP&L is now in full compliance.

VIOLATION III
(Continued)

- A. NCR-4219 (Mercury 614) - Identified a violation of QCP 3110.4, paragraph 6. The sample system piping had been bent downward causing a low point in the piping. The piping was being forced down by support SLRR-188. QCP-3110.4 stated that "tubing must be properly routed." This disposition stated that "...tubing was reevaluated after support SLRR-188 and sample line were installed, after completion of Penetration 29 work." There were no records for rework or reinspection to indicate satisfactory reinstallation of supports and sample lines.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

The disposition of the NCR states:

"Sample shown piping (2SL $\frac{1}{2}$ -105) was bent downward after installation of support SLRR-188 and has been sprung further out of position by work being done on penetration 29. Evaluation of this area of the sample system piping should be done after the work on penetration 29 is completed, and the pipe and support are returned to their proper positions."

This disposition was signed by Ebasco I&C Engineer. Penetration #29 was reworked and documented on Mercury NCR 684. Once rework was complete, the same ESSE I&C engineer evaluated the piping and verified that it met the installation criteria (Attachment #3 to NCR 4219). This NCR was properly dispositioned and accepted by LP&L.

VIOLATION III
(Continued)

- A. NCR-7432 - Identified a problem with concrete preplacement and post-placement documentation. The documentation could not be matched because the identification of the various placements were on different QC forms. Also, this NCR was dispositioned by stating "...this problem was addressed on other NCRs and therefore voided..." No specific references were used; therefore, this disposition is unacceptable. Also, a QA engineer approved the recommended disposition and then voided the NCR.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The following corrective actions were initiated:

1. A late entry was added to NCR-7432 referencing NCRs 7431 R1 and 7435 as the documents which provided the corrective action to the deficiencies identified by NCR-7432.
2. The referenced NCRs were reviewed to substantiate resolution of the deficiencies identified on NCR-7432 and determined to be acceptable.
3. Approval of a recommended disposition and then voiding of the NCR by the same QA Engineer is not a procedural violation per ASP-III-7.
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

- A. 5. Date when full compliance will be achieved.

RESPONSE

Full compliance has now been achieved.

VIOLATION III
(Continued)

- A. NCR-7724 - Addressed problems with the qualification of Mercury welders. Ebasco's disposition of this NCR failed to determine if (1) welder M-109 had performed welds to WPS-Y for which he was not qualified; (2) welder M-101 had performed welds to WPS-Y for which he was not qualified; (3) welder M-85 had performed welds to WPS-D after his qualifications record had been voided.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated on the basis that the disposition was adequate to resolve the nonconformance. The disposition as stated in NCR-7724 is as follows:

- a. Welder M-109 left the site on February 8, 1980. The clerical error showing qualification to WPS-Y was made on November 26, 1982, WPS-Y was used for qualification testing only. It was not specified for production welding. Welder M-109 was qualified to WPS-B and WPS-D.
- b. Welder M-101 left the site on March 21, 1980. The clerical error showing qualification to WPS-Y was made on November 26, 1982, WPS-Y was used for qualification testing only. It was not specified for production welding. Welder M-101 was qualified to WPS-B.
- c. Welder M-85's valid qualification record for WPS-D was voided in error on November 8, 1983 by Mercury's welding engineer. This was a documentation error which did not effect the welders ability to perform welding to the process he had originally qualified to.

Based on the above dispositions, a Welder Qualification Records review was performed to assure that discrepancies did not exist regarding Welding Procedure accuracy. This review identified no deficiencies and concluded that Welder Qualification Records were accurate. (Identified on Attachment #4, NCR-7724).

VIOLATION III
(Continued)

- A. NCR-6234 - Identified problems with the sampling frequency of cadwelds for tensile testing for all positions and bar sizes after a cadweld was visually rejected. The data presented in the NCR was not sufficient to determine if the required tensile test sampling frequency was resumed after each visual reject.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Although the NCR did not present sufficient data to determine if the required tensile test sampling frequency was resumed, ESSE-Civil provided the following recommended disposition per attachment VII of NCR-6234:

"the actual test sampling and test results for cadweld operators who performed production cadwelding has been reviewed by ESSE-Civil. Even though there have been deviations from specification requirements for the test sampling procedures, the overall performance of cadweld operators have been found satisfactory as judged by test results. Accept the cadwelding operation as is, since deviations from specification were non-detrimental to the work."

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-6719/R1 - Identified problem with Mercury hydrostatic test conditions. The Ebasco disposition of the NCR was based on analyzing the "worst case" hydrostatic test conditions; however, only one test was reviewed by Ebasco.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation based on the fact that a total of three (3) tests were analyzed by Ebasco (M-560-465, M-533-60C, M-536-60, refer to Attachment 3 of NCR-6719/R1). These were found to be acceptable by ESSE. Later, engineering was asked to identify a worst case hydrotest configuration. If this configuration was found to be acceptable, then all other configurations would be acceptable. If this case was not acceptable, then other hydrotests of all questionable configurations would have to be analyzed.

A worst case configuration was determined by first identifying the systems that had the greatest elevation changes. Secondly, instrumentation for those systems had to be located below the system low point. After reviewing several systems and locations of their associated instrumentation, it was ultimately determined that the Safety Injection Tanks represented the worst case configuration for Waterford 3. (Identified on Attachment 15 & 16 of NCR-6719/R1 - test M-532-60C)

It should be noted that Ebasco did not "assume" a worst case but actually determined a worst case hydrostatic test. Several hydrostatic test configurations had to be evaluated before the worst case could be determined. (Identified on Attachment 17, NCR-6719/R1)

VIOLATION III
(Continued)

- A. NCR-5997 - Identified problems with the certification of personnel inspecting the clam shell filler blanket under the nuclear plant island. Ebasco's response to the NCR was that the J. A. Jones QC inspector cited was qualified when he performed the inspection although his employer certification did not exist. This response was determined to be incorrect because the J. A. Jones QC inspector had no testing or inspection experience prior to coming to Waterford 3.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Certification of the referenced individual was reviewed by Ebasco QA, GEO QA and Ebasco's site soils engineer. In their response to this issue (Attachment IV of NCR-5997) it was stated that the individual was qualified to perform the inspection he did, at the time he did it, although employer certification did not exist. This concern was addressed and resolved by the in-depth qualification/verification review accomplished under Prelicensing Assessment Issue No. 1 (See II. A, B, C, D of this report).

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedure to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to Violation II A.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- A. NCR-1579 - Documented the heat numbers, after paint was removed, for 1" to 1-1/2" adapters. The closure of the NCR documented heat numbers for 1-1/2" to 1" reducers on the same instrument installation. A visual inspection of the installation by the NRC inspectors did not reveal the heat numbers. The disposition of this NCR is questionable based on how the QC inspector was able to verify the heat numbers.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The Q.C. inspector verified heat numbers for the wrong adapter, NCR description was for 1" x 1/2" O.D. adapter, inspector verified the heat no. for 1 1/2" x 1" O.D. adapters.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

In order to properly close NCR 1579, CIWA 018904 was initiated to perform field verification of the 1" x 1/2" adapters to determine the correct heat number. The field verification revealed that heat/I.D. numbers were not visible on the adapters. A verification of the installation documentation (Mercury OCR Package 1796) indicated both a heat no. C-66 and Purchase Order No. WP3-1139 for the 1" x 1/2" O.D. adapters. The OCR Package documents that subsequent rework was done on the tube side of the adapters, so it is possible that this rework removed the heat code. The above referenced documentation has been filed with the NCR to properly close the NCR.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has now been achieved.

VIOLATION III
(Continued)

- B. NCRs 313, 322 and 337 - Identified seven $\frac{1}{2}$ " stainless steel lines for P2 instruments that were damaged by weld spatter. The NCR stated that the lines were replaced and documented as such in Operational Control Record (OCR) 995 and OCR 1020, but it could not be ascertained from these rework packages that the repair and reinspection was either started or completed. There was no documentation with these NCRs to prove that corrective action was completed.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Due to the numerous conflicts and discrepancies revealed during the review of NCR 313, Ebasco Q.A. determined that the following steps were to be taken:

1. Evaluate the information contained with the nonconformance to determine the actual location(s) of damaged tubing, as described in NCR 313's "description of nonconformance."
2. Research Mercury's operational control record packages (OCR's) 995B and 1020A, to verify that the balance of the damaged tubing not corrected by NCR's 322 and 337 had been replaced.
3. Verify through field reinspection, if any damaged tubings as described in NCR's 313, 322 and 337 are still present, both at azimuth 75.00' and 58.00' in the RCB.

VIOLATION III
(Continued)
NCRs 313, 322 and 337

- B. Upon completion of the above three (3) steps, Ebasco Q.A. determined the following:
1. In review of NCR 313 block 7, Mercury identified that additional problems found during the rework were addressed on Mercury NCR's 322 and 337. Ebasco Q.A. concluded that the initiator of NCR 313 had provided an inaccurate location of the damaged tubing. This was further substantiated by the fact that NCR's 313, 322 and 337 all referenced drawing 172-T-027-CE and CCR-1020, which shows these instrumentation lines located in the RCB at azimuth 58.00' not 75.00'.
 2. Upon review of Mercury's operational control record packages (OCR's) 995B and 1020A, Ebasco Q.A. revealed that two (2) additional drawings were applicable to the instrumentation lines described in NCR 313. These drawings were 172-T-026-CE and 172-L-007-CE. In review of all four (4) drawings, Ebasco Q.A. identified that the drawings were redlined to incorporate information noted on NCR's 313, 322 and 337, and numerous additional Mercury NCR's information. Also revealed was that weld data records were available for all the welds noted on Mercury's drawings 172-L-008-CE, 172-L-007-CE, 172-T-026-CE and 172-T-027-CE. However, neither of these drawings reflects which new weld numbers were redlined in accordance with NCR 313's "description of nonconformance."
 3. In order to verify that all of the damaged tubing had been replaced in accordance with NCR 313's "recommended disposition" and to further substantiate the results of 1 and 2 above, Ebasco Q.A. performed a field reinspection of tubing on instruments DPT-RC-124Y (HP and LP), DPT-RC-0121/0120 (HP and LP), PS-RC-0001-2AS, PS-RC-1002S and PT-RC-0163, to identify if the deficiencies as stated in NCR 313 and subsequent NCR's 322 and 337 no longer exists. The reinspection was performed utilizing drawings 172-T-026-CE, 172-L-007-CE, and 172-L-008-CE as the means for identification and location of these instrument lines.

VIOLATION III
(Continued)
NCRs 313, 322 and 337

B.

The results of this reinspection revealed that no damaged tubing existed as described in NCR 313, and subsequent NCR's 322 and 337's "Description of nonconformances." This reinspection data is noted on general inspection report number SW-927 (attached). In addition, the tubing located at azimuth 75.00' in the RCB was also reinspected for damaged tubing for the possibility that initiator or NCR 313 identified the incorrect drawings. The results of this reinspection also revealed no damaged tubing.

Based on the above results, Ebasco Q.A. has determined that the damaged tubing as described in NCR 313, and subsequent NCR's 322 and 337 had been removed and replaced, the applicable drawings redlined to reflect the new weld numbers and the applicable operational control records (OCR's) revised to reflect the new redlined drawing information. As a result, it can be substantiated that the discrepancies identified were adequately corrected by Mercury.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- B. NCR-363 - Indicated a problem with fitup of emergency diesel generator fuel oil tank "A". This was a safety-related system; therefore, an authorized nuclear inspector (ANI) review should have been performed, but was not.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

The ASME process pipe connected to emergency diesel generator fuel oil tank "A" as described in the NCR is a class 3 installation and does not require ANI review. The NCR was properly dispositioned and DCN-IC-534 R/3 was issued to document the design change. This NCR was found acceptable by LP&L and the NRC with no further action required.

VIOLATION III
(Continued)

- B. NCR-554 - Noted numerous problems with supports during a walkdown. There was no proof of work being performed to correct these problems other than a memo (Form 211) stating that work was performed.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

Form 211 attached to the NCR is a standard Mercury Quality Control report on which the QC Inspector documented his inspection of acceptable resolution to each identified concern. Additionally, Form 211 references Mercury OCR package #1723 which was found to contain documentation of all rework activities required by the NCR. This NCR was found to be acceptable by LP&L and the NRC with no further action required.

VIOLATION III
(Continued)

- B. NCR-658 - Identified problem with OCR 1671 seismic Category I support, B-430-x23-J-42. The NCR stated "the disposition has been completed, all rework documented." There was no other documentation in the package other than the NCR W3-7317 acceptance letter.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated. Mercury nonconformance procedure SP-664 does not specifically require supporting documentation to be attached to an NCR if it is cross referenced to the NCR. Although documentation was not in the package, the NCR and rework documentation were cross-referenced for retrievability and verification that corrective action was completed.

VIOLATION III
(Continued)

B. NCR-572 - Noted that the weld on support location #26 was undersized. The NCR stated that the weld was reworked and weld metal added to bring weld to sufficient size. There was no reference as to what OCR was issued to perform this rework or traceability of weld metal used in the performance of this job. Also, there were no inspection reports identified or contained in the package.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Support No. 26 was redesignated as support No. 1714-33 by Redline No. 6 of Drawing No. 163-T-013-A. A copy of documentation for weld build up was located and placed in file.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- B. NCRs 673-678 - These NCRs were closed out by the statement: "Administratively closed B31.1 to be tracked and resolved by Mercury Engineering Department." This resolution was unacceptable as the requirements of 10 CFR 50, Appendix B apply to safety-related installations as committed to by LP&L. (Also, all of these NCRs were reviewed by Ebasco under NCR W3-7317 and accepted "as-is.")

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Detailed below is the corrective action initiated for each specific NCR:

NCR-673 Ebasco reinspected the tubing on 8/2/84 and found that the discrepancies noted in this NCR had been corrected. Copies of the documentation to verify the reinspection were placed in NCR folder.

NCR-674 Ebasco reinspected the supports and tubing addressed on this NCR, and ESSE accepted the installation as-is. Copies of the inspection and evaluation were placed in the NCR folder for support documentation to justify disposition and closure of this NCR.

NCR-675 Ebasco reinspected the tubing and found that the discrepancy noted in this NCR had been corrected. A copy of the report was placed in the NCR folder.

NCR-676 Ebasco inspected the tubing and found that the minor bow would not affect the applicable pressure switch. ESSE concurred and accepted the installation as-is. Copies of the evaluation have been placed in the NCR folder to support closure of the NCR.

VIOLATION III
(Continued)

B.

NCR-677 Ebasco reinspected the tubing addressed by this NCR and ESSE accepted the installation as-is. Copies of the inspection and evaluation have been placed in the NCR folder to support disposition and closure of this NCR.

NCR-678 Ebasco reinspected the tubing addressed in this NCR, and the results were evaluated by ESSE to use-as-is. Copies of the inspection and evaluation have been placed in the NCR folder to support disposition and closure of this NCR.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- B. NCR-888 - Indicated problems with personnel qualifications; e.g., "Several QC type personnel have been certified Level II without documented indications of qualification requirements per QCP 3110, paragraph 1.4 and ANSI N45.2.6." Recommended disposition was marked "N/A" yet the recommended disposition as completed stated "This NCR not processed:

- (1) Initiator not a Mercury employee at time of writing;
- (2) QCP 3110 - ...does not apply to W3; (3) ANSI N45.2.6 previously incorporated by QCP 3050 is approved. All Mercury Company QC techs are trained and tested QCP 3050 prior to performing inspection or tests."

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The review of the above document determined that: a) The initiator was terminated on the same date the NCR was initiated and b) a review of all Mercury's quality assurance/quality inspection personnel was undertaken for adherence to procedural and ANSI requirements relative to qualification/certification status. The concern as stated in the NCR and reinspection is addressed and resolved by the in-depth qualification/verification review documented in Prelicensing Assessment Issue No. 1 (See II.A, B, C, D of this report).

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- B. NCR-889 - Indicated problems dealing with piping supports installed by Mercury in that the installed hangers were different than those noted in Mercury's QC support installation documentation. As with NCR 888, the recommended disposition was marked "N/A" and the recommended disposition was completed by saying "This NCR not processed:

- (1) Initiator not a Mercury employee at time of writing:
- (2) QCP 3110 - ...does not apply to W3; (2) ANSI N45.2.6 previously incorporated by QCP 3050 is approved. All M Co. QC techs are trained and tested per QCP 3050 prior to performing inspection or tests."

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Review of the above document determined that: a) The initiator was terminated on the same date the NCR was initiated. b) Since the time this NCR was initiated, numerous efforts have been undertaken to verify that as-built field conditions do in fact reflect the Mercury as-built drawings:

- 1) Ebasco Q.C. verification of supports per procedure ECRRI-3. A total of 1852 supports were inspected for configuration, dimensions, location, amount of weldment.
- 2) LP&L Construction QA walkdown during the status review of turnover of systems. This consisted of 114 instrument supports.
- 3) All N1 (approximately 1600) supports were inspected and documented in accordance with LP&L procedure QASP 19.15.
- 4) Mercury NCR-3578 was upgraded to Ebasco NCR-W3-6512 which generically addressed traceability of Mercury supports.

VIOLATION III
(Continued)
NCR-889

B. Based on the above efforts and the resulting documentation, the concern stated on the NCR is considered to be resolved. (See also II.A, B, C, D of this report)

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedure to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- B. NCR-3149 - Indicated that there was no documented indications that welder M-343 was qualified to welding procedure specification D (WPS-D). Disposition of this problem was by use of a weld test coupon subsequently found on April 27, 1983, but no longer available. No documentation existed on the qualification of this welder or on his retest. Thus, all welds made by this welder were suspect.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

See our response to NCR-3912.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The qualification papers for welder M-343 were lost by Mercury Q.A. Utilizing the test coupon made by the welder for his original qualification to WPS-D, new paperwork was initiated and processed through ANI for review and approval. A copy of the record was obtained from the welders qualification folder and attached to NCR-3149.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to NCR-3912.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION III
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies that section III.C. is a violation of corrective action requirements. The following paragraphs show that procedures were followed, dispositions made and corrective actions taken. Other EDNs referenced in SER Supp. 7 and 9 were addressed in our response to Prelicensing Assessment Issue No. 4 and all were determined to be nonsignificant.

The EDN procedure, ASP-IV-70 allows the Engineering Inspector to disposition or forward an EDN to the appropriate discipline - Resident Engineer for recommended disposition.

Section 6.3.2.4 of the procedure states:

"The Engineering Inspector may either provide the recommended disposition himself or forward the EDN to the appropriate discipline Resident Engineer for recommended disposition. Once the recommended disposition has been completed, the EDN shall be forwarded to the appropriate discipline Senior Resident Engineer, or his designee, for disposition."

Additionally, the procedure requires that Resident Engineer disposition and forward the EDN to ESSE (Ebasco Site Support Engineering) if required, i.e., "use-as-is" or "accept-as-is."

Section 6.3.2.5 of the procedure states:

"After the Senior Resident Engineer, or his designee, has provided the disposition, he shall indicate to whom the EDN is to be referred for corrective action, or whether an ESSE evaluation is required. (An ESSE evaluation is required whenever the disposition recommends or accepts a deviation from approved design criteria)."

