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October 10, 1984

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President and  
Chief Executive Officer

W3B84-0495

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

SUBJECT: Waterford 3 SES  
Revised Program Plan

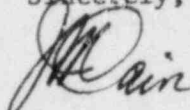
REFERENCES: 1) J. M. Cain to D. G. Eisenhut, dated June 28, 1984  
2) J. M. Cain to D. G. Eisenhut, dated July 27, 1984

Dear Mr. Eisenhut:

The purpose of this letter is to transmit a revised program plan for resolution of the twenty-three (23) issues identified in your letter of June 13, 1984. This revision supercedes the plans transmitted by References 1 and 2 as well as individual issue plans transmitted with issue responses. The attached plan includes additional information on the procedures, processes and qualifications of personnel involved in the resolution process. These additions should be beneficial to the NRC staff in planning for and completing the staffs' review and resolution of the issues.

To date, a total of seventeen responses have been submitted to the staff for review. Completion of the remaining responses and a discussion of the collective significance is expected within the next several weeks.

Sincerely,



J. M. Cain

JMC:KWC:11

Attachments

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Mr. Darrell G. Eisenhut, Director  
W3B84-0495  
October 10, 1984

Page 2

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October 10, 1984

WATERFORD 3  
PROGRAM PLAN AND SCHEDULE

I. INTRODUCTION AND PURPOSE

This program plan outlines the methods by which the 23 individual issues described in the NRC letter, Docket No. 50-382, dated June 13, 1984, are being resolved by LP&L. Further, the Plan provides a mechanism to address the cause of the issues, the generic implications and collective significance of the issues, and the programmatic and management changes designed to preclude recurrence of such issues. The plan also identifies the procedures, processes and qualifications of personnel involved in the issue resolution process. The Program includes a separate review of the resolutions by the Waterford 3 Safety Review Committee (SRC) Subcommittee and the establishment of an independent Pre-Licensing Issues Assessment Task Force (Task Force) to advise LP&L and evaluate LP&L's resolution of the issues.

II. PROGRAM PLAN MANAGEMENT

1. The LP&L Project Manager - Nuclear is assigned responsibility for management of the overall Plan and actions outlined below. He will perform these tasks in a normal line management role and have access to and the support of any requisite LP&L and contractor managers and staffs on a top priority basis. He will assure effective interfaces with external groups including the SRC and the Task Force described in VI below.
2. The Project Manager - Nuclear reports directly to the Senior Vice President - Nuclear, who in turn reports directly to the President and Chief Executive Officer of LP&L. Both the Senior Vice President - Nuclear and the CEO are directly and actively involved in the management of the Program.

III. RESOLUTION OF ISSUES

1. Each issue will be analyzed to determine:
  - The facts and the specific problems
  - The cause
  - The generic implication
  - The actions and schedules to correct both the specific problem and related generic concerns
  - The safety significance with respect to fuel load and low power operation, and to operation above 5% power

2. The intended manner in which each of the 23 issues are to be addressed is described in the Program Plans. It should be noted that the manner of resolution may need modification as actions necessary to resolve any related safety concerns are undertaken or additional sources of information become available.
3. The process for preparation and review of responses to the issues is described by the flow chart in Figure 1. The steps in the process are described below.

The initial program plan development was accomplished by preparation of an approach to resolution by gathering information on each issue from knowledgeable individuals. The approach was reviewed by a combination of an LP&L management team and the SRC Subcommittee. The independent Task Force reviewed the plan for logic of the approach and adequacy of the scope of the resolution.

Development of draft responses were prepared by the organization most appropriate, dependent upon the issue. Where Ebasco QA and/or Engineering were involved in the response development, LP&L QA and/or Engineering reviewed the process, evaluations and conclusions as necessary.

The LP&L Response Review Team\* reviews draft responses and directs efforts of the authors/evaluators as necessary to assure adequacy of evaluations and acceptability of responses. Final determinations on generic implication, cause, safety significance and corrective actions are accomplished through the Review Team. Reviews are also initiated by the Task Force and the SRC Subcommittee.

Following approval of draft responses by the Review Team, a formal LP&L validation process is initiated to provide assurance that the responses are accurate and are supported by proper documentation.

Upon completion of the specified reviews the final response is presented to the LP&L President and CEO for his concurrence and transmittal to the NRC. The Task Force and SRC Subcommittee provide statements for each response indicating agreement with the logic of the response.

Upon completion of the overall Task Force review, a final report will be prepared and transmitted simultaneously to the LP&L CEO and the NRC.

\* The LP&L Response Review Team consists of the LP&L Project Manager--Nuclear, the LP&L Engineering and Safety Manager, the LP&L Nuclear Support and Licensing Manager, a representative of the LP&L Plant Manager, the LP&L Corporate QA Manager and senior contract personnel who are particularly knowledgeable of the specific issues.



#### IV. COLLECTIVE SIGNIFICANCE AND PROGRAMMATIC CHANGES

In parallel with the process of formulating the information contained in paragraph III above, LP&L will:

1. Assess the collective significance of the individual issues, and
2. Recommend institutional or programmatic changes deemed appropriate to avoid recurrence of the types of problems underlying the issues being addressed.

