



**LOUISIANA
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October 19, 1984

J.M. CAIN
President and
Chief Executive Officer

W3B84-0801

Director of Nuclear Reactor Regulation
ATTN: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Waterford 3 SES
Partial Response to Items
from Waterford Review Team

REFERENCES: 1) Letter, D.G. Eisenhut to J.M. Cain,
"Waterford 3 Review," dated June 13, 1984
2) Letter W3B84-0495, J.M. Cain to D.G. Eisenhut,
"Revised Program Plan" dated October 10, 1984

Dear Mr. Eisenhut:

The purpose of this letter is to submit Louisiana Power & Light's responses to Issues 4 and 9 as set forth in your June 13, 1984 letter (Reference 1). The response to Issue 4 follows the approach set forth in the Attachment to Reference 2. The Program Plan for Issue 9 (enclosed) has been revised in order to reflect the information developed since October 10, 1984. The response to Issue 9 follows this revised approach. Current assessment of each of the issues is as set forth in the responses.

The responses have been reviewed and verified by LP&L QA in accordance with procedure QASP 19-13. The designated subcommittee of the Waterford Safety Review Committee also has reviewed the adequacy of the responses for resolving the issues raised. The subcommittee scope of responsibility does not include independent validation of the facts.

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Mr. Darrell G. Eisenhut, Director
W3B84-0801
October 19, 1984

Page 2

The Task Force has indicated by separate correspondence (enclosed) that it is satisfied with the logic of the responses to Issues 4 and 9. However, it has not yet completed its independent validation of the facts. The Task Force has committed to notifying me and the NRC immediately should it find significant deviations in the course of its validation. In the event of such notification, LP&L will amend individual responses as may be necessary.

We request that you commence actions you deem necessary to lead to the resolution of these individual issues.

Sincerely,


J. L. Cain

JMC:DA:pbs

Attachments

Mr. Darrell G. Eisenhut, Director
W3B84-0801
October 19, 1984

Page 3

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Mr. T.F. Gerrets

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ISSUE: 9

DATE: 10/19/84

TITLE:

Welder Certification

DESCRIPTION OF ISSUE:

Locate missing documents for instrument cabinet welds and determine if welders were appropriately certified to the positions they welded. Take appropriate action to assure the quality of the supports if documentation cannot be located.

LP&L APPROACH TO RESOLUTION:

NCR W3-7549 was generated on 2/1/84 and supplemented on 4/6/84 to resolve this problem.

A review of Weld Inspection Reports (WIR) was conducted. The review identified no cases where welders did weld out of a qualified position. However, the documentation was not complete, and it could not be conclusively established that out of position welding never took place. To assure the quality of the supports, 17 of the 18 cabinets were reinspected (welds on cabinet C-2B were inaccessible).

This reinspection identified some welding deficiencies which were evaluated and found to be acceptable with no rework required.

A review was conducted to identify the scope of Jones other welding. The welding identified by this review was arranged into twenty-two work packages. Welding for six of the twenty-two packages were reinspected and found acceptable.

Based on the extensive reinspection and evaluation described above, with no deficiencies identified requiring corrective action, it is concluded that Jones welding was adequately performed.

WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.10	QA Inspection Structural Steel Weldments
	QASP 19.13	Response Verification
	W-SITP-14	Site Inspection and Test Procedure for Welding Inspection (J.A. Jones)
	QASP 2.12	QA Section Qualification and Certification of Inspection Personnel

ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1. Scoping of documents where J.A. Jones potentially performed welding.	1. The review was carried out by Construction Engineers under the supervision of the Resident Civil Engineer.
	2. Determination of all specific welding performed by J.A. Jones and determination that proper documentation exists.	2. The review was carried out by Construction Engineers under the supervision of the Resident Civil Engineer. Documentation review was performed by a QA Engineer under the supervision of the Site QA Supervisor.
	3. Reinspection of the seven instrument cabinets where supporting documentation could not be located was performed in accordance with the criteria of NCR-W3-7549.	3. Reinspection of welds was performed under the supervision of the Material Applications Engineer.
	4. Reinspection of other eleven (11) instrument cabinet welds in accordance with QASP 19.10.	4. Same as item 3) above.
	5. Engineering evaluation of those welds where supporting documentation could not be located.	5. Evaluation performed by a Civil Engineer under the direction of the ESSE Civil Supervisor.
	6. Engineering evaluation of those welds for the eleven (11) cabinets with all supporting documentation.	6. Same as item 5) above.

ORGANIZATIONS INVOLVED: (CONT'D)

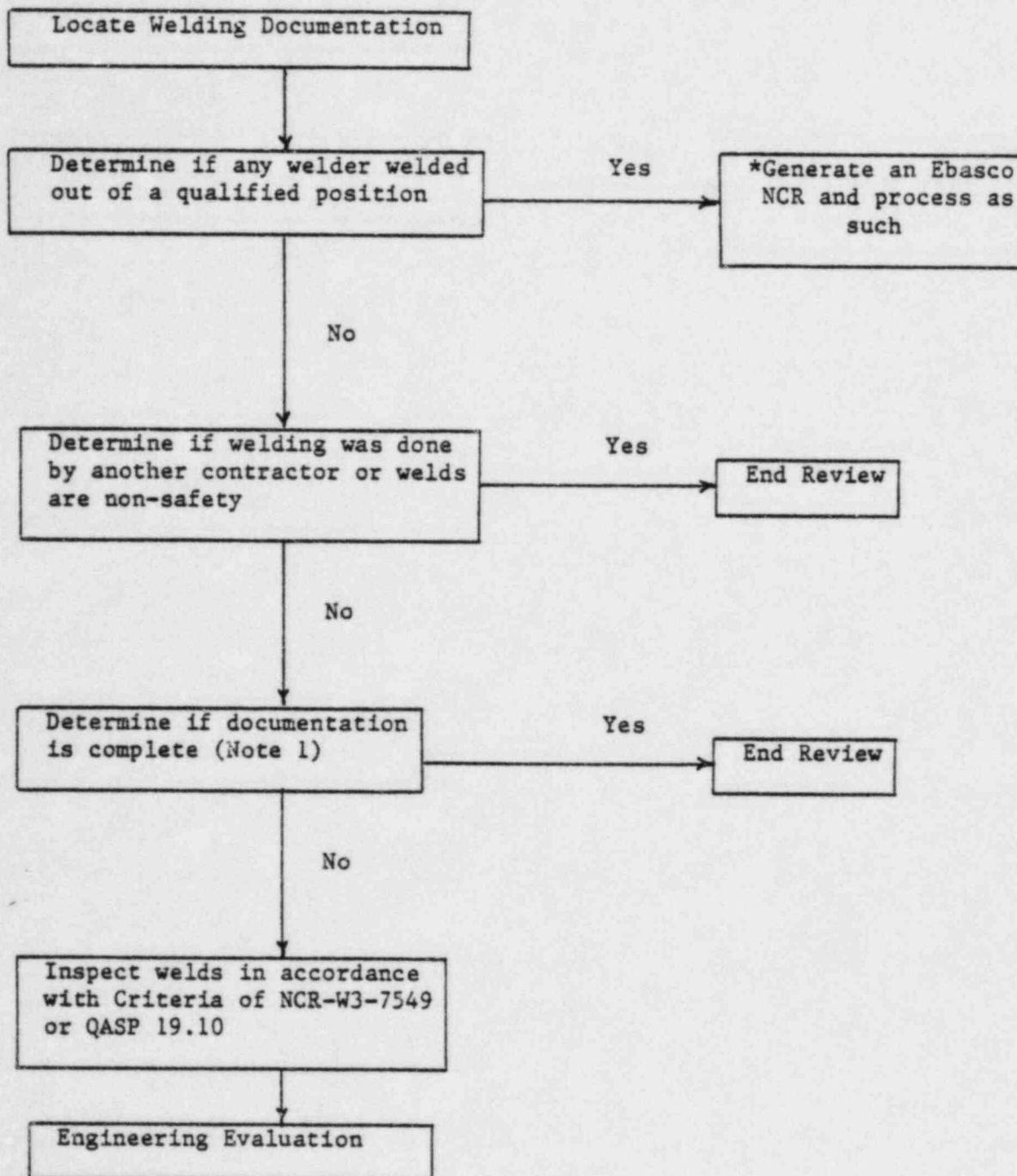
ORGANIZATION	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
LP&L	<ol style="list-style-type: none">1. Validation per QASP 19.13 by LP&L QA will consist of, but not be limited to, the following:<ol style="list-style-type: none">a) Review of supporting calculations.b) Review of all weld inspection reports for J.A. Jones structural steel on instrument cabinets specifically addressed by response.c) Verify that objective evidence exists to support statements of fact made in the response.2. LP&L supervised inspection of welds in accordance with QASP 19.10.	<ol style="list-style-type: none">1. Validation will be performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).2. Qualification/Certification was accomplished in accordance with ANSI N45.2.6(1973).