The violation states that the procedure did not allow these dispositions and further documents the supposition that correct EDN dispositions require conformance or generation of a nonconformance for disposition. The procedure did not list any specific disposition, i.e., rework, use-as-is, repair, but did require Resident Engineer, ESSE Engineer disposition and Quality Assurance concurrence.

VIOLATION III
(Continued)
C.

RESPONSE 1.
(Continued)

Two of the EDNs cited in the violation were dispositioned, evaluated and concurred with using the processes described above. The third EDN, EC-1618, which identified that two activities were performed without a rework form and an anchor bolt checklist. This EDN was dispositioned by a Resident Engineer and did not involve a deviation from design criteria. Again the EDN procedure was followed. None of the EDNs were considered significant and none met the criteria for an NCR.

VIOLATION IV Failure to Establish QA Program for Application of Nuclear Protective Coatings

Criterion II of 10 CFR 50, Appendix B requires that the applicant establish at the earliest practicable time, consistent with the schedule for accomplishing the activities, a QA program which complies with the requirements of this appendix. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout plant life in accordance with those policies, procedures, or instructions. The QA program shall provide control over activities affecting the quality of the identified structures, systems, and components to an extent consistent with their importance to safety.

LP&L committed to meet ANSI N101.2-1972, "Protective Coating (Paints) for Light Water Nuclear Reactor Containment Facilities," in their Preliminary Safety Analysis Report (PSAR) and Final Safety Analysis Report (FSAR) for coatings application to the interior of the containment vessel until September 1983, when the FSAR was revised to include only parts of ANSI N101.2-1972. Paragraph 7.5 (utilization) of this standard requires that the application of a given coatings system, including surface preparation, will be specified to meet the QA program established for the nuclear project utilizing this coating system.

Contrary to the above, LP&L did not require Chicago Bridge and Iron (CB&I) to establish a QA program for the application of nuclear protective coatings to the interior of the containment vessel. As a result, CB&I did not maintain documentation on the basic materials which would support the acceptability of the coatings material or its application. The only documentation available for coatings applied to the containment vessel were the Ebasco QC surveillance inspection reports. There was no established method of documenting the coating work until flaking and delamination of Carbo Fine 11 (primer) occurred after postweld heat treatment was completed by CB&I.

Ref: SSER-7:A-256, 271.

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L failed to fully review Contract No. NY-403405 dated 9-16-71 & Supplement 8, dated 6-13-73 to impose QA Program requirements for the application of nuclear protective coatings to the interior of the containment vessel. This resulted in the lack of documentation concerning material certification, painter certification, Quality Control Certification, or work instructions which would support the acceptability of the coatings material or its application.

VIOLATION IV
(Continued)

- A. 3. Corrective steps that will be taken and the results achieved
(Includes confirmation of the completeness of the actions
taken to correct the cited examples:

RESPONSE

The coating problem was identified to Ebasco Corrosion Engineering and the coating manufacturer representative in July of 1981. At that time an inspection of the walls and dome was conducted by these parties. Other Ebasco Construction, Q.A., and LP&L personnel accompanied on a part time-basis. As a result of the inspection Ebasco initiated Nonconformance Report W3-3648.

The Ebasco Corrosion Engineering Department and an independent coating testing agency developed an in-situ Design Basis Accident (DBA) test-box to determine if the major portion of the coating defects on the liner plate was acceptable. No coating failures resulted from this testing program. Therefore the defects which were present and addressed in NCR W3-3648 did not compromise the safety related function of the coating system.

The Ebasco Corrosion Engineering Department identified, the measures to be taken for the types of defects previously mentioned on attachments to NCR W3-3648,. The results of the in-situ DBA testing demonstrated that no further repair beyond those measures was required. After completion of the testing program, the site coating contractor, Sline Industrial Painters, Inc., began repair of the liner coating using the direction provided by NCR W3-3648 and by the coating specification, LOU 1564.734. Repair consisted of either power or hand tool cleaning or blast cleaning of unacceptable areas, and recoating.

Coating repairs were completed, inspected and supporting documentation verified. The aforementioned information was documented in the final report of Significant Construction Deficiency No. 56. The NRC documented full closure of SCD 56 in Inspection Report 84-24, dated July 3, 1984.

The coating problem was subsequently identified as allegations A-256 and A-271 in SER, Supplement 7. The NRC's assessment concerning this issue was "This allegation has neither safety significance nor generic implications. Actions Required: None."

VIOLATION IV
(Continued)

A.

However, when SER Supplement No. 9 was issued, Allegation A-256 was reopened and made a license condition in the Waterford 3 Operating License. The license condition (Section 2.c.16) stated the following:

"Prior to January 18, 1985, the licensee shall provide for staff review and approval an evaluation of the potential adverse effects of the failure of coatings inside of containment on post accident fluid systems."

To fulfill the license condition, LP&L submitted to the NRC by letters W3P85-0130, dated January 17, 1985 and W3P85-0449, dated February 27, 1985, the required evaluation of the potential adverse effects of the failure of coatings inside of containment on post accident fluid systems.

The NRC's assessment of the above evaluation as stated in SSER-10 Section 6.1.2 is quoted below.

"On the basis of its evaluation, the staff has reasonable assurance that debris generated by the failure of unqualified coatings inside containment under design-basis accidents will not adversely affect the performance of post accident fluid systems and, therefore, considers the unqualified coatings issue resolved pending confirmation of the results of additional evaluations."

Confirmation of the results of additional evaluations were submitted to the NRC by letters W3P85-1103, dated March 29, 1985 and W3P85-1149, dated April 25, 1985. Confirmatory evaluations include a three dimensional analysis of the near field effect of paint coating fragments on the SIS Sump and a confirmatory evaluation of the particle size failure characteristics of the paint coatings used at Waterford 3. Both evaluations further substantiated the conservatism and validity of the original evaluations.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

VIOLATION IV
(Continued)

A.

RESPONSE

LP&L submitted an FSAR change to Section 6.1.2.1 Protective Coatings, on Amendment No. 33 dated September 1983, which stated that not all containment protective coatings were applied in accordance with the QA requirements of ANSI N 101.4, to reflect the present condition of protective coatings inside containment.

The Nuclear Operations Management Manual (NOMM) Section V, Chapter 4, "Procurement Document Control" and its implementing procedures QAP-206 "Quality Review of Purchase Requisitions", UNT-8-001 "Processing of Procurement Documents" and QI-4-001 "Quality Review of Procurement Documents," provide for a quality review of procurement documents in Waterford 3. This should assure that the applicable quality assurance requirements and required documentation are being imposed on supplier of items and services for Waterford 3 SES.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

Criterion XVII of 10 CFR 50, Appendix B requires that sufficient records be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance and material analyses. The records shall also include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall as a minimum, identify the inspector or data records, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.

LP&L QA Manual Section QR-2.0, "Quality Assurance Program," Table 2.1, states that LP&L is committed to guidance document ANSI N45.2.9, "Requirements for collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Plants," draft 11, Revision 0, January 1, 1973. This ANSI standard requires that the licensee retain QA records in accordance with the retention periods listed in Appendix A of this standard. The following is a sample list of types of records with the retention periods indicated.

<u>Record Type</u>	<u>Permanent</u>	<u>Years After Commercial Operation</u>
Concrete Placement Records	X	
Soil Compaction Test Reports	X	
Field Inspection Report and Release	X	
Material Properties Reports	X	
Performance Test Procedures and Results Records	X	
Nonconformance Reports	X	
Welding Personnel Qualifications		2
Welding Procedures	X	
Welding Inspection Reports (Magnetic, Liquid Penetrant, Radiographic, Ultrasonic)	X	
Welding Filler Metal Material Reports	X	

Contrary to the above, the NRC inspectors noted that the following QA documents had not been maintained as required by ANSI N45.2.9.

VIOLATION V
(Continued)

- A. Mercury Construction Company did not maintain proper accountability of all Mercury Nonconformance Reports (NCRs) to demonstrate NCR retention requirements of ANSI N45.2.9 were satisfied prior to 1982.
- Ref: SSER-7:A-232
- B. Ebasco did not maintain the following voided NCRs as part of their QA records: W3-27, W3-814, W3-859, W3-981, W3-1053, W3-1102, W3-1109, W3-1228, W-1349 and W3-1438.
- Ref: SSER-7:A-18.
- C. Chicago Bridge and Iron did not maintain records of coating materials purchased from Carboline for applications to the inside of the containment vessel.
- Ref: SSER-7:A-256.
- D. GEO Construction Testing Company did not maintain quality assurance records for the qualification of construction materials testing personnel prior to 1982.
- Ref: Inquiry Team [IT] Report, Section II.A.1.e and III.A.3.d.
- E. Concrete placement package 593-S01-16 is missing sheet 3 of 5 of the concrete test records.
- Ref: SSER-7:A-109.
- F. Concrete placement package 593-S01-UZ4FHAA does not contain the original concrete curing log.
- Ref: SSER-7:A-112.
- G. Backfill records for the seven placement fills surrounding the foundation walls do not contain the in-place testing frequency records for the first 3 feet of backfill in fill area #7 or the first 5 feet of backfill in area #5.
- Ref: SSER-7:A-138.
- H. Inspection documentation does not exist for several bolted connections on the east and west main steam line framing (elevation +46 and above).
- Ref: SSER-7:A-30.
- I. Two common foundation pour packages (499-S02-6 and 499-S03-13B) are missing approximately 5 pages of the in-process test records.

VIOLATION V
(Continued)

- J. CCW system structure (cooling tower) pour package (499-804-8A1). The top of the wall pour was identified as not being covered with water for one day during that airing period. Discrepancy Notice (DN) L308 specified that the normal during period be extended two extra days. Curing information for the final day was not in the package.

Ref: CAT, Section V.B.1.

VIOLATION V
(Continued)

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits to the violation.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L considers the identified deficiencies as isolated instances. Reasons for the specific deficiencies are provided below.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

A review of Mercury NCRs was performed by LP&L QA in accordance with procedure QASP 19.17 to determine whether any were improperly voided or administratively closed. An accountability review of Mercury NCRs was also performed to reconcile whether a Mercury NCR document was issued/processed for each given number issued by Mercury Company. This was accomplished by both a review of the Mercury NCR log and a review of the Mercury NCR documents to assure that the specific categories of NCRs questioned by the NRC within SSER 7 were obtained.

The results of the review performed on the voided and "administratively closed" NCRs has determined that, except as noted below, they were appropriately processed and closed. Cases were found where the documentation to support closure was referenced, but not in the Mercury NCR file. This documentation was retrieved from the other files, reviewed by LP&L QA and placed into the Mercury NCR files. The review also revealed that all but two of the Mercury NCRs were accounted for, that two NCRs were incorrectly administratively closed, and that one was not processed.

NOTE: The following deficiency descriptions are the same as described in attachment #5 of the Prelicensing Assessment Issue No. 13 response.

Mercury NCR-2685

The description provided in the NCR Log indicated that this NCR was written against OCR 1029, instrument number DPI/DPS-HV 5009A, Drawing No. 853-L-183-A to identify "no-fit up date" as the nonconforming condition.

VIOLATION V
(Continued)

A.

Since the description noted in the log was not specific as to what item(s) did not have a fit-up date, four areas were considered. These areas are the following:

- 1) Tubing - The tubing on the noted drawing is ANSI B31.1 and therefore no documented inspection would be required.
- 2) Instrument Stand - The instrument stand is installed per Instrument Installations Detail B430 - X14 which is a non-seismic stand and therefore no documented inspection would be required.
- 3) Tube Track - The tube track on the drawing is seismic but no fit-up inspections were required.
- 4) Seismic Supports - There were 19 seismic supports on the subject drawing. These supports required a documented fit-up inspections. After reviewing the documentation for all 19 supports, only one Support Locator (No. 12) was missing a fit-up inspection data on the "Support Inspection Report" form (262-1).

Further search revealed that the "Support Inspection Report" form showed a late entry of the fit-up inspection data for Support Locator No. 12 made by the same person who initiated the NCR. It is deduced that the same individual identified the nonconforming condition and then corrected it.

As a result of this investigation, LP&L concluded that the condition identified by the missing NCR was corrected and documentation was available to show resolution.

Mercury NCR-2242

The Mercury NCR Log entry for this NCR was crossed out by the log keeper noting that the NCR was written in error and that the number was never used.

VIOLATION V
(Continued)

A.

At about the same time two more entries were made against the same OCR number, the same drawing number and the same instrument that were noted on NCR-2242. The new entries were NCR-2264 and NCR-2285. NCR-2285 was closed with the notation that the same problem was tracked via NCR-2264.

From the description provided in the NCR Log, the same instrument was identified on all three NCRs and it was resolved under 2264. Since the NCR Log does not describe the specific nonconforming condition, further research was performed to determine if any situation existed which may have gone unaddressed. A review of Mercury QC inspection reports (Form 211) of the same period revealed that three different QC inspectors noted the same condition during three different walkdowns and recommended that NCRs be issued to correct the discrepancy. Furthermore, a Form 211 was found which records that an inspection was performed that verified the correction of the discrepancy and thus the closure of NCRs 2264, 2285 and 2242.

As a result of this investigation, LP&L concluded that the condition identified by the missing NCR was corrected.

Mercury NCRs that were never Processed

Three nonconformances that were issued but were incorrectly administratively closed or not processed by Mercury Q.A. Department were NCR-888 dated 9-19-82, 889 dated 9-19-82 and 2734 dated 3-10-84. Mercury should have processed these NCRs; subsequent actions have resolved the deficiencies contained therein. The rationale by Mercury for not processing the NCRs and the resolution by Ebasco to the NCR concerns are provided below:

NCR-888

This NCR was written stating that several Q.C. personnel have been certified to Level II without documented evidence of qualification requirements. At the time Mercury's management response was that the NCR was not processed based on "1) initiator not a Mercury employee at time of writing 2) QCP-3110 paragraph 1.4 references QCP-3040 which does not apply to W-3 3) ANSI N45.2.6 provisions incorporated by QCP-3050 as approved. All Mercury Company QC techs are trained and tested per QCP-3050 prior to performing inspections or tests."

VIOLATION V
(Continued)

A.

Ebasco's current review of the above document determined that: a) The initiator was terminated on the same date the NCR was initiated. b) Recently a review of all Mercury's quality assurance/quality inspection personnel has been undertaken for adherence to procedural and ANSI requirements relative to qualification/certification status. The concern as stated in the NCR and reinspection was addressed and resolved by the in-depth qualification/verification review being accomplished under Prelicensing Assessment Issue No. 1.

NCR-889

The NCR was written noting a change to actual field installation versus Mercury's Q.C. support installation documentation. Mercury's Support Verification Group and Mercury's Documentation Review Group had identified numerous deficiencies relative to hanger installation traceability.

At the time Mercury's management response to this NCR was that the NCR was not processed based on: "1) Initiator not a Mercury Company employee at time of writing. 2) The situation has already been identified by LP&L Audits, Ebasco Audits, Mercury Company Audits and case-by-case NCRs. There is insufficient information to process an NCR of this description. Mercury Company has established a program to investigate, evaluate and report on these conditions with LP&L and Ebasco Q.A. concurrence."

Ebasco's review of the above document determined that: a) The initiator was terminated on the same date the NCR was initiated. b) Since the time this NCR was initiated, numerous efforts have been undertaken to verify that as-built field conditions do in fact reflect the Mercury as-built drawings:

- 1) Ebasco Q.C. verification of supports per procedure ECRRI-3. A total of 1852 supports were inspected for configuration, dimensions, location, amount of weldment.
- 2) LP&L Construction Q.A. walkdown during the status review of turnover of systems. This consisted of 114 instrument supports.
- 3) All NI (approximately 1600) supports were inspected and documented in accordance with LP&L procedure QASP-19.15.

VIOLATION V
(Continued)

A.

- 4) Mercury NCR-3578 was upgraded to Ebasco NCR-W3-6512 which generically addressed traceability of Mercury supports.

Based on the above efforts and the resulting documentation, the concern stated on the NCR was considered resolved.

NCR-2734

Maximum lengths 4" x 3" x $\frac{1}{2}$ " angle were exceeded on supports 8-000-H-013N, 17-000-H-008N, 18-000-H-013N by 1", 2" and 4" respectively. Mercury failed to process this NCR.

Ebasco initiated CIWA 018917 to evaluate the cited problem and found it to be acceptable. LP&L has concurred with the ESSE evaluation.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

The Operations Phase QA program provides an improved means to identify, track and resolve quality problems. The quality deficiency identification mechanisms provide an expanded and controlled tracking system. Reference the "Collective Significance" document contain within our response to the Prelicensing issues.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION V
(Continued)

- B. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The cause for the majority of the Ebasco NCR deficiencies was the manner in which NCRs were logged and tracked prior to June 1979. The manual system implemented prior to that date provided less information as to the status of NCRs than the later system; however, it should be noted that the system was capable of maintaining accountability.

The probable cause for the remaining Ebasco NCRs was that, from late 1982 to September 1983, Ebasco QA engineers were located in a "satellite" office in the Mercury complex. When a Mercury NCR was generated and assigned a unique Mercury NCR number, the "satellite" office Ebasco QA engineer would request an Ebasco NCR number by telephone to assign to the Mercury NCR. This was in contrast to normal practice of assigning a number when the Ebasco NCR was written. In some instances this request was duplicated by another Ebasco QA Engineer, perhaps on second shift. The net result was that two Ebasco NCRs were issued to address the same Mercury NCR. One Ebasco NCR thus would be used; one would not. This situation was later corrected by assigning a block of Ebasco NCR numbers for use by the "satellite" office.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

An accountability review was conducted for closed or voided NCRs (both site and Ebasco New York Office (NYO) issued). In certain cases NCR numbers were assigned and the associated NCRs were cancelled or voided; in other cases the investigation concluded that NCR numbers within the sequential numbering of Ebasco site issued NCRs were not assigned to an NCR. The review concluded that Ebasco NCRs were properly accounted for.

Of the 10 Ebasco NCR deficiency examples identified by the NRC, LP&L investigations concluded that:

Four (4) NCRs were entered into a manual log system with a general subject and a void and/or void date notation and were not issued. Copies of these NCRs were not located.

VIOLATION V
(Continued)

B.

Four (4) NCRs were entered into a manual log system with a general subject and a void and/or void date notation. Copies of these NCRs were located and it was determined that the NCRs were properly voided. The QA records vault index was appropriately updated.

One (1) NCR was appropriately filed in the QA records vault. The manual tracking log properly indicated it as voided.

One (1) Non-Safety NCR, was properly renumbered to indicate a non-safety related designation and was located in the appropriate file.

Other NCR logging system deficiencies were identified and resolved by LP&L and were summarized in the LP&L response to the Prelicensing Assessment Issue number 13.

The review compared information from the NCR tracking mechanisms with the NCR card index files located in the Site QA Records Vault in order to identify additional closed or voided NCRs that were not on file in the vault. Emphasis was placed on NCRs which were indicated by the tracking mechanisms as being void. For each case where an index card was not on file, but for which the corresponding NCR record (original or copy) was actually located on the file in the vault, an appropriate index card was prepared and filed. For each case where neither index card nor a corresponding NCR record (original or copy) was located on file in the vault, a review was performed to either obtain the missing NCR or determine if it was ever issued.

The review and investigation of the more than 8200 closed or voided Ebasco NCRs concluded that all were accounted for. The fact that all of the NCRs issued prior to the establishment of the improved tracking system indicates that the current system has provided improved control.

VIOLATION V
(Continued)

- B. 4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

The Operations Phase QA program provides for an improved means to identify, track and resolve quality problems. The quality deficiency identification mechanisms provide an expanded and controlled tracking system. Reference the "Collective Significance" document contained within our response to the Prelicensing Issues.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

NOTE: This response to Violation V B contains excerpts from the response to the Prelicensing Assessment Issue No. 13, which should be referenced for further detail.

VIOLATION V
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation.

Chicago Bridge & Iron's contract had no QA requirements for protective coating applications inside the containment; hence, therefore, CB&I did not maintain records of coating materials purchased from Carboline. LP&L feels that this violation is subsumed by Violation IV.

VIOLATION V
(Continued)

D.

1. Admission or denial of the alleged violations:

RESPONSE

LP&L admits the violation

2. Reasons for the violation, if admitted:

Implementation of ANSI N45.2.6-1973 allows substitution for education and experience levels by noting that "... education and experience requirements specified for the various levels should not be treated as absolute when other factors provide reasonable assurance that a person can competently perform a particular task." GEO and its predecessor organizations issued certifications of qualifications for testing personnel under successive programs which employed such substitutions and which became more detailed and better documented with time. The program in place since 1978 generally parallels the ANSI Standard for inspector certification. However, the verification program revealed that verification of background data was not adequate or documented, documentation of the justification for substitution of other factors for the requisite degree of training, education or experience was sometimes not provided, lacked depth, was not totally in accordance with contractor procedures or the ANSI standard, as currently interpreted.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

As requested, LP&L pursued and obtained additional information on the GEO individuals performing inspections and tests. A verification program was implemented to review the professional credentials of 100% of the site QA/QC personnel who may have performed safety-related functions at Waterford 3, including supervisors, managers and remaining QA/QC personnel. Assessment of the qualifications of all GEO Construction Material Testing (CMT) personnel, was a part of that verification program.

VIOLATION V
(Continued)

D.

The program, which was performed under the overall direction of LP&L, consisted of three major elements:

- o Collection and verification of personnel data.
- o Evaluation of qualifications against specified standards.
- o Dispositioning of deficiencies resulting from cases where inspections, tests or data collection were conducted by personnel whose qualifications against the appropriate standards could not be confirmed.

Personnel data were collected from various sources, including site files, contractor home office files, personnel contact with individuals or supervisors and a thorough background verification program.

Efforts were made to verify the education and work experience of 100% of the GEO-CMT QA/QC personnel by researching Waterford 3 GEO-CMT records and by contacting schools, former employers and others.

QA/QC personnel data were evaluated in order to classify individuals as either having verified qualifications or not. Training, education and work experience were the qualifications of primary concern. These qualifications were verified against the following criteria:

- (1) Inspectors - ANSI N45.2.6-1973
- (2) Other QA/QC Personnel - QA Program requirements

For those individuals found "unqualified" the LP&L review board initiated Corrective Action Requests (CAR) to formally disposition the identified deficiencies. A statistical analysis was conducted, using industry standard techniques, to evaluate test results for concrete and the class A backfill to determine the adequacy of the work performed by the questionable individuals. In the case of concrete both the overall and within-test coefficients of variation demonstrated excellent control of the product which would not be the case had the tests not been well conducted. Backfill test results also demonstrate good consistency. A review of cadweld data and test results described in Issue 11 indicates reliability of the test data and confirms the adequacy of the cadweld testing. This evaluation verifies the overall adequacy of the work of all levels, Levels (I, II and III) of GEO-CMT QC personnel.

VIOLATION V
D
(Continued)

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

During the Operational Phase, LP&L and contractor inspection personnel will be certified to ANSI N45.2.6-1978 and Regulatory Guide 1.58 Rev. 1. Prior to certification a background investigation must be satisfactorily completed documenting a candidate's education and employment experience. Additionally, records generated to support personnel qualifications are retained in accordance with approved LP&L Administrative procedures.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

NOTE: This response to Violation V-D contains excerpts from the response to the Prelicensing Assessment. Issue No. 20, which should be referenced for further detail.

VIOLATION V
(Continued)

E.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

NOTE: Sheet "3 of 5" should read "5 of 5". Concrete placement package 593-S01-16 should read 499-S03-16.

2. Reasons for the violation, if admitted:

RESPONSE

Concrete Test Record, Sheet 5 of 5 of Concrete Placement Package 499-S03-16 was lost.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

On May 1, 1984, Concrete Test Record, Sheet 5 of 5 of Concrete Placement Package 499-S03-16 was reconstructed based on data contained on other QCIP-7-3 forms, QCIP-7-3a Forms and Concrete Batch Tickets and annotated as such.

The 100% documentation review by Ebasco and LP&L proved the concrete placement records were adequate.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Documentation (objective evidence of acceptance) requirements during plant operation are defined in drawings, specifications and procedures. Review of documentation requirements associated with station modifications is an integral part of the operations phase design process.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION V
(Continued)

- F. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

Concrete placement number 593-S01-UZ4FHAA was entered into the left hand corner of a copy of the Concrete Curing Log for concrete placement 593-S01-UZ3ZAA and used as the documentation for Concrete Curing Log for concrete placement 593-S01-UZ4FHAA. The reason for this was that the original concrete curing documentation for 593-S01-UZ4FHAA was lost. Since the two concrete columns were placed on the same day and were adjacent to one another in the Fuel Handling Building their curing conditions would have been similar.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

A letter was placed in the concrete placement package for 593-S01-UZ4FHAA to properly note the lost document and its similarity to the adjacent placement document.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

See our response to Violation V.E.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION V
(Continued)

- G. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

Records correlation had not been completed. Some were in the Ebasco vaults and some had not yet been obtained from the contractor who was still onsite and active.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

LP&L reviewed the soils packages for completeness and technical adequacy, located the items found missing by the NRC staff, identified those soil volumes for which complete records were not found, and has justified by analysis that the structural capability of the plant under seismic loads is assured. A detailed engineering report was prepared describing the review and analysis of the soil backfill densities, which reconfirmed the adequacy of the backfill. This was also repeatedly demonstrated in the seven (7) statistical studies of backfill densities performed during the construction period, which showed control of the work and that specification requirements were generally exceeded.

The complete set of laboratory test records, along with the engineering report and corresponding documents, were transmitted to the LP&L-Ebasco Quality Assurance Records Vault.

The remaining site subcontractor records for completed work were also transferred to Ebasco. Records for the minimal construction and testing activities are being turned over as work is completed. This will assure accessibility and retrievability of subcontractor records and ultimate turnover to LP&L in accordance with the established records turnover program.

VIOLATION V.
(Continued)

- G. 4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Records are processed upon completion of the activity and verified complete by cognizant supervisory personnel. Quality records during the operations phase are maintained by LP&L's Project Files. Nuclear Operations Procedure, NOP-003, "Records Management System" is currently awaiting signature and provides the site directions for the review, interim storage, transmittal, permanent storage and retrieval of QA Records.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION V
(Continued)

H.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated. SCD-78, dated March 29, 1983, identified deficiencies in American Bridge structural steel installations and documentation. Subsequently, the NRC identified that the corrective actions for this SCD were inadequately scoped. LP&L had failed to include American Bridge work on the framing for both steam generators. (Reference NRC Violation I.D) LP&L recognizes and agrees that corrective actions (scoping) were inadequate, but maintains that in place programs and procedures would have required proper reinspection and documentation if the SCD corrective actions had been scoped properly. Ebasco procedures ASP-IV-128 and 129 had been developed when SCD-78 was issued. These procedures would have been used and were, in fact, used after the scoping problem was brought to our attention.

VIOLATION V
(Continued)

- I. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violations, if admitted:

RESPONSE

LP&L was unable to determine how the records were lost.

3. Corrective steps that will be taken and the results achieved
(Includes confirmation of the completeness of the actions
taken to correct the cited examples):

RESPONSE

The missing concrete test documents were summaries of the
"Concrete Batch Ticket" and the "Concrete Physical Test"
documentation records. The missing summary sheets
("Concrete Test Record") were reconstructed utilizing
"Concrete Batch Ticket" and "Concrete Physical Test"
document records.

The 100% documentation review of concrete placement record
packages by Ebasco and LP&L revealed that the records were
adequate.

4. Corrective steps that will be taken to avoid further
violations (Includes changes to the quality assurance
program and implementing procedures to prevent similar
violations during future modification or maintenance
activities):

RESPONSE

See our response to V.E.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION V
(Continued)

J.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated. Due to the circumstances explained below, no record was required. The finding that curing information (pour 499-S04-8A1) for the final day (10/23/76) of curing, was not maintained on file per ANSI N45.2.9, as required, is incorrect for the following reasons:

Ebasco concrete curing log, dated 10/20/76, for placement 499-S04-8A1, identified a discrepant condition in curing (the top of wall was found dry), which resulted in DN-C-308 being initiated on 10/20/76. DN-C-308 was subsequently upgraded to an NCR (W3-236) on 10/22/76. In the interval of time between the initiation of DN-C-308 (10/20/76) and the initiation of NCR-W3-236 (10/22/76), additional curing time was being maintained as evidenced by JA Jones curing log. NCR-W3-236 was initiated, with a recommended disposition of accept as is, based on the fact that the J.A. Jones Project Engineer had inspected the concrete wall top surface which revealed no shrinkage cracking. This recommended disposition was accepted on the NCR by the Ebasco Concrete Hydraulics Engineer.

DN-C-308 was dispositioned in error on 10/20/76 to extend the cure time to four (4) days (from 10/20/76 through 10/23/76). With the issuance of W3-236, the NCR became the higher tier and controlling document. Since the NCR (W3-236) did not require any additional curing days, no additional reports were required to be maintained. The fact that additional curing time was not required was substantiated by Peabody Testing (GEO Construction Testing) Laboratory Report numbers A1078, A1080 and A0182. The Laboratory Reports individually stated the compressive strength of placement 499-S04-8A1 was in excess of 4,000 P.S.I.

VIOLATION VI Failure to Adequately Review Quality Assurance Records

Criterion XVII of 10 CFR 50, Appendix B requires that sufficient records be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and material analyses. The records shall also include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data records, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Criterion V of 10 CFR 50, Appendix B requires that activities be accomplished in accordance with procedures appropriate to the circumstances.

Ebasco QA Instruction QAI-9, "Review and Handling of Construction - Installation Records,:" describes the requirements that QA records must be reviewed for to verify their acceptability.

Contrary to the above, the following QA record deficiencies should have been identified and corrected during Ebasco's QA document reviews that were performed to verify their acceptability.

- A. Deficiencies existed in N1 instrument records of installation and inspection in zones classified under ANSI B31.1 prior to April 7, 1982. The record deficiencies included weld reports, welder identification, weld filler material, base material, and weld inspection reports.

Ref: SSER-7:A-197.

- B. QC inspection welds records for the instrument cabinet support structures inside the containment building do not indicate if the welds were accomplished by welders working in positions for which they were qualified.

Ref: SSER-7:A-160.

- C. Component cooling water (CCW) system structure (cooling tower) pour package (499-S04-1A3 and 1A4), test values slightly exceeding specification was recorded but not identified as being nonconforming conditions.

Ref: CAT, Section V.B.1

VIOLATION VI
(Continued)

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted.

RESPONSE

It was not recognized that quality records required by 10 CFR 50, Appendix B sometimes exceed the record keeping requirements of industry codes.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

N1 instrument installation documentation was reviewed and analyzed. Fourteen locally mounted and four cabinet mounted instruments were reworked to ASME code requirements prior to fuel load (Reference Final Response to Prelicensing Assessment Issue No. 2).

4. Corrective Steps that will be taken to avoid further violations (Includes the changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Documentation (objective evidence of acceptance) requirements during plant operation are defined in drawings, specifications and procedures. Review of the Station Modification Package and its associated documentation is an integral part of the operations phase design process.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION VI
(Continued)

B

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation

2. Reasons for the violation, if admitted:

RESPONSE

The cause of this situation concerning documentation and quality of work on the RCB instrument cabinet supports is believed to have been a combination of several factors that by themselves had no adverse effects, but as uniquely combined in the instrument cabinet work, resulted in the deficiencies noted by the NRC. These factors were:

- (1) Limited welding performed by J. A. Jones provided limited opportunity for detecting any adverse condition in the welding program.
- (2) A "Welding Inspection Report" (WIR) format that did not ensure documentation of inspection on an individual weld basis.
- (3) Numerous revisions to the FCRs used for installing the instrument cabinet support steel. In some cases as many as three separate FCRs were required to complete the installation of steel for a single cabinet.
- (4) Frequent modification/removal/reinstallation of support steel as a result of (3) above.
- (5) Due to (3) and (4) above, the installation required an inordinate length of time, with different welders involved in small portions of the overall job for each cabinet support.

The WIR used by J. A. Jones was, in retrospect, inadequate to deal with this combination of problems confined to these supports. As a result, a portion of the welding associated with the instrument cabinets may not have been inspected and deficiencies were not documented and corrected.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

VIOLATION VI
(Continued)

RESPONSE

To determine that no welders welded out of a qualified position, a thorough review was conducted of Weld Inspection Reports (WIRs) associated with the support steel for the RCB instrument cabinets. This review determined that for 11 of the 18 instrument cabinets, the WIRs indicated the welders were all qualified.

For the remaining seven cabinets documentation was not complete. Accordingly, it could not be conclusively established that no welders welded out of a qualified position. To confirm the integrity of the welding associated with these seven cabinet supports, a complete reinspection of six cabinet supports (welds on cabinet C-2B were inaccessible) was performed. The results of this inspection are documented in Attachment 9 of NCR 7549. The inspection revealed conditions which required engineering evaluation. However, the evaluation confirmed the capability of the support steel to perform its safety functions under design conditions including seismic loads required by the FSAR. No rework was required.

Based on the inspection results of the six cabinets, LP&L elected to reinspect the other 11 cabinets. Conditions requiring engineering evaluation were documented. The evaluations confirmed the as-built condition to be acceptable with no rework required. Based on partial documentation of welding on cabinet C-2B and the acceptable evaluation of the other 17 cabinets, no further evaluation of C-2B is necessary.

The following summarizes the conclusions reached from reinspection and evaluation of the instrument cabinets.

- (1) Documentation for inspection of welding on the RCB instrument cabinet supports was not complete.
- (2) A review of the available documentation revealed no cases where out-of-position welding occurred. The J. A. Jones weld inspection procedure included instructions for completing WIRs that required a check of the welders certifications, and very few Jones welders were not qualified to all positions. This review provided reasonable assurance that no J. A. Jones welders performed welding in positions for which they were not qualified.

VIOLATION VI
(Continued)

- (3) In any instances where out-of-position welding may have occurred, the complete reinspection and subsequent evaluation of the as-built condition confirmed its adequacy.
4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

To avoid reoccurrence, as work is completed, records will be verified as complete against the scope of work.

Additionally, any change in scope of the contractor's responsibilities will initiate an LP&L review of the applicable portions of the contractor's QA program similar to that which is required for a new contract. Such review will include document generation requirements.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION VI
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation. The test values slightly exceeded the specification concerning two pour packages, however, the actual nonconforming condition was improper use of design control. A letter was utilized to change or augment design tolerances in lieu of a Field Change Request (FCR).

2. Reasons for the violation, if admitted:

RESPONSE

Peabody Testing (now Unitech Testing) identified the reports (14631 & 14616) as acceptable because they were instructed by letter from Engineering to accept the increased percentages of slump and air. The increased air & slump was to compensate for a loss of slump and entrained air in the concrete due to the increased summer time temperatures.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

D.N. SQ-2858 and NCR W3-7669 were issued to identify the discrepancy. The NCR was dispositioned to issue Field Change Request (FCR) CH-1450, which provided proper design controls. NCR W3-7669 was reviewed by QA and closed on May 4, 1984. (Attachment 1, NCR W3-7669; 13 pages) Peabody Testing (Unitech Testing) lab reports, A2203 & A2204, for pour 499-S04-1A3 & 1A4, were reviewed for compressive strength. Each of the lab reports indicated the compressive strength of the concrete exceeded 4,000 P.S.I.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

The two instances noted above, as well as the use of a memo instead of a DCN or FCR were considered isolated cases. No quality assurance program or procedure changes were required.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION VII Improper Welder Certification

Criterion XVI of 10 CFR 50, Appendix B requires that measures be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

LP&L QA Manual Section QR 9.0, revision 2, "Control of Special Processes," requires that "Special process control records shall provide objective evidence that special processes were performed in compliance with approved special process control procedures by qualified personnel. Results of nondestructive examinations, inspections and tests shall be recorded in accordance with applicable codes, standards and specifications. Special process control shall be retained by vendor and/or supplied to LP&L as required by contract or purchase order. Qualifications records of procedures, equipment, and personnel associated with special processes shall be established, filed, and kept up-to-date."

Contrary to the above, the following examples of Mercury welder certification records indicated the welders were certified to welding procedures for which they were not qualified.

- A. Welder M-44 - Was originally qualified to WPS-B but the record had been retyped and incorrectly indicated the welder was qualified to WPS-Y. The NRC staff reviewed the welders' qualifications record, but could find no qualification to WPS-Y.
- B. Welder M-109 - The NRC Staff found that the welder's WPS-Y qualifications record was dated November 26, 1982, and voided October 22, 1983; however, the welder qualification status record did not show qualification or welding performed to WPS-Y.
- C. Welder M-9 - This welder's qualification status record reflected dates different than those recorded on the welder qualifications record for WPS-E. This record had been revised to change the qualification test date from December 18, 1979 to December 18, 1978. However, the welder qualification status record indicated the test was performed on December 18, 1979, as originally dated.
- D. Welder M-101 - This welder was originally qualified to WPS-B but the welder's qualification test record had been revised and the qualification changed to WPS-Y. The NRC staff reviewed the welder's qualification record, but could find no qualification to WPS-Y.

Ref: SSER-7:A-215.

VIOLATION VII
(Continued)

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated. Welders were certified to welding procedures for which they were qualified.

LP&L performed a review of all Mercury welders for proper qualification. This review was initiated in October 1983 as disposition to NCR-W3-7218. It concluded that, with a single exception, all Mercury welders making safety and seismic weldments were properly qualified, and had welded only in processes for which they were qualified. A single exception was identified, corrected and dispositioned via NCR-W3-7219. Since the NRC's special review, NCR-W3-7218 has been supplemented with an attachment which provided clearer and more auditable documentation of the review.

NCR-W3-7724 was issued as a result of concerns regarding discrepancies in Mercury welder qualification records noted by the NRC during the special review, and brought to LP&L's attention during a meeting on May 18, 1984. A review was conducted that confirmed that the documentation to support the proper welding procedure qualification of all Mercury welders was in order with the exception of three minor discrepancies which have been corrected.

Although the review conducted by LP&L via NCR-W3-7724 covered all Mercury welders, a specific response to questions regarding the qualifications of the welders identified by the NRC during the special review was generated. Included was a response to the three documentation discrepancies. (Reference Attachment 1 Prelicensing Assessment, Issue No. 22).

In the case of the welders cited by the NRC, documentation supports the fact that all welded in processes for which they were qualified, except for M315. This welder did perform a weld out of his qualification. The weld, however, was rejected in process by the Mercury QC inspector, and the weld was redone by a qualified welder.