ATTACHMENTS:

1. Process Flow Chart - Review of J.A. Jones Welds and Welding Documentation
-

ATTACHMENT 1

PROCESS FLOW CHART - REVIEW OF J. A. JONES WELDS AND WELDING DOCUMENTATION



* None of the welder documentation reached this point.

Note 1: While documentation was found in order for 11 instrument cabinets, these welds will also be reinspected.



910 CLOPPER ROAD
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(301) 258-6000

NUS-W3-A737
October 17, 1984

Mr. J. M. Cain
President and Chief Executive Officer
Louisiana Power and Light Company
317 Barrone Street
New Orleans, Louisiana 70160

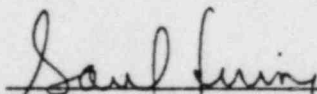
Reference: Letter from D. G. Eisenhut, Director, Division of Licensing,
USNRC to J. M. Cain, President and Chief Executive Officer,
LP&L, Waterford 3 Review, June 13, 1984

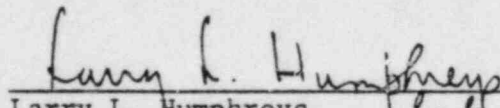
Dear Mr. Cain:

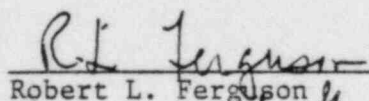
We understand that you plan to submit LP&L responses to the NRC covering
Issues 4 and 9 of the referenced letter.

The Task Force has no objection to this course of action. We have studied
these issues and find the logic stated in the LP&L responses to be adequate.
You should note that the Task Force has not yet completed its independent
validation of the facts presented in the responses. We will notify you and
the NRC immediately if we find significant deviations in the course of our
continuing validation effort. Of course, as you know, our work on all 23
issues and their collective significance is continuing and will culminate
in a formal report to you.

Sincerely,


Saul Levine
Vice President and Group Executive
Consulting Group, NUS


Larry L. Humphreys
President
UNC Operations Division


Robert L. Ferguson
Chairman
UNC Nuclear Industries

SL/cn

RESPONSE

ITEM NO.: 4

TITLE: Lower Tier Corrective Actions Are Not Being Upgraded to NCRs

NRC DESCRIPTION OF CONCERN:

The staff reviewed the Corrective Action system to verify if lower tier corrective action documents were being properly upgraded to NCRs as required by 10 CFR Part 50, Appendix B Criteria XV and XVI. Specifically the staff looked at a number of Field Change Requests (FCRs), Design Change Notices (DCNs), and Engineering Deficiency Notices (EDNs) selected from printouts of safety-related equipment and systems document issuance logs. The selected documents were reviewed for content and basis for issuance (i.e. before the fact design change or after the fact nonconformance). Finally a walkdown was performed to verify proper identification and change control completion. In addition Tompkins-Beckwith (T-B) Discrepancy Notices (DNs) were reviewed.

As a result of its review the staff found the following issues.

- a. Field Change Requests - Sixty-three FCRs and 21 revisions to FCRs were evaluated. It appears as though 35 should have been NCRs and another 4 reflected conditions that may have warranted an NCR. The list below provides examples of FCRs that should have been NCRs.

F-MP-1818	F-AS-1631
F-AS-3698	F-E-3089
F-AS-3648	F-MP-2138
F-AS-2338	F-MP-2151
F-MP-1434	F-E-2288

- b. Design Change Notices - Fourteen DCNs and 5 revisions to DCNs were reviewed. It appears as though 4 of those should have been upgraded to NCRs. Listed below are examples of these.

DCN-703 and Revision 1
DCN-IC-478
DCN-ME-30
DCN-E-790

It appears as though the problems identified in DCN-703 are related to FCR-MP-2138 and may have been reportable under 10 CFR Parts 21 or 50.55(e).

- c. Engineering Discrepancy Notices (EDNs) - Seventy-six EDNs were reviewed for proper identification and control. Of those 76, it appears as though 51 of those should have been NCRs. Examples of these are listed below.

EDN-EC-1476
EDN-EC-1548
EDN-EC-1502
EDN-EC-1479

In addition during the review, another 35 were "voided" with no action taken. The voiding action was performed by a clerk. Examples of voided EDNs are as follows:

EDN-EC-0630
EDN-EC-1175
EDN-EC-1176
EDN-EC-1140

- d. Tompkins-Beckwith - The staff reviewed a sample of the handling of information requests and Discrepancy Notices by Ebasco. As a result of that review it appeared that a number of these items should have been upgraded to NCRs. Examples of these are listed below.