VIOLATION VIII Failure to Properly Identify Conditions Adverse to Quality

Criterion XVI of 10 CFR 50, Appendix B, requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material, and equipment, and nonconformances are properly identified and corrected.

LP&L QA Manual Section 16.0, "Corrective Action," paragraph 16.2, requires, in part, that the major contractors and their suppliers establish written procedures for identifying, for determining the cause of, for evaluating, and for correcting conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances.

- A. Mercury Procedure SP-664, "Procedure for Handling of Nonconformances and Corrective Action," paragraph 5.0, requires that the individual or department that identifies a nonconforming condition initiate an NCR.

Contrary to the above, drawing 172-L-012-C, Revision 4, had a handwritten note which identified two lines, DPT-RC-9116 SMB (HP) and DPR-RC-9116 SMA (HP), where the line separation criteria had been violated for startup system (SUS) 52A. This condition was not addressed on an NCR until discussed with the licensee.

Ref: SSER-7:A-279.

- B. EBASCO Procedure ASP-III-7, "Corrective Action," Paragraph 6.2.1, requires, in part, that a nonconformance report be issued if the condition cannot be corrected within the scope of approved engineering drawings, specifications, or procedures, or if elaborate engineering evaluation is required, or involves items designed ASME Section III. Paragraph 4.3 of this procedure defines a nonconformance as "a condition in characteristic, documentation, or procedure which renders the quality of an item or service unacceptable or indeterminate. Examples of nonconformances include: physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed inspection or test procedures."

Contrary to the above, the following deficiencies were identified during performance of EBASCO Quality Assurance Instruction QAI 9, "Review of Handling of Construction - Installation Records:"

1. Q3-CC-1C-16 - 9.2 dated May 5, 1983, reviewed Item 1 - Torque wrench CT-339 was designated by field instructions for torquing of bolts to 90 ft/lbs. This wrench, designated for work between 0-600 ft/lbs. had not been calibrated for use in the lower range.

VIOLATION VIII
(Continued)

Resolution was "use as is" since the bolts are evenly torqued, but resolution did not address the problem with the calibration of the torque wrench. An NCR should have been issued.

2. Q2-ST-1C-89 - 9.2 dated March 24, 1983, reviewed Item 17 - Dravo certified material test report (CMTR) which indicated the piping material specified was 376TP304. The bill of material specified the material as 358TP304. An NCR should have been issued.
3. Q2-W3-ST-10-F/E - 9.2 reviewed Item 11 - Supplemental data was added to quality assurance records. The additions were neither initialed or dated, as required by ANSI N45.2.9, paragraph 3.2.6. An NCR should have been issued.
4. QMC-HYPO P11E - 9.2 reviewed Items 43, 78, 81 - Penetration test reports were generated as a result of the work required by CIWA 820914 and FCR 1490 R1 for the installation of seal rings in penetrations. The work performed was not inspected or documented. An NCR should have been issued.

*Refers to Quality Assurance Instruction QAI-9, Attachment 9.2, "Construction - Installation Records Deficiency Report."

Ref: SSER-7:A-05.

- C. T-B Procedure TPB-12, "Nonconformance and Discrepancies," states in Section 6.2, "DNs are required to be upgraded to Ebasco NCRs when the following criteria applies..." (as defined in Section 4.1)

"Nonconformance - A deficiency in characteristic, documentation or procedures which renders the quality of an item of service acceptable or indeterminate. Examples of a nonconformance include: physical defects; test failure; incorrect or inadequate documentation or deviation from prescribed inspection or test procedures, drawings, code and contract requirements."

Contrary to the above, T-B failed to upgrade DN's into Ebasco NCRs as required. The following DN's are examples that should have been upgraded:

1. T-B DN-5047 documented a welder using the wrong procedure to complete a weld. The procedure used was judged by a welding engineer to be metallurgically compatible with the correct procedure. Consequently, the weld record was revised after the completion of the

VIOLATION VIII
(Continued)

weld to require either the originally required procedure or the procedure used. This DN was never upgraded to an NCR.

2. T-B DN-W-728 documents a missed ANI witness hold point to a PT inspection. The inspection was redone with the ANI present. This incident was not upgraded to an NCR.
3. T-B DN-W-4112 documents 3000# couplings being installed where 6000# couplings were required. Engineering evaluated the installed material and determined its acceptability, but the nonconforming material was never upgraded to a nonconformance.

Ref: SSER-7:A-302.

VIOLATION VIII
(Continued)

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted:

RESPONSE

The primary cause of this problem was insufficient attention to the specified installation separation criteria by the installing contractor.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The violation was identified and dispositioned in NCR-W3-7702 (lines DPT-RC-9116SMB (HP) and DPT-RC-9116SMA (HP)) to remove the expansion loops. This permitted the instrument lines to be fully protected by their respective tube track. The expansion loops can be deleted because the actual tubing installations contain expanding legs and minimum (absorbing) legs which relieve the thermal stresses. This follows the criteria established on drawing B430 Sheet X23D through X23D.5. The calculations supporting the elimination of the loops were attached to NCR W3-7702. [These violations, had they remained uncorrected, would not have adversely affected plant safety. The instrumentation was installed solely for the purpose of providing protection for a Reactor Coolant Pump shaft break accident. This event would not generate any conditions such as gravity missiles, pipe whip or jet impingement that would disable these instrument lines.]

A full inspection of the instrument lines for the 8 RCP shaft break instruments (DPT-RC-9126SMA through DPT-RC-9126SMD, DPT-RC-9116SMC, DPT-RC-9116SMD, and the remainder of the loops for DPT-RC-9116SMA and DPT-RC-9116SMB not covered in NCR-W3-7702) was then conducted and NCR-W3-7730 was generated to disposition six areas of potential separation violations found on these lines. All were evaluated by Engineering and found acceptable. An additional sample of 45 instrument lines was then identified for reinspection to the separation criteria. This reinspection was documented as a supplement to NCR-W3-7730. The installations identified for reinspection were in areas of congestion where additional separation violations would most likely be found.

VIOLATION VIII
(Continued)

A.

In general, the separation requirement is 24 inches between exposed safety channels (N1 and N1) and safety and non-safety (N1 and N3) channels. The specific details and approved exceptions are delineated in Drawing B430 sheet X-23. The results of the reinspection indicated that for the 53 N1 instrument lines inspected under NCR-7730 there were 13 violations out of a total of 276 locations (expansion loops and exposed tubing). The Engineering evaluation of these violations indicated that no rework was required. These 13 violations were evaluated and found to be acceptable due to the lack of external threat (i.e., jet impingement or seismically induced missile) or due to the functional requirements of the instrumentation.

To provide full assurance that no separation criteria deficiencies existed which could affect plant safety, a QC verification of all lines where redundant tubing lines were run in proximity to each other was performed. This entailed a walkdown of 72 additional N1 instrument installations. Only one item requiring minor rework was identified during this walkdown. (Reference Prelicensing Assessment No. 3)

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Under the operations phase QA Program field run items will be minimized and controlled by procedure. The Station Modification Package (SMP) process includes a checklist of generic criteria to be addressed, including cable separation criteria. Additionally, the Detailed Construction Package will contain necessary acceptance criteria to direct the installer and inspector.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION VIII
(Continued)

- B. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the violation as stated.

Reasons for the denial are as follows:

Ebasco Procedure QAI-9, Rev. 2, paragraph 7.3.3 to 7.3.5 read as follows:

7.3.3 Deficiencies detected during the statusing review shall be corrected by the responsible organization to the extent possible prior to the cut off date established by the Lead Coordinator.

7.3.3.1 Deficiencies unable to be resolved prior to submittal for turnover shall be documented on attachment 4.2 - Form QAI-9.2 "Construction-Installation Records Deficiency" Report.

7.3.4 As a part of the statusing review a separate recommendation shall be made to identify potential hardware impacting deficiencies identified on the QAI-9.2 deficiency report. Ebasco Start-up shall review the QAI-9A.1 forms generated and determine potentially hardware impacting deficiencies for further processing.

7.3.5 Concerns regarding discrepancies in plant configuration shall be brought to the attention of the Ebasco QA Surveillance Group for action in accordance with Instruction QAI-15. Such concerns shall not be identified as QAI-9.2 deficiency items.

This procedure section provides adequate assurance that Ebasco 9.2 were reviewed for potential nonconforming conditions.

The violation examples cited are not considered by LP&L to have been potentially nonconforming, however, further clarification should have been provided with the 9.2 resolutions. The applicable clarifications are provided below for each example.

NOTE:

Correct Q3-CC-1C-16 to Q3-CC-1C-6.
 Correct date May 5, 1983 to May 27, 1983.
 Correct Q2-ST-1C-89 to Q2-SI-1C-89.
 Correct Q2-W3-ST-10-F/E to Q2-LW3-SI-10-F/E.
 Correct QMC-HVPO-P11E to QMC-HVPO-P11-E
 Correct FCR 1490R1 to FCR 1498R1

1. Q3-CC-1C-6 - 9.2 dated 5/27/83, item #1 was appropriately resolved. The torque wrench in question was of the incorrect range to perform the required torque values. The effective range of the CT-339 torque wrench was 120-600 ft/lbs. (Note: torque wrench ranges are limited to 20% of the nominal range due to calibration increments). This was further substantiated by the LP&L calibration sheet completed after the date of violation. The wrench (CT-339) was still within acceptable limits with no adjustment required. The flange bolts therefore, were retorqued by a lower range torque wrench (CT-413).
2. Q2-SI-1C-89 - 9.2 dated 3/24/83 which documents an incorrect revision of the material specification was not resolved, however, the weld records which contains the invalid correction were updated. The reason for the initial change in material specification is unclear. It appears that the change was made by an interim engineering review. It was subsequently verified that the material verified by QC and now listed on the applicable weld record did correctly reflect the specifications shown on the design drawing. Hardware was not affected by this clerical error.
3. Q2-LW3-SI-10-F/E - 9.2, item #11, documented the addition of a notation to CMTR's without initials or date did not render the hardware unacceptable or indeterminate. The notation referenced NCR 3860 which was changed to code case 242-1 on 5-19-83. The CMTR was subsequently reviewed to this code case and was found to be acceptable as noted by initials "R.C." (Richard Chinnici, Ebasco QA Records Reviewer) on 10-8-84.

VIOLATION VIII

B.

(Continued)

4. QMC-HVPO-F11-E - 9.2, items 43, 78 and 81 - The work performed, as explained in letters W3QAIRG-0434 and 13-F-3 (referenced in the 9.2 and contained in the installation package), was downgraded to a non-safety item, as it served no seismic or safety-related purpose, and therefore did not require safety related documentation.

VIOLATION VIII
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violations, if admitted:

RESPONSE

LP&L does not specifically know why NCRs were not written but suspects that it was because the deficiencies were considered minor and controllable without additional documentation and Ebasco review.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The three DN's (T-B-DN's-5047, 728 and 4112) noted in this violation were evaluated in our response to Prelicensing Assessment Issue No. 4 and found to be nonsignificant. The DN's were not upgraded to NCRs since all corrective actions were completed as specified on the DN.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

During the operations phase a uniform program for quality deficiency identification and resolution is employed. The Condition Identification and Work Authorization (CIWA) is the primary means of identification and implementation of corrective action at Waterford 3. The CIWA and other quality deficiency mechanism utilized by LP&L are further described in detail in Sections II.B.1.a-e in the "Collective Significance" document in our response to the Prelicensing Issues.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION IX Inadequate Procedures to Control Activities Affecting Quality

Criterion V of 10 CFR 50, Appendix B requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

LP&L QA Manual Section QP-5.0, Revision 2, "Instructions, Procedures, and Drawings," required that "Safety-related activities of LP&L and its major contractors shall be described in documented instructions, procedures, drawings, specifications, checklists, or manuals appropriate to the circumstances. Activities such as design, procurement, manufacturing, construction, installation, testing, inspection and auditing shall be accomplished in accordance with these documents."

Contrary to the above, review of the following procedures revealed that the instructions were inadequate to ensure that activities affecting quality were correctly executed.

- A. Ebasco Procedure ASP-IV-18, Issue Q, "Receiving, Storage, Issuing and Control of Welding Electrodes and Filler Materials," does not meet the storage and rebake requirements for storage of AWS A5.1 (7018), electrodes, as described by AWS D1.1-1980, to which Ebasco is committed. American Welding Society AWS D1.1-1980 requires that low hydrogen electrodes conforming to AWS A5.1 be purchased in hermetically sealed containers or be dried for at least 2 hours between 450°F and 500°F before they can be used. Electrodes shall be dried prior to use if the hermetically sealed container shows evidence of damage. Immediately after opening of the hermetically sealed container or removal of the electrodes from drying ovens, electrodes shall be stored in ovens held at a temperature of at least 250°F (120°C). After the opening of hermetically sealed containers or removal from drying or storage ovens, electrode exposure to the atmosphere shall not exceed 4 hours prior to being returned to the storage area. In the case that electrodes are exposed for a period greater than 4 hours, the electrodes are required to be redried.

Ebasco Procedure ASP-IV-18 requires that electrodes be stored in ovens of a temperature between 200-300°F for approximately 8 hours following removal from the hermetically sealed container and prior to use. Covered electrodes are not to be exposed to ambient temperatures for more than 4 hours and if unused are to be returned to the storage ovens for 8 hours prior to reissuance. No instruction are given for electrodes exposed for a period greater than 4 hours.

Ref: SSER-7:A-215.

VIOLATION IX
(Continued)

- B. LP&L Construction QA transferred systems to LP&L Operations without using approved procedures for conducting reviews prior to the transfer on or before March 22, 1984. An approved procedure was issued on March 22, 1984 for conducting these reviews.

Ref: IT:Sections II.A.1.m and III.A.5.c.

VIOLATION IX
(Continued)

A.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies the alleged violation that instructions were inadequate to ensure activities affecting quality were correctly executed.

Ebasco weld material control procedure, ASP-IV-18, never provided for rebaking weld rods, but did require all low hydrogen electrodes be redried or destroyed if the 4 hour AWS code exposure limit was exceeded. This method was used to provide adequate drying using conventional rod ovens as opposed to rebake ovens which required higher temperatures. The required temperature and times did differ from AWS D1.1, however, they did meet ASME Section II, Part C, SFA 5.1, which is endorsed by AWS.

During the NRC CAT Inspection a "rebake" sign was seen on a weld oven. The sign was incorrect and misleading since because it indicated a process that was not used. The sign should have indicated a redry process.

In order to eliminate any doubts of the adequacy of the redrying process LP&L retained the weld rod manufacturer to duplicate this drying process which showed the technique to be adequate. Furthermore, the NRC staff previously determined that noted conditions had no safety significance or impact on hardware. (Reference SSER 9 "Discussion of 23 Issues as presented in the June 13, 1984 letter from D. G. Eisenhut (NRC) to J. M. Cain, LP&L, Issue 22.)"

The program was adequate to ensure that activities affecting quality were correctly executed; however, LP&L should have clarified code commitments in the FSAR.

VIOLATION IX
(Continued)

B.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation. The procedure being used to conduct reviews of system documentation had not been revised to include the transfer review process prior to March 22, 1984.

2. Reasons for the violation, if admitted:

RESPONSE

LP&L Construction QA performed "status" reviews of Start-up system documentation as required by procedure QP-17.5. The review process outlined in this procedure was essentially the same process used to perform "transfer" reviews with some minor changes. This procedure was revised and issued as QASP-17.5 Rev. 1 in March 1984. The revision process covered several months because of changes to the documentation review process. These changes were improvements to the review process which resulted in a more comprehensive review.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

QASP 17.5 was revised to specifically address the "transfer" review process. Also a detailed review of each comment generated during both "status" and "transfer" reviews was conducted by LP&L QA. This review revealed no additional problems.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

No additional corrective action is required since the review process for transferring systems is complete.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION X

Failure to Control Conditionally Released Equipment

Criterion XVII of 10 CFR 50, Appendix B requires that sufficient records be maintained to furnish evidence of activities affecting quality... The records shall also include closely-related data such as qualifications of personnel, procedures and equipment.

EBASCO Procedure ASP-IV-86, "Conditional Release of Nonconforming or Deficient Items," Section 6.1, requires, in part, that nonconforming or deficient items released on a conditional release basis be approved by the QC supervisor and assigned a QC log number.

Contrary to the above, a list of deficiencies associated with the conditional certification of equipment was found for equipment supplied by Combustion Engineering, Inc. (C-E). One conditional certification of equipment involved the reactor vessel and internals. This certification was issued because as-built drawings, material certifications, and the fabrication plans had not been forwarded when equipment was delivered to LP&L in 1976. This condition existed since July 25, 1976 until it was identified in April or May of 1984, indicating that the system used to control conditional releases was not adequate to ensure that all releases were appropriately approved and assigned. Furthermore, records were not sufficient to verify that all conditional releases have been identified.

Ref: SSER-7:A-165.

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation and acknowledges that Combustion Engineering Conditional Certifications of Equipment associated with Nuclear Steam Supply System (NSSS) were not formally tracked as open items.

2. Reasons for the violation, if admitted:

RESPONSE

The existence of Conditional Certifications of Equipment was not considered a problem because of the site's understanding that they reflected incompleted purchase orders as opposed to hardware or software deficiencies. This situation existed from the time of the original shipments of material and equipment from Combustion Engineering. The site did informally track the Conditional Certifications of Equipment as open items and the issuance of Conditional Certifications of Equipment was controlled under CE's QA program. In addition, letters were periodically sent to CE requesting the status and resolution of these items.

VIOLATION X
(Continued)

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

LP&L has reviewed their records to ensure that Conditional Certifications of Equipment and other conditional release conditions have been identified, reviewed and resolved. The following discussion outlines the results of the review.

Combustion Engineering

The quality records associated with Combustion Engineering material and equipment have been re-reviewed. An initial review concluded that Conditional Certifications of Equipment had been received for 45 purchase orders, and that for 31 of these, Combustion Engineering had provided Unconditional Certifications of Equipment prior to the audit. Ebasco Discrepancy Report 84-5-3 was prepared and issued on May 1, 1984, identifying the items for which Unconditional Certifications had not been received. This Deficiency Report was entered into the site tracking system.

During the validation process, the Pre-Licensing Issues Task Force Support Group identified two additional CE purchase orders for which unconditional certifications did not exist in the files. This finding prompted a 100% re-review of the quality records associated with CE material and equipment for the existence of conditional purchase orders which at one time had Conditional Certifications of Equipment. Of these, only one was still without an unconditional certification.

Unconditional Certifications have now been received for the 54 purchase orders, including the replacement copy of the unconditional certification for the Reactor Vessel Assembly. Although the probability was considered very low, there was a possibility that the operability of equipment could have been affected. A review was therefore performed for the 54 purchase purchase orders received with Conditional Certifications of Equipment. The review concluded that the ability of the equipment to perform their intended design functions was not compromised.

VIOLATION X
(Continued)

To provide further assurance, site activity associated with conditional certifications was assessed. As of August 7, 1984, LP&L operations had placed 69 purchase orders with CE for spare parts. Of these 69 purchase orders, one had a CE Conditional Certification. The equipment related to this Conditional Certification is being controlled by an LP&L QC Conditional Release in accordance with plant procedure QI-10-006.