W-6519	W-5755
W-6183	W-742
W-6322	W-5917
W-3656*	W-381
W-1876	W-5824*
W-4112	W-5047
W-5692	W-5416
W-6243	W-5916
W-6349	W-2105
W-728*	W-4968*
W-4648	W-4969*

The asterisked (*) items all related to incorrect heat numbers being entered incorrectly or clerical errors being made on rod slips.

In summary, the staff found that the QA program requirements for nonconformance identification, control and proper action do not appear to have been complied with.

LP&L shall review all FCRs, DCNs, EDNs, and T-B DNs to assure that proper corrective action was taken, including an adequate review by QA. This action shall include the steps required by 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, and for Construction Deficiency Reporting, 50.55(e). Also included in this review shall be the examination of improper voiding of all other design changes or discrepancies notices that affected safety-related systems or that were misclassified as non-safety related.

DISCUSSION:

To confirm that the requirements of 10CFR 50 Appendix B, Criteria III, XV and XVI and 10CFR50.55(e)/10CFR21, as applicable to FCRs, DCNs, EDNs and T-B DNs, were met, LP&L has taken the following actions:

- ° A review of the FCR's/DCN's and lower tier documents identified by the NRC has been performed to determine if the conditions described should have been processed as an NCR. Any determined to have warranted such processing were then reviewed for safety significance under the reportability criteria of 10CFR50.55(e) and 10CFR21.

- ° A similar review was performed on a sample of approximately 900 lower tier documents and FCR's/DCN's.
- ° The voided EDNs identified by the NRC were reviewed to ensure that proper actions had been taken or that voiding was proper. An additional sample of 49 voided EDNs was reviewed in the same manner.
- ° A sample of over 160 EDNs were reviewed to determine if the proper safety classification had been assigned.
- ° All 145 Mechanical (M) and Welding (W) voided T-B DNs were reviewed to ensure that proper actions had been taken or that voiding was proper.

In the discussion that follows, the results of these actions as well as a description of the size and type of sample reviewed will be presented. An overview of the lower tier reporting system as well as the processing of DCNs and FCRs is provided as Appendix A. The discussion together with the appendix demonstrates that, although interpretive errors allowed a small percentage of conditions that should have been dispositioned on an NCR to be processed on another document, adequate procedural quality safeguards existed such that high confidence exists that conditions of safety significance received the proper evaluation and reportability review. Of the documents reviewed none met the criteria for reportability of 10CFR50.55(e) or 10CFR21. In addition, no plant hardware changes were required as a result of this review.

I. REVIEW OF LOWER TIER DOCUMENTS AND FCRs/DCNs IDENTIFIED BY THE NRC

In addition to those items specifically cited in the NRC DESCRIPTION OF CONCERN, the NRC subsequently provided a list to LP&L of uncited lower tier documents and FCRs/DCNs which the NRC identified as potentially warranting processing as an NCR.

A review of these documents was performed by Ebasco to determine if any warranted processing as an NCR, and if so, whether the condition described met the criteria for safety significance and reportability in accordance with 10CFR50.55(e) and 10CFR21.

In addition, a joint committee, headed by LP&L (two LP&L and two Ebasco engineers) conducted an indepth evaluation of the 121 documents identified by the NRC. This committee determined how many documents warranted processing as an NCR; reviewed all documents pursuant to 10CFR50.55(e) and 10CFR21; and determined how many FCRs/DCNs had been appropriately preceeded by a construction field document. These field documents were then reviewed to ensure that they were being used to identify in-process constructability problems and not "after the fact" deficiencies.

The committee identified the following two items which required retesting or reverification:

- ° FCR-MP-2151 - This FCR was developed to add a one inch isolation valve upstream of a damaged regulator valve during RCS hydrostatic testing. These valves are located in a branch line (sample line) off of the pressurizer surge line. Our review indicated that the regulator valve was subsequently repaired. However no documentation was available to substantiate that six welds on line 2RC3/4-051A/B-2 had been hydrostatically tested.

On October 2, 1984 Ebasco initiated Condition Identification and Work Authorization (CIWA) - 19024 to test the welds. On October 4, 1984, all welds were hydrostatically tested and confirmed to be acceptable.

- ° EDN-EC-1595 - Satisfactory documentation could not be located to show proper closure of this EDN. The EDN required specific QC signoffs for wiring modifications performed within the Process Analog Control (PAC) system panels CP-42 and 49.

Since some of the individual signoffs were not done initially, the EDN required that LP&L perform a QC check on the terminations. On September 25, 1984 two CIWAs were developed to perform the specific wiring verifications and to evaluate any noted discrepancies. After verification of all terminations, and by utilizing referenced DCNs to determine subsequent changes, all wiring was confirmed to be correct.

The following are the overall results of the reviews for documents questioned by the NRC:

- ° Of the 36 identified FCRs, six (6) were judged to have warranted processing via an NCR; none was judged to meet the criteria for reportability per 10CFR50.55(e) and 10CFR21.
- ° Of the seven (7) identified DCNs, none were judged to have warranted processing via an NCR; none was judged to meet the criteria for reportability per 10CFR50.55(e) and 10CFR21.
- ° Of the 55 identified EDNs, two (2) were judged to have warranted processing via an NCR; none was judged to meet the criteria for reportability per 10CFR50.55(e) and 10CFR21.
- ° Of the 23 identified T-B DNs, two (2) were judged to have warranted processing via an NCR; none was judged to meet the criteria for reportability per 10CFR50.55(e) and 10CFR21.
- ° Of the 43 design documents (36 FCRs and 7 DCNs) reviewed, 40 should have appropriately been preceded by a lead field document. Of these, seven (7) either did not have a lead field document or the field document identified a nonconformance instead of a constructability problem. Two of these 7 design documents were non-safety related.

Details of the evaluation of the cited examples are contained in Attachments 1 and 2.

II. RANDOM SAMPLE OF LOWER TIER DOCUMENTS AND FCRs/DCNs

A sample size of approximately 900 documents was initially reviewed by Ebasco from a total population of approximately 32,000 documents. Except for the fact that only documents pertaining to safety-related components, structures or systems were chosen, the sample was random.

The objectives of the review were to:

- ° Determine if the condition described on the document should have been processed as an NCR, and

^c If so, did the condition meet the criteria for safety significance and reportability as defined in 10CFR50.55(e) and 10CFR21.

The review was conducted by experienced engineers familiar with the Waterford-3 design. The initial evaluation was checked by another reviewer. If it was judged that the condition should have been upgraded to an NCR, Ebasco Licensing and QA performed a review for safety significance and reportability. These results were further reviewed by two committee representatives (LP&L committee chairman and an Ebasco representative).

Of the total documents reviewed, it was judged that 39 (4%) should have been processed as an NCR. However, the disposition for these 39 documents was, in all cases adequately evaluated and documented. Additionally, none of the document-described conditions were considered to meet the criteria for safety significance and reportability in accordance with 10CFR50.55(e) and 10CFR21.

III. REVIEW OF VOIDED DOCUMENTS

To address the apparent NRC concern that improper voiding of documents may have caused the identified conditions to go unresolved, LP&L and Ebasco conducted a sample review of EDNs and a total review of T-B "M" and "W" DN's. In addition, LP&L identified that voiding of EDNs was never procedurally allowed and voiding of T-B DN's was only allowed after August, 1981.

LP&L reviewed 53 of a total of 222 voided EDNs. These documents are identified in Attachment 3. The review indicated that the EDNs were voided because either they were not an actual deficiency or were subsequently resolved by other means. Based on the review of the 53 voided documents, there is a confidence level of 95% that 95% of the unsampled voided EDNs contained no safety significant issues.

A total of 145 "M" and "W" T-B DN's were voided. Of this total, 13 were voided because they were found to be non-safety related and required no further review. Sixteen of the DN's had been voided because they were upgraded to NCR's. The balance of voided DN's (116) were voided for one of the following reasons:

- 1) The review concluded that no discrepancy existed.
- 2) Misinterpretation of procedures by inspectors.
- 3) Premature inspection of in process work.
- 4) Duplication of lost DN's where original was later found.
- 5) Code Case acceptance.

Voiding of design changes (DCNs, FCRs) does not represent a safety issue in that final plant configuration must be in accordance with final design specifications and drawings. If a potential design change was voided, the change was not implemented and the design configuration must still be in accordance with the latest revision of the drawings.

Based on the above reviews, LP&L believes that the voiding of these documents does not represent a significant safety issue.

IV. REVIEW FOR PROPER SAFETY CLASSIFICATION

The NRC also requested that LP&L evaluate the document types in the concern to assure that non-safety related discrepancies/changes were not misclassified. As noted on Figure 1, correct DCN/FCR classification was reviewed and accepted by Construction Engineering and Design Engineering. These reviews provided adequate assurances that design documents were classified properly.

The TB-DN procedure did not differentiate between safety and non-safety related. All DNs were procedurally required to be reviewed by QA for upgrading.

EDN processing was slightly different. Non-safety discrepancies did not normally receive QA review. For this reason LP&L has sampled 163 out of the approximately 1200 non-safety related EDNs to determine if: 1) they were classified correctly and 2) if they were misclassified, was the discrepancy a significant safety problem. The results of the sample showed that none of EDNs were misclassified. On that basis, there is a confidence level of 95% that 98% of the total non-safety related EDN population was classified correctly. Based on this sample LP&L believes that no further review is warranted.

CAUSE:

The cause of the concern was due to the utilization of several specialty contractors with individual QA programs. The corrective action sections of these programs did not standardize the definition and use of NCR. This lack of standardization caused a minor number of interpretive errors to be made. Interpretive errors led to processing a small percentage of conditions on a lower tier document or FCR/DCN that should have more appropriately been dispositioned on an NCR.

GENERIC IMPLICATIONS:

The potential generic implications of this concern were that significant conditions adverse to quality and safety may not have been properly evaluated, corrected, and reported in accordance with Criteria XVI of Appendix B to 10CFR50 and 10CFR50.55e/10CFR21.

The review conducted has provided LP&L with a high level of confidence that such conditions have been processed properly.

CORRECTIVE ACTION PLAN/SCHEDULE:

LP&L feels that no further action is necessary for items that should have been upgraded to NCRs. Our review has shown that the dispositions and corrective actions defined on lower tier documents were adequately evaluated and properly documented.

With respect to procedural violations identified during the review, LP&L is highly confident that present programs as implemented by Nuclear Operations

should preclude recurrence. Since the operation phase will not utilize the number of subcontractors required during the construction phase, the QA program will be inherently less complex. As presently structured, the operations QA program is designed to implement the requirements of 10CFR50, Appendix B, Criteria III, XV, and XVI. The approved QA program is outlined in chapter 17.2 of the FSAR and implemented by well defined procedures and management controls. In addition Nuclear Operations and Nuclear Services have implemented programs to meet the legal reporting requirements defined in 10CFR parts 20, 21, 50, 70 and 95. LP&L will provide a more in depth discussion of the overall QA program in the submittal that discusses the collective significance of the 23 NRC items of concern.

SAFETY SIGNIFICANCE:

The reviews described above reached the following conclusions:

- ° No conditions were found which required physical plant changes.
- ° No lower tier or design documents (FCRs/DCNs) that were judged to warrant processing as an NCR described conditions which, if left uncorrected, would adversely affect plant safety.
- ° The dispositions and corrective actions defined on the lower tier documents that should have been upgraded to NCRs were conservative and correct. Upgrading the documents would not have changed the dispositions or corrective actions.
- ° The sample of lower tier documents discussed in Section II was random and consisted of over 900 documents out of a total of approximately 32,000. The basic concern relates to the ability of the hardware to perform its intended safety function. For statistical purposes, therefore, a defect is defined as an instance in which, as a result of the review, a hardware deficiency was identified which, if left uncorrected, would adversely affect safety. No such defects were found and on that basis there is a confidence level of 95% that 98% of the total population neither describe conditions that have safety significance nor meet the reportability criteria of 10CFR50.55(e) and 10CFR21.

LP&L therefore believes that this concern has been adequately addressed and should not be considered a constraint to fuel load or power operation.

ATTACHMENTS:

- 1) DCNs/FCRs Cited by NRC
- 2) Evaluation of T-B DNs and EDNs
- 3) Voided EDNs

Appendix A: Overview of Lower Tier Documenting Reporting System and Processing of FCRs/DCNs.

ATTACHMENT 1

DCNs/FCRs CITED BY NRC

<u>FCR/DCN NO.</u>	<u>RESOLUTION/COMMENTS</u>
FCR-MP-1818	This FCR and NCR W3-3897 were written within one day of each other. TB-182 (NCR) initiated W3-3897. The FCR provided dimensional information for the NCR disposition of "replace". Drawings G-204-S7 provides evidence of FCR implementation. This item is not considered reportable.
FCR-AS-3698	This field change was generated to revise plate and bolts to accomodate as-built condition. DN-SQ-0924 was developed which subsequently caused CEIR-090 to be written. CEIR-090 was submitted and caused development of FCR-3698. The item is not considered reportable.
FCR-AS-3648	Several design and corrective action documents were associated with this support. Support deficiencies were initially identified by an NCR. This NCR appears to have been closed prematurely, however subsequent design documents corrected the conditions. FCR-AS-3648 was issued to accomodate the "as built" condition developed by the previously written NCR and design documents. The item is not considered reportable.
FCR-AS-2338	No NCR was generated. Based on definition, an NCR should have been generated since a prefabricated piece of structural steel was shop released and incorrect. This item is not considered reportable.
FCR-MP-1434	Two TB-IRs (4559, 5356) properly identified and documented the incorrect installation of the Dravo spool piece. The installation error is significant due to the piping segments safety function and should have been written as an NCR prior to shipment of the piping assembly. Additionally the spool, as initially installed, caused further fit up problems which had to be corrected to affect proper piping alignment. The disposition for the IRs is conservative and properly documented on the FCR. The item is significant but not reportable since construction controls were in place to prevent the improperly installed spool from going uncorrected.