4. Corrective steps that will taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

LP&L has addressed this concern generically. A review determined that adequate identification and control exists for vendor material being shipped to the site.

Any quality related material received on site with conditional certifications is tracked in accordance with the approved procedure for Discrepancy Notices (DN).

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has now been achieved.

VIOLATION XI Failure to Maintain Design Control

Criterion III of 10 CFR-50, Appendix B requires that measures be established for the identification and control of design interfaces and for coordination among participating design organizations for review, approval, release, distribution, and revision of documents involving design interfaces.

EBASCO Procedure ASP-IV-58, Revision E, "Attachment to Seismic Supports," requires added loads be reported to engineering for inclusion into the "Seismic Allowable Load Chart."

Contrary to the above, the NRC CAT examination of 28 seismic cable tray and HVAC Supports revealed that 18 exhibited loads were not shown on design documents and were not reported to engineering included in the "Seismic Allowable Load Chart."

The following cable tray supports exhibited this condition:

C-459	C-1406	C-1435
C-512	C-1407	C-1989
C-517	C-1418	C-8031
C-874	C-1428	C-2318
C-744	C-1429	33E838

Additionally, NRC CAT observed that six of the 15 supports listed above contained loads in excess of the stated allowable and should have been individually analyzed by engineering. These supports are:

C-1407	317% of allowable
C-1418	161% of allowable
C-1420	249% of allowable
C-1429	162% of allowable
C-1435	164% of allowable
C-2031	151% of allowable

Ref: CAT, Section VIII.B.4.

VIOLATION XI
(Continued)

1. Admission or denial of the alleged violation:

RESPONSE

LP&L denies that this violation represents a 10CFR50, Appendix B, Criterion III violation, since the design control program was in place but admits that approved procedures for design control were not followed or lacked clarity.

2. Reasons for the violation, if admitted:

RESPONSE

Procedure ASP-IV-58 was not followed or did not have sufficient administrative controls to ensure compliance by contractors and subcontractors installing additional attachments.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

A comprehensive walkdown and evaluation of the 3110 HVAC/cable tray seismic supports was conducted April 1984 in accordance with site procedure ASP-IV-143, "Procedure for Evaluation of Field Routed Attachments to Cable Trays/HVAC Seismic Supports." The seismic supports including the specific HVAC/cable tray seismic supports identified by the NRC to exhibit conditions of undocumented miscellaneous load attachments, were as-built to document all miscellaneous attachments, analyzed by Ebasco engineering and found to be acceptable.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

Ebasco Engineering is presently maintaining a file on each of 3110 HVAC/cable tray seismic supports which give the complete history of added attachments, total existing loads and total allowable loads. These files will be updated whenever a new attachment is made to a seismic support.

VIOLATION XI
(Continued)

Procedure ASP-IV-58 was initially revised to require that a copy of accepted ASP-IV-53-1 forms be included in the work package prior to submittal to QA. Site procedure for field run conduit supports was revised to enforce compliance with ASP-IV-58. QA Surveillance Programs were initiated to enforce compliance with ASP-IV-58. Procedure ASP-IV-58 was later replaced by EMP-1.08W3 entitled, "Procedure for Attachment to Seismic Supports" (considered a design input document in formulating SMPs). This procedure further consolidates the control of new attachments to cable tray/HVAC supports under the responsibility of the lead civil engineer. At present, the modifications in the plant are controlled by the LP&L Station Modification Program.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

VIOLATION XII Failure to Adequately Perform Document and Design Control Reviews

Criterion VI of CFR 50, Appendix B requires that measures be established to control the issuance of documents such as instructions, procedures and drawings including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is being performed.

LP&L Quality Assurance Manual, Section QR 6.0, Revision 2, "Document Control" paragraph 6.1 requires that "LP&L and its major contractors shall establish document control programs to control the review, approval, and issuance of documents, such as instructions, procedures, and drawings, including changes thereto, to assure that the documents are adequate and that the quality requirements are stated. . ."

Contrary to the above, discrepancies were identified with controlled documents as described in the following examples:

A. Drawing Stick Files

1. Drawings within the following design groups of Ebasco Site Services Engineering (ESSE) were not properly posted with the applicable Field Change Request (FCR) and Design Change Notice (DCN) numbers.

<u>Design Group</u>	<u>Dwg. No.</u>	<u>Rev.</u>	<u>FCR/DCN Not Posted</u>
ESSE Electrical	G310 sh4	6	DCN-E-1193
ESSE Electrical	G314	8	FCR-E-3192 R3 DCN-E-825 R4
ESSE Mechanical	G435 sh6	3	FCR-IC-P-602 DCN-IC-1247 R1

2. Drawing stick files which contained controlled drawings within the following design groups of ESSE were not kept current with respect to the latest drawing revisions.

<u>Design Group</u>	<u>Dwg. No.</u>	<u>Revision Found</u>	<u>Latest Revision</u>
ESSE Mechanical	G432 sh8	7	8
ESSE Mechanical	EMDRAC	3	4
4305 1893			
ESSE I&C Mech.	G161 sh2	6	14
ESSE I&C Mech.	G164 sh3	8	10
ESSE I&C Mech.	G164 sh4	Missing	2

VIOLATION XII

3. The following errors were identified in the Drawing Closeout Schedule of January 20, 1984.

<u>Drawing</u>	<u>Improper FCR/DCN Listing</u>	<u>FCR/DCN Not Listed But Outstanding</u>
G435 sh6 R3		FCR-IC-P-602
G190 sh3 R3	DCN-MP-704 R1	
G162 sh2 R11		FCR-MP-2474
G162 sh4 R1	FCR-MP-2474	
G310 sh2 R2	FCR-E-850	
G310 sh3 R3	DCN-E-1444	
G311 sh1 R8	DCN-E-1023	
G315 R6	FCR-E-533	DCN-E-1345 R2
	FCR-E-988 R3	
	FCR-E-1089	
	FCR-E-1188	
	DCN-E-463 R2	
	FCR-E-2567	
G319 sh1 R8		
G320 sh1 R8		FCR-E-1444
G320 sh1 R10		FCR-E-1444
G432 sh5 R7	DCN-IC-1179 R2	FCR-IC-P-37

B. General Specification MC-1, "General Specification Covering Installation of Mechanical Equipment."

1. A copy of specification MC-1 did not have the correct posting upon receipt from field Document Control. Specifically, the revisions to FCR-CH-110 were not posted.

The missed posting in Document Control occurred because the originating and reviewing organizations of FCR-CH-1101, Rev. 2 and Rev. 3 did not correctly identify that specification MC-1 was an affected document. As a consequence, Document Control could not properly post these two revisions against the document.

2. ESSE Mechanical's controlled copy of specification MC-1 did not have the following applicable FCRs posted:

FCR-M-13	FCR-M-110	FCR-M-118	FCR-M-123
FCR-M-129	FCR-M-196	FCR-CH-1237R1	FCR-M-1101R3

From a review of the dates of approval of these FCRs, it can be concluded that posting of applicable FCRs against specification MC-1 was not performed after April 4, 1981.

Ref: CAT, Section VII.B.1

VIOLATION XII
(Continued)

A & B

1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation.

2. Reasons for the violation, if admitted.

RESPONSE

Drawing stick file and specification MC-1 discrepancies (items A.1, A.2 and B.2) occurred as a result of inadequate drawing file maintenance by the responsible departments. Drawing Closeout Schedule discrepancies (item A.3) and incorrect posting of specification MC-1 (item B.1) occurred as a result of an inadequate system to provide verification and updating of design change information.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

The following initial and subsequent actions were taken and incorporated into Ebasco's Site Document Control procedure:

- A) The number of Ebasco Control Numbers used for maintaining and receiving controlled document distribution was reduced to three. These three control numbers were established as satellite document libraries.
- B) The personnel assigned responsibility for posting and maintaining drawing file documents distributed to the satellite libraries were assigned to Ebasco Document Control. Ebasco Document Control is now directly responsible for assuring that the drawings are properly posted and maintained.
- C) Ebasco Document Control is now responsible for updating the Drawing Closeout Schedule (DCS) which has since been incorporated into the Master Document List. The DCS/Master Document List identifies outstanding design changes and drawing revision numbers to assure concurrence with Document Control's records. The DCS was being updated and sent to Ebasco New York for incorporation and reissue. Now the DCS/Master Document List is totally maintained at the site and transmitted to New York monthly as a complete document. Ebasco designers in New York review the update DCS/Master Document List for accuracy and conformance to their records.

VIOLATION XII
(Continued)

A & B

- D) The responsibility revising nearly all the primary design drawings has now been transferred to the site. The site engineering group reviews the DCS as drawings are being revised and corrects any discrepancies between the DCS and the drawing revisions related to incorporation and/or still outstanding design changes.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

The following actions/programs have been instituted to avoid future violation:

- A) A standardized form was developed and made a mandatory part of all FCR/DCN's which identified specifically, by FCR/DCN revision, the affected design documents. This concept has been carried over to the LP&L SMP Program.
- B) A second form was developed for use by Engineering and others to identify and correct (only with Engineering's approval) erroneous or missing design posting information. This form was routed to Ebasco Document Control to assure that information was incorporated into the DCS and the controlled drawings. A similar form, adopted by LP&L Document Control, superseded the Ebasco form when LP&L Document Control assumed responsibility for site document control activities. No changes (other than the usual update changes generated by the issuance of design change documents or drawing revisions) are made to Ebasco's Master Document List, LP&L's automated database or controlled drawings without this change form.
- C) A review was made of all drawings relative to outstanding design posting during transfer of site Document Control responsibilities. This information was put into LP&L's automated document control system. Ebasco's DCS was reviewed for conformance to the same data provided to LP&L and controlled drawing files were audited to assure consistency with the DCS.
- D) Ebasco Document Control receives a monthly update of the DCS from Engineering. The update identifies additional design changes, new drawing revisions and incorporated design changes. This mark-up is cross checked with a file copy of the same issue of the DCS. The DCS has been marked-up by Ebasco Document Control during the month as design changes and/or drawing

VIOLATION XII
(Continued)

A & B

revisions were received through controlled distribution. Errors are identified and resolved prior to the issuing the next revision of the DCS.

- E) The Ebasco Master Document List and the LP&L automated database are cross checked by each Document Control organization monthly, to identify and resolve errors. These two documents are used as the baseline document against which controlled documents are audited.

This program of cross checking of independently maintained baseline documents should reduce the chance for error to well within acceptable limits and established a program where the time span for undetected errors is limited.

5. Date when full compliance will be achieved.

RESPONSE

LP&L is now in full compliance.

Violation XIII Failure to Implement an Adequate Inspection Program

Criterion X of 10 CFR 50, Appendix B requires that a program for inspection of activities affecting quality be established for and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.

LP&L QA Manual Section 10, "Inspection," paragraph 10.1 requires, in part, that LP&L's major contractors establish programs for inspection during manufacturing and construction to assure conformance with applicable instructions, procedures, drawings, specifications, and contract requirements.

Contrary to the above, the licensee did not ensure that an adequate inspection program was implemented by their contractors:

- A. For the verification of electrical raceway separations. This is established by the number of observed raceway cable trays and conduits, listed in Table I-1, which do not maintain the required separation between divisions.

SEPARATION VIOLATIONS

<u>This</u> <u>Raceway</u>	<u>Violates</u> <u>Separation</u>	<u>With This</u> <u>Raceway</u>	<u>This</u> <u>Raceway</u>	<u>Violates</u> <u>Separation</u>	<u>With This</u> <u>Raceway</u>
C205-B-NA		C202-SA	35073B-NB		C202-SB
C206K-NA		L202-SB	3001D-PA		34324-NA
C106-SA		C114-NB	3H051BA-SB		3H051AA-SA
L202B-SB		C206M-NB	3H051AB-SA		39148-NA
L201B-SA		C205B-NA	37855-SMB		36231-NB
31551H-SA		31551T-SB	37666-SMB		36379-SMA
P104-SB		30285-NA	32596B9-SA		3112981-SB
P-104-SB		30285C-NA	31246A-SB		31243A-SA
P104-SB		32087E-NA	31246B-SB		L208-NB
P104-SB		30287C-NA	31243B-SA		31246A-SB
C106D-NB		C102-SB	31243B-SA		35223-NB
L201B-SA		C205M-NA	31246A-SB		35D51A2-NA
C205M-NA		C201B-SA	32661D-SB		37709-NB
C205M-NA		P201B-SA	39956-SB		36225-NB
L203B-NA		C201B-SA	39956-SB		36226-NB
C205L-NA		L201-SA	L201D-SA		30203L-NB
C201A-SA		C205E-NA	L201D-SA		35210H-NA
C201A-SA		P204B-NA	39559-SA		34004-NAB
C201A-SA		L204-NA	39787-SA		398228-NB
C201A-SA		37798-NA	C202E-SB		3100X-NB

Violation XIII
(Continued)

<u>This</u> <u>Raceway</u>	<u>Violated</u> <u>Separation</u>	<u>With This</u> <u>Raceway</u>	<u>This</u> <u>Raceway</u>	<u>Violates</u> <u>Separation</u>	<u>With This</u> <u>Raceway</u>
C201A-SA		31172K-NB	C202D-SB		311004-NB
C202-SA		P204B-NA	C202D-SB		C201C-SAB
35261-SB		C102-SA	39578-SA		39821-SB
C102-SA		C103-SB	38743-SMC		L203-NB
C102-SA		32807R-NA	38743-SMC		L203D-NA
C102-SA		32807S-NA	35369-SB		L203D-NA
C102-SA		32810X-NA	37963-NA		C201-SAB
C102-SA		32810Y-NA	39851-SAB		3CPR005-NA
C102-SA		32810H-NA	3952L-SMA		39516A-SMD
C102-SA		32810S-NA	37243-SMD		37691-NB
C102-SA		32812N-NA	37172-SMA		30199M-NA
C105M-NA		C101C-SA	C204A-SA		36941-NA
C205-NA		C202-SA	C204A-SA		36942-NA
C203-NB		C202-SA	37666-SMB		37901-NA
32847F-NA		C202-SB			
3FD30A-NA		31509K-SB			

Ref: CAT, Section II.B.1

- B. To ensure that piping supports/restraints were constructed in accordance with design requirements.

Ref: CAT, Section III.B.2

- C. To ensure that HVAC restraints were inspected to the actual as-built configuration.

Ref: CAT, Section III.B.3

6Violation XIII
(Continued)

- A. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation. As a result, LP&L issued Significant Construction Deficiency No. 105.

NOTE: Of the observed raceway separation violations cited in Table I-1, there are four typographical errors as compared with those cited in CAT Section II.B.1. These are as follows:

<i>Raceway/Raceway</i>	<i>Should Be</i>	<i>Raceway/Raceway</i>
<i>P104-SB/30285-NA</i>		<i>P104-SB/30285E-NA</i>
<i>3001D-PA/34324-NA</i>		<i>30001D-PA/34324-NA</i>
<i>37666-SMB/37901-NA</i>		<i>37666-SMB/37091-NA</i>
<i>37666-SMB/36786-NB was omitted by NRC</i>		

2. Reasons for the violation, if admitted:

RESPONSE

The deviations were the result of:

- A) Construction activities (safety-related) subsequent to installation.
- B) Installation of non-safety field run conduit which did not require inspection for separation criteria.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

Attachment I tabulates those raceway separation violations, as cited in Table I-1 (incorporating the above corrections), and the resolution of the violations.

Several walkdowns and surveillances were conducted to identify the discrepancies. The LP&L QA walkdown, combined with NUS' independent walkdown, identified raceway separation discrepancies. The subsequent evaluation process to provide disposition for the deviations has been completed. The results were as follows:

- A) Minor modifications were completed by craft personnel, inspected by QA/QC and documented on the punch lists.
- B) Cable trays requiring covers or fire barrier material (as an alternate to metal tray covers at conduit entrance points and as a separation barrier on selected conduits) were identified and corrected per LP&L's CIWA program.

Violation XIII

A.

(Continued)

RESPONSE 3.

(Continued)

- C) Ebasco's procedure CP-764 (Installation of Electrical Conduit) as well as LP&L procedure ME-4-800 (Installation of Conduit and Boxes) were revised to require a QC inspection of non-safety related conduit installations to identify discrepancies in separation requirement. Engineering, Quality Control and Construction Supervision were trained in the separation criteria.

Pertinent documentation (i.e., CIWAs, punchlists, walkdowns, etc.) is provided as backup material to SCD 105.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

LP&L procedure ME-4-800 "Installation of Conduit and Boxes" and ME-4-802 "Hand Pulling Electrical Cable" require Plant Quality signoff for fulfillment of separation criteria as well as reinstallation of any tray covers or fire barriers that may have been removed in the work package.

5. Date when full compliance will be achieved.

RESPONSE

Full compliance has been achieved.

ATTACHMENT NO. 1

RESOLUTION OF SPECIFIC NRC OBSERVATIONS ON ELECTRICAL SEPARATION

<u>RACEWAY/RACEWAY</u>	<u>RESOLUTION (SEE INDEX)</u>	<u>RACEWAY/RACEWAY</u>	<u>RESOLUTION (SEE INDEX)</u>
C205B-NA/C202-SA	3	31243B-SA/35223-NB	2
C206K-NA/L202-SB	3	31246A-SB/35D51A2-NA	2
C106-SA/C114-NB	3	32661D-SB/37709-NB	2
L202B-SB/C206M-NB	3	39956-SP/36225-NB	2
L201B-SA/C205B-NA	2	39956-SB/36226-NB	2
31551H-SA/31551T-SB	2	L201D-SA/30203L-NB	1
P104-SB/30285E-NA*	1	L201D-SA/35210H-NA	1
P104-SB/30285C-NA	1	39559-SA/34004-NAB	1
P104-SB/32087E-NA	1	39787-SA/398228-NB	1
P104-SB/30287C-NA	1	C202E-SB/3100X-NB	5
C106D-NB/C102-SB	3	C202D-SB/311004-NB	5
L201B-SA/C205M-NA	3	C202D-SB/C201C-SAB	3
C205M-NA/C201B-SA	3	39578-SA/39821-SB	2
C205M-NA/P201B-SA	3	38743-SMC/L203-NB	2
L203B-NA/C201B-SA	3	38743-SMC/L203D-NA	5
C205L-NA/L201-SA	3	35369-SB/L203D-NA	2
C201A-SA/C205E-NA	3	37963-NA/C201-SAB	2
C201A-SA/P204B-NA	3	39851-SAB/3CPR005-NA	2
C201A-SA/L204-NA	3	3952L-SMA/39516A-SMD	2
C201A-SA/37798-NA	3	37243-SMD/37691-NB	2
C201A-SA/31172K-NB	3	37172-SMA/30199M-NA	2
C202-SA/P204B-NA	3	C204A-SA/36941-NA	1
35261-SB/C102-SA	3	C204A-SA/36942-NA	1
C102-SA/C103-SB	3	37666-SMB/37091-NA*	2
C102-SA/32807R-NA	1	37666-SMB/36786-NB*	2
C102-SA/32807S-NA	1		
C102-SA/32810X-NA	1	Index to Resolutions of NRC	
C102-SA/32810Y-NA	1	Observations	
C102-SA/32810H-NA	1	* Corrected Raceway ID.	
C102-SA/32810S-NA	1	1 - Fire Barrier Required	
C102-SA/32812N-NA	1	2 - Acceptable as per Engineering	
C105M-NA/C101C-SA	3	Evaluation	
C205-NA/C202-SA	3	3 - Tray Cover Required	
C203-SB/C202-SA	3	4 - Minerallic Strap Required	
32847F-NA/C202-SB	1	5 - Case could not be verified	
3FD30A-NA/31509K-SB	2	(i.e., subsequent field walkdown	
35073B-NB/C202-SB	1	could not verify separation	
30001D-PA/34324-NA*	2	violation)	
3H051BA-SB/3H051AA-SA	2		
3H051AB-SA/39148-NA	2		
37855-SMB/36231-NB	2		
37666-SMB/36379-SMA	2		
32596B9-SA/3112981-SB	2		
31246A-SB/31243A-SA	2		
31246B-SB/L208-NB	3		
31243B-SA/31246A-SB	2		

Violation XIII
(Continued)

- B. 1. Admission or denial of the alleged violation:

RESPONSE

LP&L admits the violation as stated.