ATTACHMENT 1
DCNs/FCRs CITED BY NRC
(Continued)

FCR/DCN NO.

RESOLUTION/COMMENTS

FCR-AS-1631

Original cracks were repaired via NCR W3-1548. Continued attempts at the repairs required by W3-1548 still resulted in cracked weld. FCR AS-6131 was generated to allow alternate configuration to eliminate cracking at this joint. This item is not considered reportable.

FCR-E-3089

An NCR was written on this matter. NCR-5371 revealed that the enclosures for reactor coolant pump speed sensor amplifiers had been replaced. Apparently heavy corrosion had been noted. Stainless enclosures were substituted for carbon steel. Subsequently, Ebasco performed an unauthorized modification which negated the NEMA Type III requirements for a weather proof enclosure. The FCR was generated to document the enclosure change and gasket replacement.

The plant contains 24 sensor amplifiers. 16 are considered safety related since they feed safety channels for the Core Protection Calculator (CPC). However, failure of the amplifiers signal due to environmental effects would cause a reactor trip, but not prevent a trip. Therefore the stated condition does not represent a significant deficiency that could adversely affect the safe operation of the plant.

FCR-MP-2138
DCN-MP-703

This item was identified by NCR-W3-4739. In addition several CIWAs were generated to implement corrective actions. The cause of the cracking was due to overtightening of the valves to limit RCS leakage prior to hydrostatic testing. The valves were replaced and tested satisfactorily. Although this deficiency is not considered reportable it was noted that the NCR was inadequately evaluated during the time of occurrence.

The condition was evaluated with only one failure noted. After the addition of 13 valves to the NCR the condition was not immediately re-evaluated by Ebasco. During our review Ebasco Engineering and LP&L Engineering concluded that the condition was not reportable pursuant to 10CFR50.55(e) and 10CFR21.

ATTACHMENT 1
DCNs/FCRs CITED BY NRC
(Continued)

FCR/DCN NO.

RESOLUTION/COMMENTS

FCR-MP-2151

The FCR added a manual valve upstream of a damaged regulating valve to facilitate cold hydro testing. Documentation was available to document repair of the regulating valve; however no documentation was available to substantiate the hydrotesting of six welds in line 2RC3/4-051A/B-2. Subsequently, the line was hydrotested successfully. A more detailed explanation of this FCR is contained in the body of the response. This item is not considered reportable.

FCR-2288

This FCR was written in response to RFI-4143 which requested additional cable pull clarification. These cables are non-safety. This item is not considered reportable.

DCN-IC-478

This DCN involved retagging of instruments in the warehouse based on an inventory survey. Subsequent to the inventory survey, a DN was generated to document discrepant tag numbers based on a revised EMDRAC drawing. The DN (MC-3188) was dispositioned to change the tag numbers based on procedure ASP-IV-54, a DCN was not necessary. The tags have been changed and the DN is closed. QA documentation reflects revised tag numbers. This item is not considered reportable.

DCN-E-790

This DCN was written as a result of CIWA 820056 which revealed a disparity between design documents. This circuitry is not safety-related. This item is not considered reportable.

DCN-ME-30 R1

This DCN was generated to document the as-built condition reflected in DCN-IC-1415 R1. DCN-IC-1415 R1 revised the model number for the ASCO solenoid from NP 831664E to NP 831665E. The difference between these two types of solenoids is that the 665E model has an explosion proof and watertight enclosure while the 664E model only has a watertight enclosure. Both models are environmentally and seismically qualified. The change represents an upgrade based on ME-30 requirements. This item is not considered reportable.

ATTACHMENT 1
DCNs/FCRs CITED BY NRC
(Continued)

The DCNs/FCRs cited by the NRC were evaluated individually in this attachment. In 2 cases an NCR should have been written to document the discrepancy based on definition. However, there is no safety significance with respect to 10CFR50.55 (e)/21. In other cases, a corrective action document had been previously written, the item was nonsafety-related or the condition was identified on a pre-approved design document.

ATTACHMENT 2

EVALUATION OF T-B DNs AND EDNs

- W-381 - Welds painted prior to visual examination and dispositioned by Ebasco letter. The welds are not safety-related.
- W-728 - Hold Point for ANI bypassed. An additional LP examination was subsequently performed with ANI present. Discrepant condition brought back to requirements by additional testing.
- W-742 - Electric power off for an unknown time (weld rod ovens). Disposition by T-B welding engineer assured that rod would be held at correct temperature for required time prior to issuance. Discrepant condition brought back to requirements. (Response to Concern 22 addressed this issue).
- W-1876 - Post Weld Heat Treatment not verified for FW5R1 by QC. Records were subsequently generated by involved craft per disposition.
- W-2105 - Bypassed ANI hold for fit-up inspection. Four additional reviews were procedurally required including the ANI review of completed 11008 & 11009 forms for acceptability.
- W-4112 - Coupling installed not in conformance with MP-488R1. DCN MP-488 required the addition of 6000# couplings to an MSIV Bypass line. Apparently 3000# couplings were incorrectly installed. This DN documented and identified the problem and requested design information. 3000# couplings were subsequently documented via redline procedures and was approved and the DCN and DN closed.
- W-5047 - Incorrect weld procedure used. Weld procedure which was used was metallurgically compatible. The disposition was conservative and correct.
- W-5416 - Two DNs and NCR 4010 were affiliated with this deficiency. The DN listed several welds that were deficient due to documentation problems. The problems were identified as part of the DN-T-2474, NCR-4010 support walkdown program. (NCR-4010 was upgraded and reported as SCD-60 which is still open).
- W-5692 - No RT performed on base metal repair area. The DN was initiated to identify the need for RT instead of visual and PT examination specified on 2 previous DNs. This condition should have been written as an NCR. However, the DN disposition was conservative and not considered reportable.
- W-6183 - These DNs identified that flanges were torqued at values outside
W-6322 of the calibrated torque wrench range. However, specific torque
W-6519 values are not required by Code. These flanges were checked for leakage as part of system hydrostatic testing and were acceptable.

ATTACHMENT 2
EVALUATION OF T-B DNs AND EDNs
(Continued)

- W-6243 - A non-conservative interpass temperature of 600°F versus 350°F was specified on a weld record. Due to the type of weld involved (Bimetallic), the process involved and the documented welder training, neither interpass temperature would have been expected to be exceeded.
- W-6349 - Gap between lug and pipe clamp unacceptable per FCR 1553. Gap was evaluated by Ebasco per NCR 4010 program and accepted.
- W-3656,4648 - These DNs indicated clerical errors in transcribing heat numbers
4968,4869 or filler material on to QA documentation. Based on evaluation
5755,5824 of material dispursed by rod room, the justification for
5916,5917 maintaining the position that a clerical error existed appears well documented and logical. The error both individually and collectively, is not considered safety significant.
- EDN-EC-1479 - Material documentation on a hanger was unavailable on the four snubbers. A supplement to the purchase order was developed to require QC review of the documentation. The snubbers were released after documentation requirements were resolved.
- EDN-EC-1476 - Root pass LP was not performed. Final UT inspection was performed which volumetrically accepted the weld. This item did not represent an AWS code violation.
- EDN-EC-1548 - Small nicks on cable jacket. The condition was corrected by repairing the cable to design/installation criteria.
- EDN-EC-1502 - An EDN should not have been issued. Conduit installed through other penetrations was allowed per design drawings (B-288) as long as cable identification was maintained.

Conclusions:

LP&L's evaluation of the cited EDNs/DNs indicates that one case, by definition, should have been upgraded to an NCR. In this case, evaluation was performed by the appropriate groups including the quality assurance organization. The DN that should have been upgraded is not considered safety significant.

ATTACHMENT 3

VOIDED EDNs

- 53 voided EDNs were reviewed
- of the 53, 17 were written against safety equipment

<u>EDN NO.</u>	<u>DESCRIPTION</u>	<u>RESOLUTION*</u>
EC-0630	Inadequate drainage at -35 (RAB).	The EDN identified a non-safety/non-seismic plumbing problem. Further action was required to correct drainage problems throughout the plant. This action was accomplished by a contractor in late 1983 and early 1984 under the CIWA program.
EC-1149	Potential Damaged Tubing.	The EDN was voided because the tubing damage was previously addressed and closed out on EC-1136.
EC-1431	Unable to Locate SF-83-4-5.	The Service Form was subsequently located.
EC-1104	Scale Change on Recorder JR-RC-005/006.	A scale change was identified by CIWA 832097 and corrected by DCN-ICP-540.
EC-1392	HPSI Pump on Lower Guard.	The coupling guard bolts (non-safety) on HPSI pumps were not completely snugged down. Potential Problem Report #244 was transmitted to LP&L. The PPR was closed by LP&L via CIWA 18006.
EC-1393	Valve Stem Protector 2SI-V1544B4.	Valve stem protector lengthened. No discrepancy exists.
EC-1175	Material On Hold.	Problem addressed in EDN-1175 as it pertains to proper control, storage and segregation of permanent plant material was resolved on DN-MC-5223.
EC-1176	QC Vol. AG WQC.1.	DN-1176 identified a potential warehouse inspection problem. Warehouse inspection forms were retrieved which indicated inspection.
EC-1347	Conduit Installation CP-6.	DCN-E-1024 was developed to implement the installation change.

ATTACHMENT 3
(Continued)

<u>EDN NO.</u>	<u>DESCRIPTION</u>	<u>RESOLUTION*</u>
EC-1350	Box 31008-SB & 31009-NAB are not installed per DCN-E-1100.	FCR-E-3253 was issued to correct the installation.
EC-917	Hilti Bolt for valve 2SI-V804A/B pulling out of concrete.	Based on field inspection, no discrepancy exists.
EC-1140	Operators interchanged for 3FW-V6074 & 6CD-V343.	Potential Problem Report 0245 was submitted to LP&L. Operators were not interchanged, tag on operator must be changed based on Pacific Valve Inc. Electric Motor Operating Testing Report dated 12/20/79. This report identified operator S/R 240727 as belonging to tag 3FW-V607A. Valve 3FW-B605B does not have operator. Limitorque motor operator for 6CD-V343 must also be corrected. The PPR was closed by LP&L via CIWA 10055.
EC-1205	Exposed Hilti and Core Hole 762.	Based on field inspection, no anchor plates existed in the described area. Discrepancy invalid.
EC-1110	Foundations for Fans E-22 A&B.	Based on field inspection, no discrepancy exists.
EC-0584	Cable Reel number change.	NCR-2833 was generated. The DN should have been closed.
EC-1502	Conduit Installations	As noted on Attachment 2, the conduit installation was allowed per B-288 drawings.
EC-1802	Tubetrack	Identified that several short E11 shaped cantilevers existed on tubetrack. FCR-ICP-654 was subsequently issued to define the engineering disposition.

All voided EDNs (cited) were evaluated in this attachment. In no case was an NCR required that was not generated. None of the problems identified in the EDNs have any safety significance as defined in 10CFR50.55(e) or 10CFR21.

APPENDIX A TO CONCERN NO. 4

OVERVIEW OF LOWER TIER DOCUMENT REPORTING SYSTEM AND PROCESSING OF FCRs/DCNs

During the initial design and construction phase LP&L established and implemented an approved QA program to evaluate discrepant and nonconforming conditions. This program was implemented throughout the construction phase of the project. In addition, Corporate procedures required that individuals within the various organizations report all discrepant conditions for proper evaluation, including 10CFR50.55e and 10CFR21 (Ebasco Procedure N-23) consideration.

The lower tier reporting system contributed to plant safety in that it allowed engineering, QA personnel and management to properly focus on issues of safety significance, evaluate their generic implications and trend performance. In the final analysis, however, judgement and interpretation was made on many conditions that came close to meeting the criteria for processing as an NCR.

Our review has demonstrated that based on a strict interpretation of the definition of nonconformance, such judgements were not always appropriate. It has also shown, however, that the program requirements which delineate the identification, processing and review guidelines for these lower tier documents as well as for DCNs and FCRs provided adequate safeguards such that significant safety problems received the review, evaluation and management visibility required by Criteria XVI of Appendix B to 10CFR50.

DN, EDN Processing and Review

Deviations from design criteria and specifications were generated from Engineering/QC inspections, whether by Ebasco or other contractor personnel. Ebasco/Contractor procedures require that these conditions be identified by discrepancy notices (e.g. EDNs and T-B DNs). Discrepancy notices, by procedures, were evaluated and dispositioned within the contractor's organization by Construction or QC.

In each case (DN, EDN), the responsible QA organization was required by procedure to review the recommended disposition to ascertain if the DN, EDN should have been upgraded to an NCR. If an NCR was written, the DN/EDN was closed. If QA agreed that the concern could be addressed properly on a DN, it was processed for corrective action and verification.