2. Reasons for the violation, if admitted:

RESPONSE

- A) Damage caused by work activity subsequent to installation.
- B) Previous piping inspection was not totally effective.

3. Corrective steps that will be taken and the results achieved (Includes confirmation of the completeness of the actions taken to correct the cited examples):

RESPONSE

An inspection program was initiated under LP&L procedure QASP 19.7, "QA Inspection of Pipe Hangers." This program was established to uniformly identify discrepancies from pipe support installations, evaluate the findings, correct any discrepancies and document the results. The inspection teams were trained/indoctrinated to the QASP 19.7 procedure.

This inspection program identified no extensive structural integrity problems on installed and accepted support/restraints. There were no findings of safety significance as a result of the QASP 19.7 inspections. The results of the final inspection program are documented and maintained by LP&L.

4. Corrective steps that will be taken to avoid further violations (Includes changes to the quality assurance program and implementing procedures to prevent similar violations during future modification or maintenance activities):

RESPONSE

During the operational phase of the plant, procedure MM-12-001, "Pipe Hanger/Support Installations," will control the installation, removal, modification or repair of pipe supports. Any damage to the support installation or any discrepancy that is identified will be resolved utilizing procedure UNT-5-002, "Condition Identification and Work Authorization.

5. Date when full compliance will be achieved.

RESPONSE

All work associated with CIWA 15625 is complete, however remains open pending Plant Quality verification of ball bushing installation on hanger F-SRR-321.

Full compliance shall be accomplished prior to completion of first refueling.

Violation XIII
(Continued)

- C. 1. Admission or denial of the alleged violation:

RESPONSE

The alleged violation as stated is denied.

All cases noted in the CAT Audit were installations that conformed to the alternate installation details as shown on Ebasco design drawings, but did not conform to the contractor (Waldinger) generated "fabrication tickets" (shop fabrication drawings) which reflected basic design details. These contractor generated "fabrication tickets" were considered supplementary to the Ebasco (Contract) design drawings (which is noted on many of the Waldinger drawings), therefore acceptance of the modified connection based on alternate allowable design drawings was valid with regard to procedure requirements.

Discussions with former Waldinger QC inspectors confirms the inspectors would accept deviations from the "fabrication tickets" if the item still met the allowable requirements of the design drawings.

We believe the inspection program implemented by Waldinger to inspect the HVAC restraints in their "as-built" configuration was adequate in that all restraints met or exceeded the engineering design requirements.

Waldinger's procedure should have stated that inspection criteria could be either "fabrication tickets" or "design drawings" which would have prevented the CAT Audit finding and this alleged violation. It should be noted that the CAT Audit was performed approximately four years after The Waldinger Company had been replaced by Ebasco as the HVAC contractor and that TWC procedures were retired at the time TWC left the Waterford site. Revision of the procedure was not deemed appropriate or necessary due to the CAT Audit.

D. REQUEST FOR REDUCTION OF CIVIL PENALTY

This section describes the reasons why LP&L believes that the proposed Civil Penalty of \$130,000.00 should be reduced. It provides facts pertaining to certain violations (or examples within violations) that were admitted in Section C. LP&L feels that these facts are pertinent to mitigation because they indicate that the specific violation has no safety significance and/or are consistent with mitigating factors contained in 10 CFR2, Appendix C.

In addition, our Section C describes certain violations which we denied. LP&L believes that the facts pertaining to these two groups indicates the need for NRC review and subsequent mitigation.

The following violations were admitted and discussed in Section C:

Violation II

Because of the potential severity of this violation, LP&L initiated and completed a prompt, intensive and exhaustive course of action. As stated in our response, a verification program was developed for 100% of the QA/QC personnel ever employed during the construction phase of Waterford 3 who performed safety related activities. The bulk of the program was carried out by LP&L and supplemented by Ebasco. Additionally, NUS Corporation provided an independent overview of the program. Our conclusions, as communicated in the "Collective Significance" document as part of our response to the Pre-licensing Assessment stated that with the exception of the Mercury Company the disposition of most deficiencies identified in Prelicensing Assessment Issues Nos. 1 and 10 did not require any reinspection. For Issue 20, an engineering evaluation of the work of CMT personnel established that questions about personnel qualifications did not render the work indeterminate. Many other methods (e.g., ANI, NDE, prerequisite preoperations/integrated testing, overinspections, etc.) provide assurance that quality has been built into the plant. No safety significant hardware changes were required and this provided positive evidence as to the adequacy of the overall Construction QA Program.

Violations III.A. and III.B.

LP&L believes that our actions for the admitted and denied violations concerning Ebasco NCRs were intensive and comprehensive. At the Corporate QA Managers direction, an LP&L Operations QA Audit

(SA-W3-QA-84-06) was performed from January 24, 1984 through January 30, 1984. The assigned auditors reviewed approximately 1100 Ebasco NCRs. After the audit a larger group of LP&L Operations QA personnel continued a screening review of 100% of Ebasco and subcontractor NCRs. Throughout the year (1984) 100% of all contractor NCRs were reviewed to varying degrees. Approximately 10% were reviewed in depth. Our auditing and review effort revealed only minor problems. For example, not all NCRs had supporting documentation directly attached to the NCR; some NCRs did not properly reference supporting documentation; and few NCR dispositions were questionable as stated on the NCR and required further explanation. Very little reconfirming inspection was required and even less hardware rework was needed. No significant conditions were identified. Conclusions drawn by the NRC concerning contractor NCRs were similar to those of LP&L. (Reference SER, Supplement 9, pages 31, 33, 34 and 35).

Violation IV.

LP&L believes that this violation warrants mitigation due to the following extenuating circumstances. Corrective actions, as defined in our response, were extensive. Deficiencies associated with this violation were reported to the NRC as Significant Construction Deficiency - SCD-56. All corrective actions are complete.

Violation V.A. and V. B.

LP&L now recognizes that accountability measures for Ebasco and Mercury NCRs could have been enhanced early in the construction phase. However, our review revealed that these two violations had no impact on actual hardware installations and, all closed or voided Ebasco and Mercury NCRs were accounted for. Conclusions drawn by the NRC concerning accountability measures were similar to those of LP&L. (Reference SER, Supplement 9, page 60).

Violation V. D.

This violation is similar to Violation II. Our extensive corrective actions for inspector qualification and certification were explained for Violation II.

Violations V. E., V. F., V. G., and V. I.

LP&L believes that these violations represented isolated and minor examples of missing documentation. Documentation noted by NRC to be missing was found (V.G.) or the associated hardware was determined to be adequate based on evaluation or reconstruction of other associated documentation

(V.E, F, G, I). In addition, for violations V.E. and V.I., Ebasco and LP&L performed a review of 100% of the concrete placement packages to assure overall program adequacy. For violation V.G. an extensive analysis was performed and concluded that soil backfill was capable of resisting all imposed loads including seismic effects.

Violations VI. A; VI. B and VI. C.

These violations identified either a misinterpretation of requirements (VI.A) or isolated instances where in place design control requirements were not followed (VI. B; C.) LP&L believes that its actions were prompt and extensive in resolving these violations.

Violation VIII.A.

As noted in our response, an NCR should have been written. However, no adverse safety impact would have resulted had this deficiency gone undetected. As explained in our responses to the violation and to Prelicensing Assessment Issue No. 3, our corrective actions were prompt and extensive.

Violation VIII.C.

LP&L recognizes that the three DNs cited in this violation were only examples of the NRC concern identified in Prelicensing Assessment Issue No. 4. Our response to that issue revealed that no conditions were found which required physical plant changes. Additionally, no lower tier documents (including T-B DNG) that were judged to warrant processing as an NCR described conditions which, if left uncorrected, would adversely affect plant safety. Upgrading the documents (to NCRs) would not have changed the dispositions or corrective actions. Finally, concerning the review of the sampled documents (including TB-DNs), no defects (a hardware deficiency, if left uncorrected, would adversely affect safety) were found and on that basis there was a confidence level of 95% that 98% of the total population neither described conditions that have safety significance nor met reportability criteria of 10CFR50.55(e) and 10CFR21. Conclusions drawn by the NRC were similar to those of LP&L. (Reference SER, Supplement 9, page 26)

Violation IX.B.

As stated in our response to the violation, the procedure used by LP&L Construction QA for "transfer" reviews was not approved until March 22, 1984. However, our extensive reviews found no adverse safety conditions existed as a result of using the unapproved procedure. In addition to our reviews outlined in the response to Prelicensing Assessment Issue No. 21, an additional confirming review was completed by LP&L. This review compiled approximately 30 volumes of transfer and turnover documentation

for 21 plant systems. The majority of those systems were safety related. The review concluded that no preoperational testing was adversely affected or invalidated and that no issues adversely affected system operability. Conclusions drawn by the NRC were similar to those of LP&L. (Reference SER, Supplement 9, page 78)

Violation X

LP&L believes that our actions were extensive and that our reviews found no adverse safety condition existed. As stated in our response to the Prelicensing Assessment Issue No. 5 "... all items potentially affecting plant systems are being properly controlled on site." This evaluation was made not only concerning Combustion Engineering, but also for other contractors identified in our response.

The following list of violations were denied and explained in Section C:

III.A. NCR-7139	III.B. NCR-363
III.A. NCR-6159	III.B. NCR-554
III.A. NCR-7547	III.B. NCR-658
III.A. NCR-1650	III.C.
III.A. NCR-6165	V.C.
III.A. NCR-6514	V.H.
III.A. NCR-4219	V.J.
III.A. NCR-7724	VII.
III.A. NCR-6719	VIII.B.
III.A. NCR-7180	IX.A.
NCR-7181	XIII.C.
NCR-7182	
NCR-7184	
NCR-6723	

E. OPERATIONAL QA PROGRAM SUMMARY

1 Introduction

This section of LP&L's response to EA 85-10 discusses management controls established under the Operational QA Program with regards to 10 CFR50, Appendix B criteria that relate to the expressed items of violation. The information that follows demonstrates that LP&L has a comprehensive program for the assurance of quality for the operating phase of Waterford 3.

LP&L initiated its operational QA program several years prior to the issuance of the operating license. The NRC Staff evaluated the operational QA program description (FSAR 17.2) submitted January 13, 1984 and concluded in SSER No. 6, dated June 1984, that "the applicants description of the QA program is in compliance with applicable NRC regulations". This program has been inspected for implementation by NRC and for effectiveness by INPO. No significant uncorrected program or implementation deficiencies have been identified as a result of these reviews.

The Nuclear Operations Quality Program is applied to activities affecting the quality of those items which prevent or mitigate the consequences of postulated accidents which could cause undue risk to public health and safety. Those activities include plant operation, maintenance, repair, modification and refueling.

LP&L senior management is strongly committed to maintaining Waterford - 3 quality and believes the Operational QA Program exceeds regulatory requirements and standards. LP&L has continually refined programs in the interest of meeting the highest plant safety and performance standards. Although some of these refinements (See Section A) were made as a result of construction lessons learned, however, several were initiated because of management's recognition and desire to enhance overall safety and efficiency.

The following selected elements of the Operational QA Program that relate to EA 85-10 are described in this Section:

- a. LP&L Nuclear Operations Organization;
- b. Operational QA Program;
- c. Design Control;
- d. Instruction, Procedures, and Drawings;
- e. Document Control;
- f. Control of Special Processes;
- g. Inspection;
- h. Corrective Action, and
- i. Records

2. LP&L Nuclear Operations Organization

LP&L retains and exercises responsibility for the Quality Program at Waterford 3. The Senior Vice President-Nuclear Operations, who reports to the President and Chief Executive Officer of LP&L, is responsible for defining quality assurance policy. Reporting to him are the Plant Manager-Nuclear, Nuclear Services Manager, Project Manager - Nuclear, Corporate Quality Assurance Manager, and the Safety Review Committee (SRC). The members of the SRC are appointed by the Senior Vice President-Nuclear Operations. The corporate organization that implements QA Program is shown in Attachment E-1.

While quality is a concern of all Nuclear Operations personnel, the Quality Assurance and Site Quality Groups within Nuclear Operations deserve special mention. The Quality Assurance (QA) organization is responsible for developing, coordinating, and verifying implementation of the LP&L Quality Program. Although most safety related activities are performed by personnel outside the QA organization, an overview of the performance of these activities relative to Program compliance is accomplished by QA personnel through reviews and audits.

The Quality Assurance Group which is headed by the Corporate QA Manager is divided into three Sections. The Vendor QA Section is responsible for conducting surveillance and audits of contractors and vendors to verify compliance with applicable requirements; reviewing generated procurement documents to ensure proper inclusion of QA requirements; and maintaining the LP&L list of qualified suppliers for quality-related procurements. The System Development and Analysis QA Section is responsible for developing and maintaining QA policies and procedures; analyzing conditions adverse to quality for quality trends; and administration of the QA Group training program as well as providing assistance to other Nuclear Operations Department organizations in the areas of QA training. The Operations QA Section is responsible for reviewing and auditing Nuclear Operations Department activities; reviewing design drawings and specifications and changes thereto; and reviewing selected procedures to ensure proper inclusion of QA requirements.

Site Quality is headed by the Site Quality Manager who reports to the Plant Manager-Nuclear. This Department has direct responsibility to implement the requirements of the Quality Program related to the review, inspection, and surveillance of plant activities.

Site Quality is currently undergoing an organizational change, however the functions and responsibilities will remain essentially unchanged. Monitoring of quality program implementation is performed through inspection and surveillances during operation, maintenance, modification, repair, material receiving, and storage activities. Maintenance and modification instructions, and work plans are reviewed by Site Quality personnel to assure the inclusion of inspection requirements and to verify that methods and acceptance criteria

are defined. Inspections are performed by qualified Site Quality personnel. For safety related activities (e.g. surveillance testing) where direct inspection is not utilized, Site Quality surveil the activities in accordance with established procedures.

The Waterford-3 plant operations organization is headed by the Plant Manager-Nuclear (hereinafter referred to as Plant Manager).

The Plant Manager, is responsible for operation and maintenance of the plant and has responsibility for implementation of administrative and quality assurance measures. This responsibility includes:

- a. Providing and maintaining a trained and qualified staff to safely operate and maintain the plant.
- b. Assuring development and proper implementation of plant safety related procedures and instructions for activities such as plant operations, maintenance, repair, test, and inspection; and
- c. Addressing matters brought to his attention by the PORC.

The Plant Manager delegates management responsibilities to his staff in his absence.

Reporting directly to the Plant Manager are the Assistant Plant Manager - Operations and Maintenance, the Plant Administrative Services Manager, Plant Training Manager, Assistant Plant Manager-Plant Technical Services, and the Site Quality Manager. The Operations Superintendent, Shift Technical Advisor (STA) Superintendent, Planning and Scheduling Supervisor, and Maintenance Superintendent report to the Assistant Plant Manager - Operations and Maintenance. The Technical Support Superintendent and the Radiation Protection Superintendent report to the Assistant Plant Manager-Plant Technical Services. The Plant Technical Services unit includes the technical support for plant operation and maintenance activities. Plant Administrative Services Group functions include security, materials management, and plant records management.

The plant staff is responsible for the development and maintenance of procedures and instructions to assure that safety related activities are carried out in accordance with same.

The PORC was established to ensure onsite review and evaluation of plant operation, maintenance, and test programs. The PORC reports to the Plant Manager and advises him on matters related to nuclear safety, including referral of topics requiring review and potential action by the Safety Review Committee. PORC membership and responsibilities are in accordance with Section 6.0 of the Technical Specifications.

The Project Manager-Nuclear is responsible for direction and administration of the Project Management Group during construction completion and operation. This includes managing and controlling the activities of the Engineering and Nuclear Safety, Construction, Commercial, and Records & Administration organizations.

The functions of Project Management include:

- a. Managing the design change process, including initiation, implementation and documentation of design changes, and coordinating this activity with the plant staff;
- b. Conducting independent review of plant staff activities affecting safety;
- c. Recommending corrective actions to be taken in regard to safety issues;
- d. Reviewing selected plant operating, alarm, and emergency procedures for technical adequacy;
- e. Providing technical input in the selection of outside contracted engineering sources for selected station modifications and managing contracted activities;
- f. Providing and managing contract support for retrofit and maintenance activities;
- g. Purchasing equipment, parts, materials, and supplies in support of plant operations and station modifications;
- h. Developing and administering service contracts; and
- i. Providing support for records management including execution of the document control and quality assurance record storage program.

The Nuclear Services Group is responsible for providing support to the Waterford-3 plant staff. The organization in this group includes Nuclear Support and Licensing, Emergency Planning, Special Projects, Cost and Budget, and Change Management.

The functions of the Nuclear Services Group include:

- a. Providing the interface with and coordinating, preparing, and reviewing responses to federal, state, and local regulatory agencies, including license related matters;
- b. Managing the preparation of FSAR updates and responses to IE bulletins and generic letters;
- c. Administering environmental licensing activities;

- d. Managing the preparation and approval of the Waterford-3 Emergency Plan and implementing procedures;
- e. Coordinating the preparation of emergency drill scenarios and performance of practice drills;
- f. Coordinating the activities of Middle South Services relative to nuclear fuel material, conversion, enrichment, fabrication process, and in-core fuel management;
- g. Coordinating and providing technical support, as required, to radwaste, radiation control, health physics, and ALARA programs;
- h. Coordinating and providing technical support, as required, to support chemistry and radiochemistry programs;
- i. Providing plant special projects support, including: reliability and maintainability improvements, plant monitoring computer development, training simulator procurement, and Emergency Operations Facility conceptual design;
- j. Managing cost control measures and capital expenditures, and operations and maintenance budgets; and
- k. Managing the Commitment Management System.

3. Quality Assurance Program

LP&L's objective is to operate and maintain the Waterford-3 nuclear plant with the highest degree of functional integrity and reliability necessary to avoid undue risk to the health and safety of employees and the general public. It is the policy of LP&L that programs for design and design changes, procurement, fabrication, installation, inspection, testing, operations, maintenance, repair, refueling, and modification of Waterford-3 complies with the requirements of 10 CFR 50, Appendix B and related regulatory guidance.

LP&L has a comprehensive Quality Program for the assurance of quality during the operating phase of the Waterford-3 nuclear plant for safety related and special scope items and activities (known collectively as Quality Related). The LP&L Quality Program is applied to activities affecting the quality of those items which prevent or mitigate the consequences of postulated accidents which could cause undue risk to public health and safety.

The LP&L QA Program complies with Regulatory Guide 1.33, Revision 2, 1978 and other regulatory guides listed in Table 17.2 - 1 of the FSAR.

Attachment E-2 depicts, in graphic form, the hierarchy of documents comprising LP&L's Quality Program. This figure illustrates the relationship of the various programs, procedures, and instructions which control the safety related activities for Waterford-3. The Quality Program defines the duties of individuals and organizations participating in safety related activities.

The quality policies, goals, and objectives are documented in the Nuclear Safety Quality Policies and Special Scope Quality Policies. These Policies provide the

means for communicating the understanding that implementation of the Quality Program is mandatory for responsible organizations and individuals and that Policies adherence is enforced. Quality Policies are concurred with by the senior managers and approved by the Senior Vice President-Nuclear Operations.

The hierarchy of documents in the LP&L Operations Quality Program is as follows:

a. The first tier of documents consists of government regulations, industry codes, and standards and LP&L policies, directives, commitments, specifications, and criteria necessary to design, construct, operate, and maintain Waterford-3. An integral part of this tier is Chapter 17.2 of the Waterford-3 FSAR.

b. At the second tier of Quality Program documentation, the Nuclear Operations Management Manual defines the responsibilities, interfaces, and authorities of LP&L personnel, contractors, vendors, and suppliers during the operation and testing phases of Waterford-3. In this manual the LP&L Quality Program is documented as Nuclear Safety Quality Policies, Special Scope Quality Policies and Management Standards as appropriate. The Nuclear Safety Quality Policies define LP&L's requirements to implement 10 CFR 50, Appendix B and applicable regulatory guides, and ANSI Standards. The Special Scope Quality Policies define the Quality Programs for certain non-safety related items and activities. The Management Standards define responsibilities, interfaces and requirements where such documentation provides for coordination of selected management activities. Also at the second tier of the Quality Program is the Nuclear Operations Procedures Manual. Procedures in this manual have Nuclear Operations wide applicability for selected activities. Documentation at this level in the hierarchy of documents is concurred with by senior management and approved by the Senior Vice President - Nuclear Operations.

The individual Nuclear Operations Department groups assigned responsibilities under the scope of the Nuclear Operations Management Manual are responsible for the development, maintenance, and implementation of procedures and instructions to detail respective elements of program performance. Documentation at this level in the hierarchy of documents is approved by responsible senior management.

The Nuclear Operations Management Manual assigns the responsibility and authority for developing and coordinating the Quality Program to the Corporate QA Manager. The responsibility and authority for the execution of the administrative controls and quality measures is assigned to Nuclear Operations Department management.

c. The third tier of documentation is group departmental/section level procedures and instructions which implement the Nuclear Operations Management Manual.

The Plant Operating Manual (POM) consists of a series of procedures that address required aspects of plant management and operations. These procedures:

- o Implement the policy and direction of the Nuclear Operations Management Manual to provide control over safety related operations and activities to a degree consistent with their importance to safety;

- o Provide a clear understanding of the operating philosophy at Waterford-3; and
- o Delineate the responsibilities and authorities of plant operations personnel.

The Quality Assurance Group procedures specify and control the activities of the Quality Assurance Group.

Project Management Procedures and Nuclear Services Procedures prescribe activities and responsibilities which apply to the Nuclear Services and Project Management Groups based on LP&L's commitments to codes, standards, and quality assurance requirements.

3.1 Indoctrination and Training

Indoctrination and training programs are established for Nuclear Operations Department personnel performing safety related activities. The program is designed to ensure that personnel involved in safety are knowledgeable in quality procedures/requirements and have the necessary proficiency to implement the requirements.

The training program provided for the plant staff is defined in FSAR Chapter 13. The scope, objective, and methods for implementing indoctrination and training programs are documented in procedures developed by the Training Department. The qualification requirements are defined in departmental procedures or the Training Manual. Training programs are kept up to date to reflect current plant design, changes in procedures and the Technical Specifications.

Indoctrination, training and qualification programs are developed for Nuclear Operations organizations other than the plant staff as appropriate.

In addition to the above, QA indoctrination and training programs are conducted for Nuclear Operations personnel in accordance with approved procedures to assure that suitable proficiency is achieved and maintained in: 1) Overall company policies, procedures or instructions which define the QA Program; and 2) Procedures or instructions which implement the QA Program as it relates to the specific job-related activities.

The Corporate QA Manager concurs with the content of QA indoctrination and training programs.

Temporary LP&L and contract maintenance and service personnel receive indoctrination and training by LP&L in the above areas to the extent necessary to assure execution of their duties in accordance with the QA Program.

3.2 Management Audits

The Senior Vice President-Nuclear Operations ensures that a management audit of LP&L's quality Program is conducted annually by a qualified independent auditing organization. The information from these management audits in conjunction with summaries of the Quality Program status presented to him by the Corporate Quality Assurance Manager enables the Senior Vice President - Nuclear Operations to assess the scope, status, implementation, and effectiveness of the program and to take action, as necessary, to assure that the program complies with applicable regulatory requirements.

3.3 QA Program Changes

Amendments to FSAR 17.2 and revisions to the Nuclear Operations Management Manual and other documents which define the QA Program are issued as necessary to support effective implementation of the Quality Program. The NRC is notified annually of any changes to the Quality Program description that do not reduce the commitments previously accepted by the NRC. If a change is contemplated which would reduce the commitments in the approved Quality Program description, the proposed change is submitted to the NRC for approval prior to implementing the change.

LP&L requires their principal contractors/vendors to submit their QA program descriptions to LP&L for evaluation and to notify LP&L of changes to their quality assurance program description. In addition, LP&L requires principal contractors to provide notification of changes which reduce the commitments to a subcontractor's quality assurance program description which have the effect of changing the quality assurance program of the principal contractor or LP&L.

4. Design Control

LP&L's Operational Quality Assurance Program defines the quality requirements for the design control of plant safety related systems, components, structures, and equipment and modifications thereto. Procedures are established which address company activities regarding design control. The procedures assure that design activities associated with the preparation and review of design documents for Waterford-3 are executed in a planned, controlled, and orderly manner.

The Project Manager-Nuclear is responsible for design activities during the operational phase. He is responsible for preparing, reviewing, verifying, and approving design documents such as design input and criteria, design drawings, design analyses, computer programs, specifications, and procedures. He may delegate these functions to other organizations. However, he is responsible for the approval of the final design.

The design control program includes design activities associated with the preparation and review of design documents, including the translation of applicable regulatory requirements and design bases into design, procurement,

and procedural documents. Included in the scope of the design control program are such activities as field design engineering; physics, seismic, stress, thermal, hydraulic, radiation, and the SAR accident analyses; associated computer programs; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; quality standards; and safety significance. When a new design or design change is prepared during operations, quality standards are specified in the design documents. Deviations and changes from these quality standards are controlled in accordance with approved procedures.

Procedural control is established for design documents that reflect commitments of the FSAR. Such design documents subject to procedural control include specifications, calculations, computer programs, the FSAR when used as a design document, and drawings including flow diagrams, piping and instrument drawings, control logic diagrams, electrical single line diagrams, structural drawings for major facilities, site arrangements, and equipment locations. Specialized reviews are used when uniqueness or special design considerations warrant.

Design changes are included within the scope of the Waterford-3 Document Control Program. Design change notices are controlled documents. Any design change which might affect the performance of plant personnel duties is documented in a design change notice and distributed to the affected parties. Working documents, such as drawings, specifications, and procedures, which are affected by design changes are also revised and controlled so that responsible parties remain informed.

Maintenance and modification programs are provided to ensure that Waterford-3 safety related structures, systems, and components are maintained at the quality level required for performance of their intended functions. A preventive maintenance program is established which includes procedures dictating maintenance frequency and type.

Maintenance is performed in a manner which does not compromise plant safety. Maintenance or modification activities which affect the functioning of safety related structures, systems, or components are performed in a manner which will maintain a quality level at least equivalent to what was originally specified. Inspection and performance testing verify that safety related structures, systems, and components are functioning adequately after maintenance or modifications are complete. The results are documented and maintained in accordance with applicable records management procedures.

A program is established for performing modifications to the station. The Project Manager is responsible for approval of station modification design. The Plant Manager has final approval authority for station modifications prior to implementation.

Safety related design and specification changes, including field changes, are subject to the same type of design controls and approvals as the original design. LP&L has the option of employing qualified organizations other than the original designer in order to modify or develop designs. Anyone preparing design changes reviews the original design and/or secures design information from the original designer, as appropriate. Errors and deficiencies identified during the design process are documented and corrective action taken to preclude repetition.

Instructions, Procedures and Drawings

Instructions, procedures, and drawings for the operational phase of Waterford-3 prescribe those activities that affect the safety related functions. Activities affecting quality, such as design, procurement, installation, testing, inspection, operation, maintenance, and modification, are accomplished in accordance with these documents.

Procedures are written to provide a controlled method for preparing, reviewing, changing, and approving instructions and procedures. Instructions, procedures, and drawings prescribing safety related activities are prepared either by the LP&L organizational unit engaged in that activity, by external consultants or by other LP&L groups as assigned. Appropriate department heads are responsible to provide instructions, procedures, and drawings as required for the administration, operation, maintenance, and modification of Waterford-3.

Instructions and procedures prescribing operational activities that affect safety related functions identify any special equipment and conditions required to perform the activity, provide applicable quantitative and qualitative acceptance criteria, and include provisions for documenting that activities were accomplished in accordance with these instructions. When appropriate, instructions and procedures include checklists of the elements of an activity to be observed or measured.

Instructions, procedures, and drawings prescribing safety related activities are reviewed and approved in accordance with approved procedures. Whenever a safety related instruction, procedure, or drawing of one organization affects or involves the activities of another organization, the originating organization is responsible for ensuring that the affected organization reviews and reviewed with the document content. The originating organization is responsible for resolving comments.

Instructions, procedures, and drawings, for safety related activities are reviewed by Quality Assurance or Site Quality. For plant safety related activities Site Quality reviews and concurs with test, calibration, special process, maintenance, modification and repair instructions, and work plans.

Administrative procedures prescribe steps involved in the preparation and review of plant procedures. The procedures require that safety related maintenance, modification and test instructions, and procedures prepared by the plant staff be routed to Site Quality for review and concurrence prior to implementation. The Site Quality Manager assigns this review to qualified personnel within his group.

Site Quality review is conducted in accordance with approved procedures to determine:

- a. That the need for inspection, identification of inspection personnel, and documentation of inspection results have been properly specified;

b. That the necessary inspection requirements, methods, and acceptance criteria have been identified; and

c. That hold points are clearly identified and acceptance criteria provided.

Prepared checklists or guidelines are used in conducting and documenting the reviews.

PORC reviews and recommends approval to the Plant Manager of instructions and procedures for safety related activities for plant operation in accordance with the Waterford-3 Technical Specifications. Such documents are not approved for implementation until comments from the above reviews have been resolved.

Those drawings required for the safe operation of the plant reflecting the as-built status of Waterford-3 were transferred from the Architect-Engineer to LP&L prior to receipt of the operating license. Drawings are stored in a controlled facility, with reproducible copies of those drawings required for plant operation and maintenance furnished to the Plant Manager.

The Project Management Group or designee issues Station Modification (SMs) which delineate the drawings affected by proposed modifications and issues as-built documentation. The Project Management Group is responsible for the revision and update of master drawings to reflect station modifications. The Plant Manager implements and maintains administrative controls to assure that as-built drawings are utilized for plant operation and maintenance upon completion of the related modification. The status of as-built drawings is included in the scope of design control audits performed by the Quality Assurance Group.

6. Document Control

The Operational QA Program defines requirements for document control. Documents and their revisions which control safety related systems, structures, components, and activities are prepared, reviewed by qualified individuals, and approved by authorized personnel before release or issuance in accordance with written procedures. These procedures identify the organizations responsible for such actions and assure that changes to these documents are reviewed and approved by the same groups.

Document control procedures require that safety related documents, including changes, be reviewed for adequacy and approved by authorized persons prior to issuance.

Controlled documents and revisions generated within LP&L which affect safety related structures, systems, components, and activities are prepared by the responsible group, consultants, other qualified groups within LP&L, or combinations of these organizations. These documents are reviewed for accuracy and completeness, and for compliance with QA Program requirements.

After review comments have been resolved, the documents are approved by the supervisor of the responsible group, effective dates assigned, and the documents distributed in accordance with applicable procedures and instructions. Controlled documents are distributed prior to starting an activity and, if necessary, are on hand at the locations where the defined activities are performed before work begins.

Computerized lists of documents are available at strategic locations to preclude the use of superseded documents. They are prepared and updated in accordance with applicable procedures. These lists identify the current revision number of the instructions, procedures, specifications, drawings, and procurement specifications. Record copies of the documents are retained in accordance with appropriate records management procedures. Obsolete or superseded documents are controlled by approved written procedures to prevent inadvertent use.

Changes to safety related documents are reviewed and approved by the same organization that performed the original review and approval or by other qualified responsible organizations delegated by LP&L. Approved changes are included in the instructions, procedures, drawings, and other appropriate documents associated with the change.

7. Special Processes

The LP&L Quality Program provides that special processes, including welding, heat treating, and nondestructive testing are identified and controlled to ensure that they are accomplished according to approved written qualified procedures. Procedures are qualified in accordance with applicable codes and standards, or where no appropriate standards exist, to LP&L requirements. As required by applicable codes and standards, personnel performing special processes are qualified and their qualifications are documented. Applicable codes, standards, specifications, criteria, and other special requirements are identified and used in qualifying procedures and personnel used to accomplish special processes.

Procedures for performing special processes are written, qualified, and approved before use. Personnel responsible for performing special processes are qualified to the procedure before implementation. Special process control procedures specify the preparatory steps, processing details, conditions to be maintained during the process, and inspection and testing requirements as appropriate.

Certification includes necessary training followed by an examination of each individual.

Qualifications of personnel and procedures are audited by the Quality Assurance.

Current qualification records of plant special process personnel, procedures, and equipment are maintained by the responsible plant supervisor and reviewed by Site Quality. Special process control records of vendors may be retained by the vendor or supplied to LP&L as specified by contract or procurement document.

8. Inspection

Inspection is performed during maintenance, modification, repair, material receiving, and storage activities affecting safety related items at Waterford-3 in accordance with approved procedures or instructions. Modifications, repairs and replacements are inspected in accordance with the original designs and inspection requirements or acceptable alternatives. Maintenance and modification instructions, and work plans are reviewed by Site Quality personnel to assure the inclusion of inspection requirements and to verify that methods and criteria are defined. Work in progress does not proceed past the identified hold points without satisfaction of inspection requirements.

The Inspection Program at the Waterford-3 Plant is under the direction of the Plant Manager and is implemented by the Site Quality Manager. Normal inspections are performed by qualified personnel reporting to the Site Quality Manager. Special inspections, such as nuclear fuel receiving, are performed by qualified personnel reporting to the Plant Manager or his designee. For safety related activities (e.g., surveillance testing) where direct inspection is not utilized, Site Quality monitors the activities in accordance with established procedures.

Inspection requiring expertise in a particular area, such as preservice and inservice inspection, certain nondestructive testing, and containment vessel leak rate tests and inspections, may be conducted by offsite LP&L, Middle South Services or contractor personnel. In such instances, the inspection activities are conducted under the LP&L Quality Program or under a LP&L approved contractor program.

Inspection requirements are implemented using applicable procedures, instructions, checklists, drawings, and specifications.

When it is not possible or practical to verify conformance of processed material or products by direct inspection, indirect control is employed by monitoring processing methods, equipment, and personnel. To ensure adequate control, both direct inspection and process monitoring are used when control by only one method is considered inadequate.

Inspectors, including those provided by contractors, are qualified through experience, education, and training programs to perform the assigned inspection tasks. Where required, inspectors are formally examined and certified. Certification for Level I, II and III qualifications is done in accordance with ANSI N45.2.6-1978, and Regulatory Guide 1.58, Rev. 1. Prior to certification, a candidates' education and employment experience is satisfactorily verified. Files are maintained containing the credentials for each inspector. Inspector qualifications and certifications are kept current.

The Plant Training Department develops procedures for the training of Site Quality inspectors. These procedures contain qualification criteria for inspection personnel for the various types of inspections. The Site Quality Manager is responsible for certification of Site Quality inspectors.

9. Corrective Action

The LP&L Quality Program requires that conditions adverse to quality, such as nonconforming items, equipment failures, malfunctions, deficiencies, and deviations are promptly identified and corrected.

Procedures and instructions for corrective action of adverse conditions include provisions for:

- a. Each person to identify and report to his immediate supervisor or to the appropriate quality organization conditions suspected to be adverse to quality within his area of responsibility.
- b. Supervisor review and classification of reported conditions adverse to quality;
- c. Correction of adverse conditions; and
- d. Documenting conditions adverse to quality and initiating corrective action to preclude recurrence.

Corrective action reports become part of the plant quality assurance records. The Site Quality Manager verifies implementation of corrective action for conditions adverse to quality within the plant (the Corporate Quality Assurance Manager for those external to the plant) and reviews documentation generated by the action before the corrective action report is closed.

Significant conditions adverse to quality, the cause of the condition, and the corrective action taken to preclude recurrences is documented and reported to cognizant levels of management for review and assessment. The Licensing Section of Nuclear Services makes a determination of reportability under 10 CFR Part 21.

Contractors performing services or activities pertaining to the safety related portions of the plant or any safety related systems or components are required to comply with LP&L approved procedures which require conditions adverse to quality to be identified, reported, and corrected.

Site Quality is responsible for tracking, reviewing for validity and significance, accepting or rejecting corrective action, and verifying corrective action is complete for conditions that fall within the scope of plant procedures.

Site Quality is responsible for reviewing a significant condition adverse to quality to determine if the activity should be stopped. If it is determined that the activity should be stopped, Site Quality is responsible for notifying the responsible plant organization of the significant condition adverse to quality and recommend they stop the activity at the next safe point. Quality Assurance is responsible for tracking, reviewing for validity and significance, accepting or rejecting corrective action, and verifying corrective action is complete for conditions that fall within the scope of Nuclear Services, Project Management, Quality Assurance, and Nuclear Operations procedures.

Quality Assurance is responsible for analyzing conditions adverse to quality to identify quality trends. The results of such analyses are reported to executive and senior management on a quarterly basis.

The corrective action taken for significant conditions adverse to quality is reported to appropriate levels of management and for independent review under the cognizance of the Safety Review Committee.

10. Quality Assurance Records

LP&L's Quality Program requires that sufficient records are maintained to furnish evidence of activities affecting quality. These records include at least the following: Operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records include closely-related data such as qualifications of personnel, procedures, and equipment.

Inspection and test records, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted.

The retention period, storage method and location, preservation, retrieval, transmittal, and disposition of Waterford-3 QA records is established by procedure. Quality assurance records are identifiable and retrievable.

The Project Manager is responsible for the Records Management Program.