The processing and review of contractor DNs and Ebasco EDNs was very similar to the processing of NCRs with respect to evaluating organizations and review. Procedures clearly identified the appropriate evaluating organizations and formed an integral part of LP&L's Quality Program. Identification, control, and proper action, with respect to deviations design and installation requirements, were controlled by these procedures. (Attachment A-1) summarizes this processing and review cycle. Attachment A-2 summarizes these procedures with the responsible organizations for the processing and review of these documents.

The attachments demonstrate that whether a condition was originally documented as a DN or EDN, as opposed to an NCR, it received a quality review. Such a review effectively acted as a "safety net" for conditions with safety significance. Although occasional interpretive errors were made, the probability of conditions with safety significance not being processed on the appropriate level document was very low. Similarities in the review cycle are as follows:

- Condition identified by QC or inspection group
- Dispositioned by Construction, ESSE or QC
- QA supervisor or designee determined, by an interpretation of definition, if upgrading was required.
- QA/QC signature required/Engineering Inspector Signature
- Verification of disposition by inspection (EDN - Engineering Inspector/QC, DN-QC)

FCR/DCN PROCESSING AND REVIEW

Changes to design were generally initiated from three areas; information and new regulations received from regulatory agencies, field requests, and in-house design reviews which included vendor information received which was incorporated into design drawings and specifications. In house reviews and regulatory information were evaluated and directly transcribed onto a DCN or FCR. Field information was typically received via contractor documents such as an Information Request (IR) or a Request For Information (RFI). These requests were "in process" construction documents which provided the contractor with a documented system to request clarification, detailed information, or to advise the engineer of constructability problems.

DCNs and FCRs were used to advise the field of engineering approved changes to Ebasco design. These documents, when issued, carried the same impact and importance as design specifications and drawings. They were not considered "lower tier" documents. As discussed below, they received a level of review commensurate with the design change. They were not used in lieu of DNs, EDNs or NCRs for documenting and dispositioning design discrepancies. Utilization of DCNs/FCRs minimized original drawing revisions and were used as an interim modification until design drawings are "as-built".

It was the responsibility of the Lead Discipline Engineer to determine if the changes had a safety impact as defined in Ebasco Engineering Procedure E-69 entitled "Design Change Notice - Field Change Request". As defined in E 69, major and minor changes which affect safety-related aspects of the plant were processed, reviewed and documented in accordance with Topical Report ETR-1001, Section QA-I-4, Design Control (see Figure A-1). Processing of FCRs initiated by Construction included review and acceptance by Engineering. As in the case of DCNs, Engineering was responsible to verify that the change did not affect safety related aspects of the equipment/system. If the change affected safety, it was processed as defined in QA-I-4.

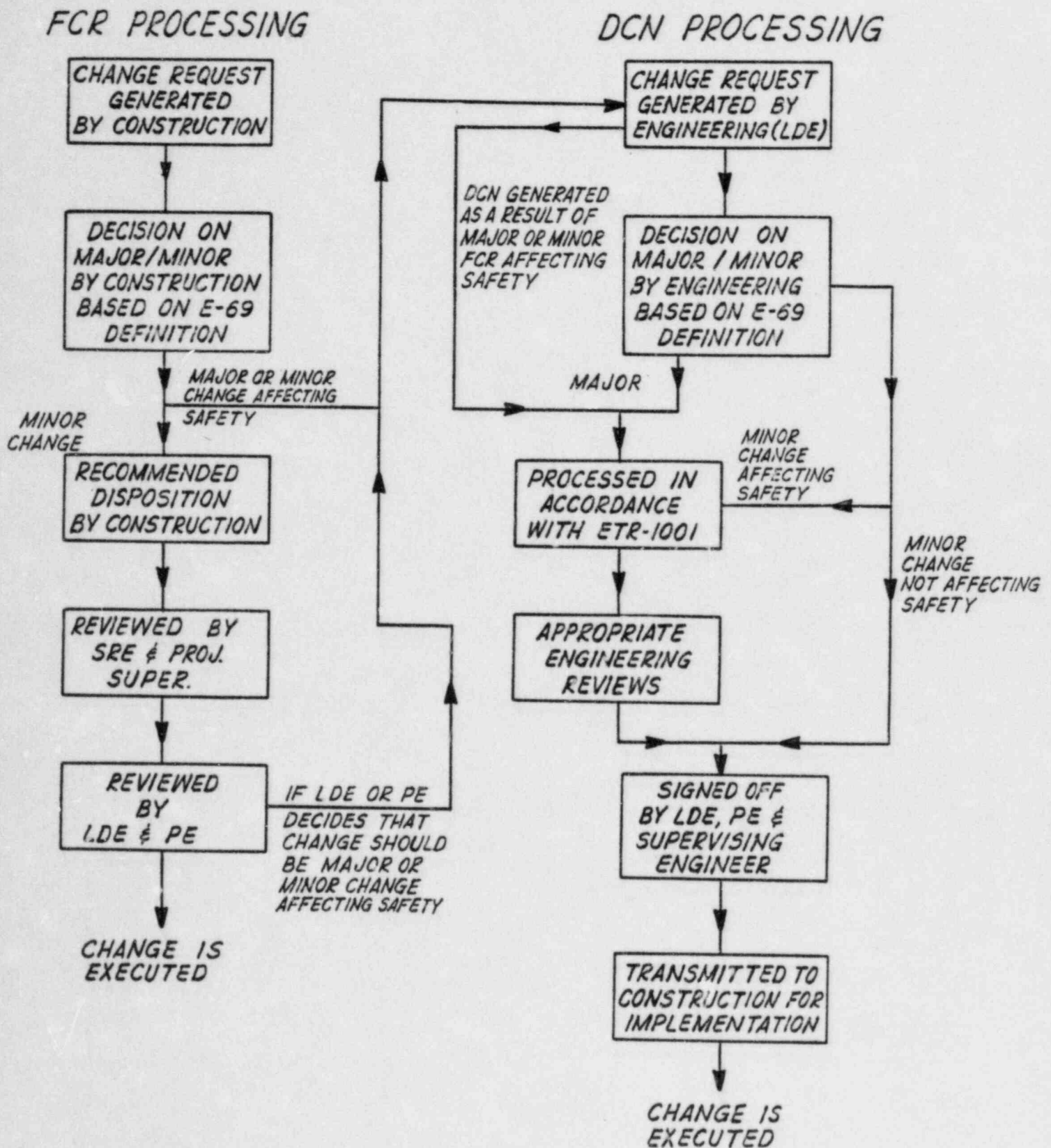
No documented review of DCNs/FCRs was required for 10CFR50.55e or 10CFR21 applicability. However, Engineering was responsible to meet the requirements of Ebasco Procedure N-23 "Reporting a Defect/Noncompliance to the NRC". This procedure required each employee to consider the effect of deviations to design and procedures and to report these types of deficiencies for evaluation as potentially significant deficiencies. The supervisor responsibilities required contact with QA for this preliminary evaluation. This procedure, by requiring QA input, made it similar to processing DNs/EDNs. Attachments A-1 and A-2 detail the processing and review cycle for DCNs and FCRs. Based on our review, there were cases where a DCN/FCR described a condition that warranted processing an NCR. However, none of these cases were considered safety significant with respect to 10CFR50.55e/21.