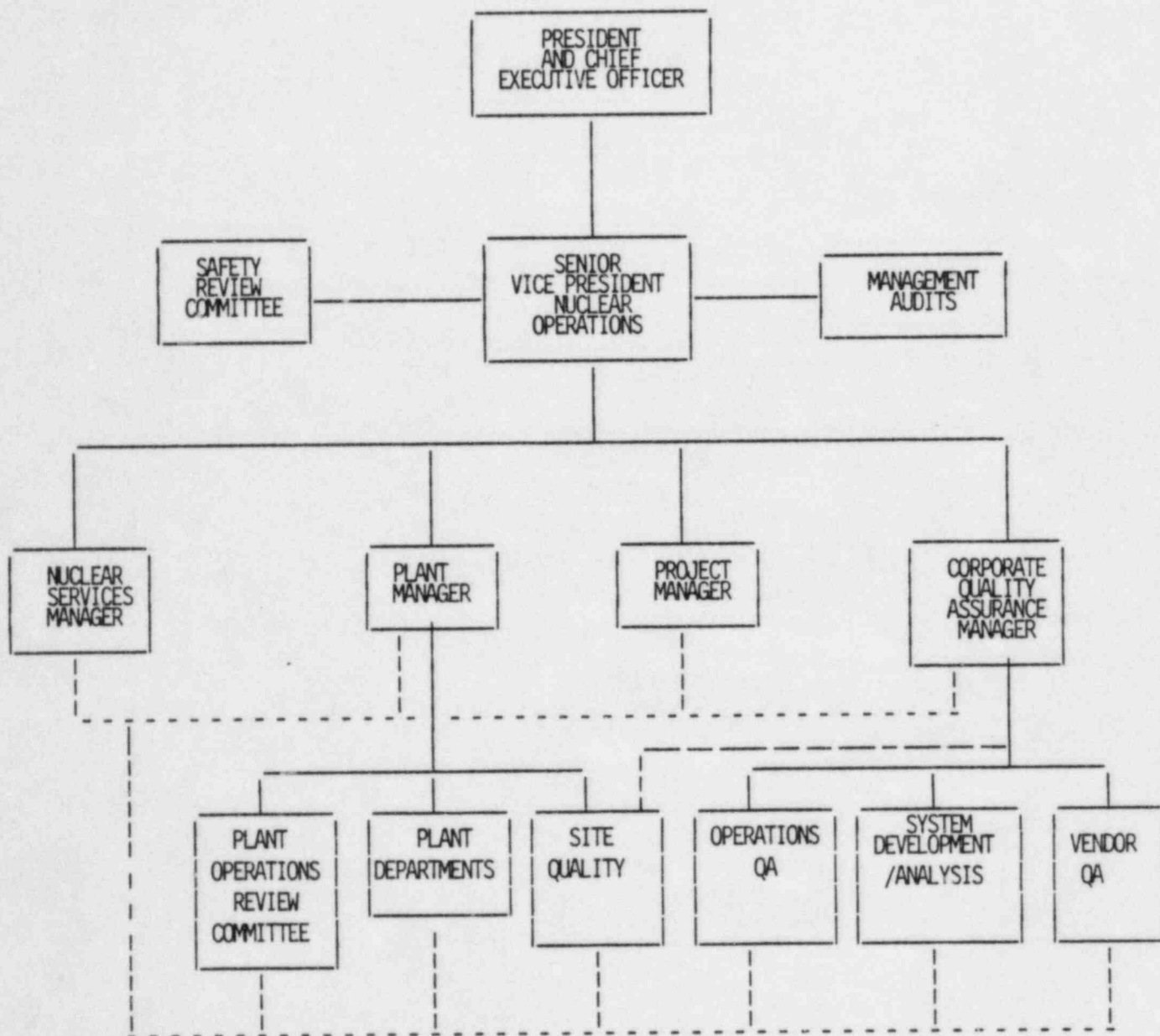
Project Files is the focal point for storage of quality records and documents. The filing system uses a computerized document retrieval system. Completed records forwarded to Project Files are indexed on a computer, then microfilmed and stored. Document Control is the organization responsible for processing controlled documents such as approved drawings, specifications, technical manuals, and procedures. This process includes receiving, recording, distributing, updating and retrieval of those documents affecting quality to ensure only the latest applicable revision is used for operation and maintenance at Waterford-3. Direct access to files maintained by the Document Control is limited to group personnel and their supervisors.

7/16/85

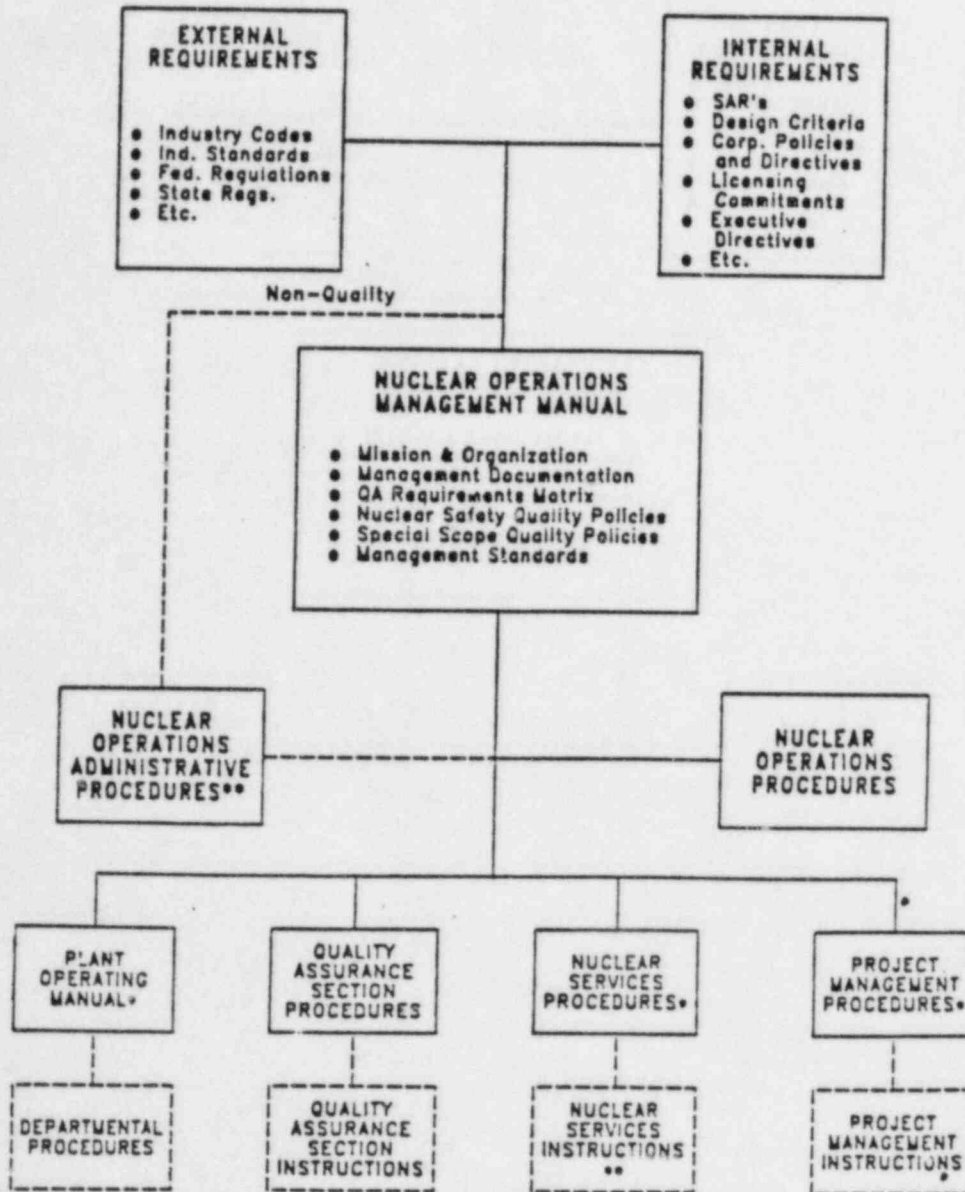
Documents associated with safety related activities generated by Site Quality and Quality Assurance in the performance of their duties are reviewed and retained in Project Files as required by procedures.

Station Modification Packages associated with safety relocated activities are reviewed by the Operations QA Section before final closure and transmittal to Project Files as required by procedures. Procurement documents are reviewed by Site Quality or Vendor QA, as appropriate to procedural requirements, as a normal part of the procurement process to assure that quality requirements have been properly specified.

ATTACHMENT E-1
CORPORATE ORGANIZATION FOR OPERATION
OF WATERFORD - 3



ATTACHMENT E-2 NUCLEAR OPERATIONS DOCUMENT HIERARCHY

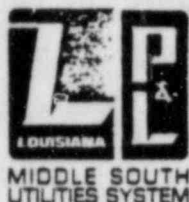


* Selected procedures that implement the QA program require review and concurrence by the Corporate QA Manager/designee.

** Non-quality related procedures.

F. RESPONSE TO NOTICE OF DEVIATION

Attached is LP&L's response to the Notice of Deviation contained in EA 85-10. It is provided herewith for ease of reference and completeness of this response package.



LOUISIANA
POWER & LIGHT

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June 21, 1985

W3P85-1413
A4.05

Mr. Robert D. Martin
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Dear Mr. Martin:

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
NRC Notice of Deviation

Reference: NRC letter EA 85-10 dated 5/24/85, R.D. Martin, NRC Region IV
to R.S. Leddick, LP&L - transmittal of enforcement package and
proposed civil penalties.

The referenced letter included in the enforcement package transmittal, a
Notice of Deviation, identified in Appendix B of EA 85-10 as a failure to
perform tests in accordance with FSAR commitment. Attached is the
Louisiana Power and Light Company response to the deviation notice.

If you have any questions on the response to the deviation, please contact
G.E. Waller, Onsite Licensing, at (504) 464-3499.

Very truly yours,

K.W. Cook
Nuclear Support & Licensing Manager

KWC:GEW:sms

Attachment

cc: NRC, Director, Office of I&E
G.W. Knighton, NRC-NRR
D.M. Crutchfield, NRC-NRR
NRC Resident Inspectors Office
INPO Records Center (J.T. Wheelock)
B.W. Churchill
W.M. Stevenson

ATTACHMENT
LP&L RESPONSE TO NOTICE OF DEVIATION EA 85-10

DEVIATION NO. EA 85-10

Failure to Perform Test in Accordance with FSAR Commitment

LP&L's Final Safety Analysis Report (FSAR) requires that all hydrostatic tests conform to the requirements of ASME III, Class 2 and 3, 1974 Edition, Summer 1976 Addenda. Article NC-6000, "Testing," which requires that "vents shall be provided at all high points of the component or system in the position in which the test is to be conducted to purge air pockets while the component or system is filling."

Contrary to the above, the NRC staff's examination of 27 hydrostatic document test packages, including the applicable valve lineup sheets and isometrics, revealed that for each of the corresponding hydrostatic tests, high point vents had not been used. An examination of the hydrostatic test index revealed that FCR-1CP-19, Revision 2, deleting the use of high point vents, was issued subsequent to all the hydrostatic test having been completed.

Ref: SSER-7:A-242

RESPONSE TO DEVIATION

- References: 1. NUREG-0787 Supplement 7, Safety Evaluation Report for Operation of Waterford 3 (SSER 7) dated September 1984 (pages 220 and 221 - Task: Allegation A-242).
2. LP&L letter W3P84-1805, dated 6/29/84, K.W. Cook to G.W. Knighton, NRC, subject: Waterford 3 FSAR Chapter 14 (copy attached).

Corrective Steps Taken and Results Achieved

Field Change Request (FCR-1CP-19, Revision 2) was initiated on August 6, 1980 to fully cover the deletion of the use of high point vents in hydrostatic tests of instrument installations. All hydrostatic testing was conducted subsequent to the approved field change request. Reference 1 confirmed by NRC Staff review that "an examination of the hydrostatic test index reveals that all Waterford Unit 3 hydrostatic tests had been performed on dates subsequent to the issuance of the field change request (FCR), and would therefore have been performed in accordance with its requirements." Furthermore, reference 1 states, "---NRC considers the alternate method of venting systems through the root valve to the process line sufficient to preclude an invalidation of hydrostatic tests."

The reference 2 letter (copy attached) clarified the LP&L position regarding the use of high point vents in hydrostatic testing and committed to amend the FSAR in accordance with the 10CFR50.71(e) requirements. The FSAR change will reflect that venting of systems during hydrostatic testing was performed in accordance with the requirements of ASME Boiler and Pressure Vessel Code, Section III, Article NC-6211 (Summer 1981 Addenda).

Corrective Steps To Avoid Commitment Deviations

A Nuclear Operations Executive Directive (ED-027, Regulatory Commitments Management) was issued to establish the policy and provide guidance for the effective processing of regulatory commitments. Additionally, the Nuclear Services Procedure NSP-102 is implemented to provide documented reviews and approval, including concurrence with safety evaluations, for revisions to licensing documents such as the FSAR.

Completion of Action Regarding Deviation

All hydrostatic testing for Waterford 3 has been completed to the satisfaction of the NRC Staff as documented in reference 1.

Appropriate policy directive and procedures are in place and are being implemented to avert future commitments deviations.

The needed clarifying change to the FSAR, as specified in reference 2, relative to the deviation cited will be made per the requirements of 10CFR50.71(e).



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June 29, 1984

W3P84-1805
Q-3-A29.22.14

Director of Nuclear Reactor Regulation
Attention: Mr. G.W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Waterford 3 SES
Docket No. 50-382
FSAR Chapter 14

Dear Sir:

Per your request and in an effort to complete LP&L's response for Allegation 28, use of high-point vents in hydrostatic testing, attached are proposed FSAR changes which will be implemented in a future amendment in accordance with 10 CFR 50.71(e) requirements. The changes clarify that venting of systems during hydrostatic testing was performed in accordance with the requirements of ASME Boiler and Pressure Vessel Code, Section III, Article NC-6211 (Summer, 1981 Addenda).

Also, attached are proposed changes which reflect that testing of the non-safety related Supplementary Chilled Water System may not be completed prior to fuel load (this does not violate any NRC requirements).

If you have any questions please do not hesitate to call.

Yours very truly,

K.W. Cook

Nuclear Support & Licensing Manager

KWC/PC/pco

Attachment

cc: E.L. Blake, W.M. Stevenson, J.T. Collins, D.M. Crutchfield,
J. Wilson, G.L. Constable

14.2.12.2.90

SECONDARY SYSTEM HYDROSTATIC TEST

15

14.2.12.2.90.1

Objective

To hydrostatically test the secondary side of the steam generators and non-isolable piping.

8

14.2.12.2.90.2

Prerequisites

- A. The steam generators and main steam piping to the main steam isolation valves are filled, vented, and at the required temperature. 15 8
- B. Reactor Coolant System (RCS) is filled, vented, and at the required temperature. 15 9
- C. The reactor coolant pumps are operable. 8
- D. Test pump is available.
- E. Main steam safety valves are gagged or removed.
- F. Test instrumentation is available and calibrated. 29
- G. Permanently installed instrumentation necessary for testing is operable and calibrated. 34

14.2.12.2.90.3

Test Method

- A. Increase RCS pressure to a value that will ensure that the secondary to primary differential pressure does not exceed design value. 8
- B. Perform the test in accordance with the ASME code.

14.2.12.2.90.4

Acceptance Criteria

The Secondary System hydrostatic test meets the requirements of ASME Boiler and Pressure Vessel Code, Section III; (Venting in performing the hydrostatic test was done according to NC-6211 - Summer, 1981 Addenda)

18

14.2.12.2.91

REACTOR COOLANT SYSTEM HYDROSTATIC TEST

14.2.12.2.91.1

Objective

To verify the integrity of the Reactor Coolant System (RCS) pressure boundary and associated Safety Class I piping.

14.2.12.2.91.2

Prerequisites

- A. The RCS is filled, vented, and at the required temperature.
- B. The reactor coolant pumps are operable.
- C. Test pump is available.
- D. Primary safety valves are gagged or removed.
- E. Permanently installed instrumentation necessary for testing is operable and calibrated.
- F. Test instrumentation is available and calibrated.

14.2.12.2.91.3

Test Method

- A. Operate reactor coolant pumps to sweep gases from the steam generator tubes.
- B. Vent the RCS and all control element drive mechanism housings.
- C. Operate the reactor coolant pumps to increase the RCS temperature to that required for pressurization of RCS to test pressure.
- D. Perform the test in accordance with the ASME code.

14.2.12.2.91.4

Acceptance Criteria

The RCS hydrostatic test meets the requirements of ASME Boiler and Pressure Vessel Code, Section III; (Venting in performing the hydrostatic test was done according to NC-6211-Summer, 1981 Addenda)

14.2.12.2.30	CHILLED WATER AND SUPPLEMENTARY CHILLED WATER SYSTEMS	15
14.2.12.2.30.1	Objective	8
	To verify the proper operation of the Chilled Water and Supplementary Chilled Water Systems.	15
14.2.12.2.30.2	Prerequisites	8
A.	Construction activities on the systems to be tested are complete.	18
B.	Test instrumentation is available and calibrated.	29
G.	Plant systems required to support testing are operable, or temporary systems are installed and operable.	15
D.	Permanently installed instrumentation is operable and calibrated.	29
14.2.12.2.30.3	Test Method	.
A.	Verify all control logic.	8
B.	Demonstrate that each chilled water train can be operated from its local and remote manual station.	
C.	Verify that each chilled water unit performs as designed and supplies chilled water at rated flow and temperature.	15
D.	Verify chilled water flow to all supplied components.	8
E.	Verify that the chilled water systems respond automatically to the appropriate engineered safety features actuation signal (ESFAS).	18 15
F.	Verify the proper operation of all protective devices, controls, interlocks, instrumentation, and alarms, using actual or simulated inputs.	8 15
14.2.12.2.30.4	Acceptance Criteria	8
	The Chilled Water System and Supplementary Water System performs ^g as described in Subsection 9.2.9.	15

TABLE 14.2-1 (Cont'd)

Subsection	Title	
14.2.12.2.21	Annulus Negative Pressure And Vacuum Relief Systems	8
14.2.12.2.22	Containment Combustible Gas Control System	15
14.2.12.2.23	Airborne Radioactivity Removal System	
14.2.12.2.24	CEDM Cooling System	8
14.2.12.2.25	Turbine Building Ventilating System	
14.2.12.2.26	Cable Vault and Switchgear Area HVAC System	
12.2.12.2.27	Control Room Envelope HVAC System	
14.2.12.2.28	RAB Normal Ventilation and Containment Purge Systems	15
12.2.12.2.29	Controlled Ventilation Area System	
14.2.12.2.30	Chilled Water And Supplementary Chilled Water Systems	8
14.2.12.2.31	RAB Miscellaneous HVAC System	
14.2.12.2.32	Fuel Handling Building Ventilating System	15
14.2.12.2.33	Primary Water Storage System	8
14.2.12.2.34	Reactor Coolant System Quench Tank Subsystem	
12.2.12.2.35	Pressurizer Pressure And Level Control System	15
14.2.12.2.36	Pressurizer Safety Valve	8
14.2.12.2.37	Chemical And Volume Control System Charging Subsystem	15
14.2.12.2.38	Chemical And Volume Control System Latdown Subsystem	8
14.2.12.2.39	Volume Control Tank Subsystem	15
14.2.12.2.40	Boronometer	8
		15