MATRIX FOR
PROCESSING AND REVIEW OF
NONCONFORMANCES (NCRs)
DISCREPANCIES (DNs)
ENGINEERING DISCREPANCIES (EDNs)
DESIGN CHANGE NOTICES (DCNs)
AND
FIELD CHANGE REQUESTS (FCRs)

DOCUMENT	GENERATED BY INSPECTION PERSONNEL (QC OR ENGR)	DISPOSITIONED BY CONSTRUCTION OR QC	REVIEWED BY QA (EBASCO OR CONTRACTOR)	VERIFICATION OF CORRECTIVE ACTION BY QA/QC	PROCEDURE REFERENCE
DN (Ebasco)	Yes	Yes	Yes (Note 1)	Yes	WQC-150
DN (Contractor- Typical)	Yes	Yes	Yes (Note 1)	Yes	TB Procedure TBP-12
DN (Contractor- Typical)	Yes	Yes	Yes (Note 1)	Yes	Gulf Procedure PR 15.0
EDN	Yes	Yes	Yes (Note 1)	Yes or Engineering Inspector	ASP-IV-70
NCR	Yes	Yes (or ESSE)	Yes	Yes	ASP-III-7
DCN	No	Yes	As Req'd. by Procedure	N/A	Engineering Procedure E-69
FCR	No	Yes	As Req'd. by Procedure	N/A	Engineering Procedure E-69

NOTE 1: Review by QA for Upgrading to NCR

FIGURE 1
DCN/FCR PROCESSING
PER ENGINEERING PROCEDURE E-69



RESPONSE

ITEM NO.: 9

TITLE: Welder Certification

NRC DESCRIPTION OF CONCERN:

The staff reviewed the records for the installation of the supports for certain of the instrumentation cabinets in the Reactor Containment Building (RCB). The review included an examination of procurement records for the support material, weld rod control documents, welder certification records and QC inspection records.

Based on the staff review, it appears that documentation is missing on a number of support welds and it is not clear that the welders were certified for all of the weld positions used. Thus, the quality of the supports for the instrument cabinets are indeterminant.

LP&L shall attempt to locate the missing documents and determine if the welders were appropriately certified. If the documentation cannot be located, appropriate action must be taken to assure the quality of the cabinet supports.

DISCUSSION:

The instrument cabinet support steel of concern to the NRC was installed by the J. A. Jones Construction Company. J. A. Jones' primary construction responsibility was to install reinforcing steel and place concrete. Welding by J. A. Jones was limited in scope and incidental to their primary responsibility.

As a result of the specific NRC concern, a thorough review was conducted of the documentation associated with welding of the instrument cabinets. Reviews were also conducted to identify the remaining scope of Jones welding and the extent of available documentation. As discussed below, no cases of welding out of position were identified, and the adequacy of Jones welding was confirmed.

A) Reactor Containment Building (RCB) Instrument Cabinets

In order 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 to NCR 7549. The inspection did document conditions requiring an 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 has provided reasonable assurance that no J. A. Jones welders performed welding in positions for which they were not qualified.
- (3) In any instances where out-of-position welding may have occurred, the complete reinspection and subsequent evaluation of the as-built condition has confirmed its adequacy.

B) Other Welding Performed by J. A. Jones

To ensure that conclusions reached relative to the safety of the instrument cabinet supports could be extended to the rest of J. A. Jones welding, a thorough review was conducted to establish the scope of welding and adequacy of documentation. The additional J. A. Jones welding identified by this review consisted of 22 work packages. They were categorized as 1) temporary work or work done for construction convenience, 2) nonsafety-related welding, 3) safety-related or seismic welding. Work performed under categories 1 and 2 were not considered further due to their non-safety applications. For welding identified as safety-related or seismic, a documentation review was conducted. This review indicated that the available documentation associated with J. A. Jones other welding was as good, and in most cases, better than the documentation associated with the RCB instrument cabinet supports welding. Documentation for three Field Change Requests (FCRs) (1898, 1916 and 1965) has not been located, however, Work Verification sheets indicating completion of this work provides a high level of confidence that the work was adequately performed.

Welding identified as safety related or seismic was also determined to be of a low stress. No applications involving high stress were identified.

The welding performed on the RCB instrument cabinet supports represented a large percentage of the J. A. Jones welding. This welding was completely reinspected and analyzed without identification of any required rework. The acceptable condition of this work, combined with the favorable documentation on additional J. A. Jones welding, substantiates the conclusion that the additional J. A. Jones welding is adequate.

To provide additional confirmation of this conclusion, six of the twenty-two packages determined to be the most important of J. A. Jones additional welding, were selected for inspection. Included in one of these work packages are the three FCRs for which full documentation has yet to be located. This inspection is documented by L-CIWA-18908, and identified no condition requiring corrective action.

CAUSE:

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" format that did not ensure documentation of inspection on an individual weld basis.
- (3) Numerous revisions to the FCRs 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 Jones was, in retrospect, inadequate to deal with this combination of problems confined to these supports. As a result, it has been concluded that a portion of the welding associated with the instrument cabinets may not have been inspected, and deficiencies were not documented and corrected.

GENERIC IMPLICATIONS:

This concern has been addressed generically. A review of all welding performed by J.A. Jones was completed. Elements of the Jones program that resulted in problems on the cabinet supports were common to all welding performed by Jones. However, the unique combination of problems observed on the cabinets was not observed elsewhere.

SAFETY SIGNIFICANCE:

Complete reinspection and engineering evaluation of the welding associated with 17 of the 18 RCB cabinets confirmed its capability to adequately perform its safety function under design conditions. Review of documentation, determination of the low stresses involved and the selected inspection confirmed the adequacy of the remaining J. A. Jones welding. On this basis, there is no recognized reason that this issue should constrain fuel load or power operation.

CORRECTIVE ACTION PLAN/SCHEDULE:

Review and evaluation of the RCB instrument cabinet supports is complete. No further corrective action is required.

Identification and documentation review of J. A. Jones additional welding is complete. Six work packages were selected for inspection. No further corrective action resulted from this inspection.

LP&L considers all corrective action associated with this concern to be completed.

ATTACHMENTS:

None

REFERENCES:

- (1) J. A. Jones QA Manual
- (2) NCR-W3-7549
- (3) J.A. Jones Welding Inspection Procedure, W-SITP-14
- (4) E. Stanley memo to file dated August 23, 1984, No. ES-84-08-7
- (5) B. Grant/I. Bari memo to J. Houghtaling dated 10/10/84, No.ES-10145-84