#### V. SAFETY REVIEW COMMITTEE

1. The Waterford 3 Safety Review Committee (SRC) has designated an SRC subcommittee to review the items outlined in paragraph III and IV above.
2. The SRC Subcommittee consists of Kenneth W. Cook, LP&L Nuclear Support and Licensing Manager, Chairman; Joseph M. Hendrie, Consulting Engineer; Robert M. Douglass, Manager of Quality Assurance, Baltimore Gas and Electric Company; and Raymond F. Burski, LP&L Engineering and Nuclear Safety Manager.

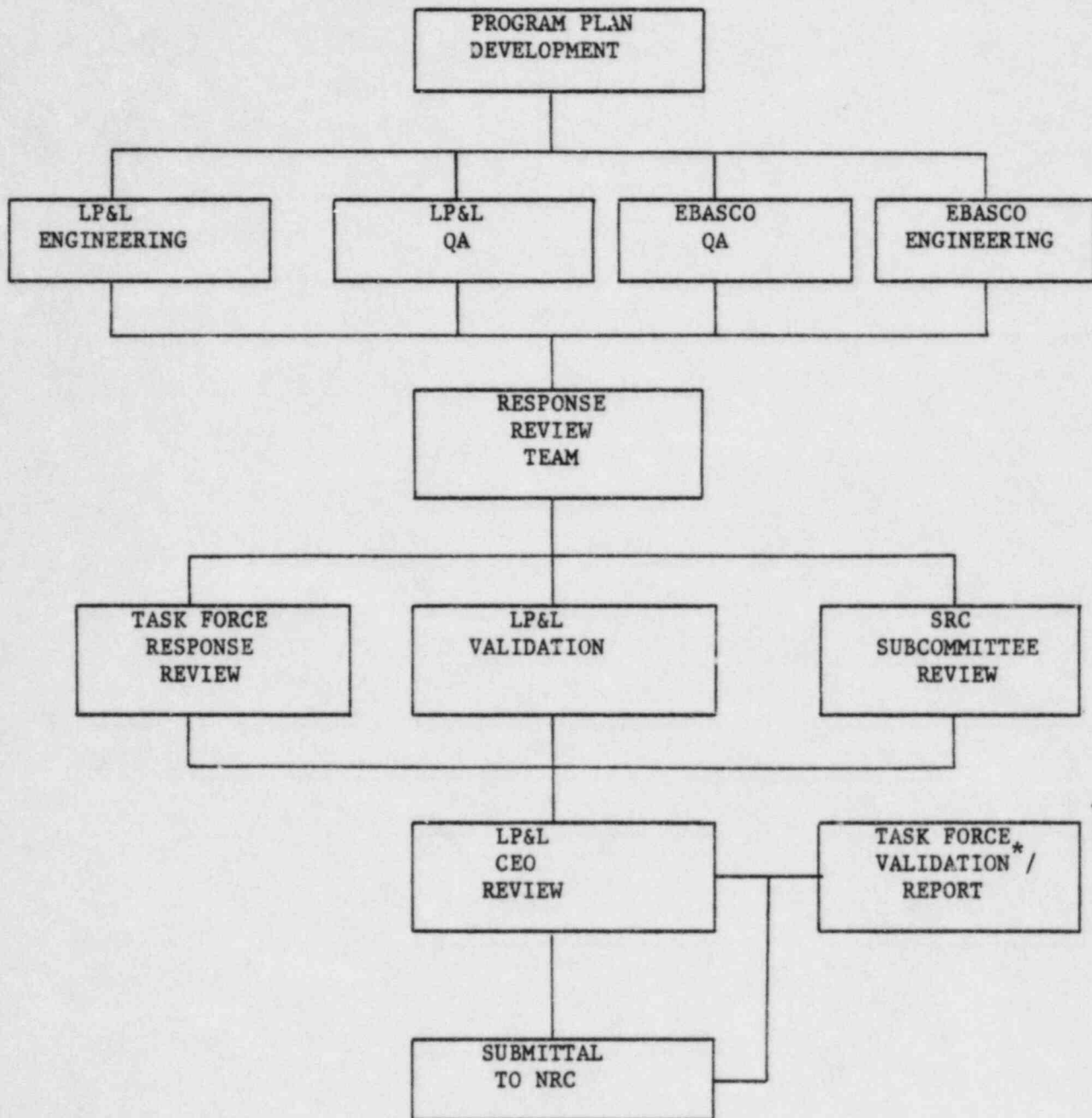
#### VI. INDEPENDENT ASSESSMENT

1. An independent assessment of the resolutions and determination of safety significance will be provided by the Task Force which reports directly to the CEO of LP&L. The Task Force consists of officials of UNC Nuclear Industries, Inc., Richland, Washington, and NUS Corporation, Gaithersburg, Maryland, who will be assisted by UNC and NUS staff members, as required. The Task Force will independently assess LP&L's resolution of the issues, including the cause, generic implications and collective significance of the issues. The Task Force will also provide an independent assessment of the safety significance of the issues with respect to fuel loading and low power testing, and operation above 5% power. It will assess the adequacy of LP&L QA/QC program in light of the NRC's issues, and will recommend any institutional or programmatic changes which may be necessary to prevent recurrence of the issues.
2. The Task Force charter, identification of principals and initial functions have been formalized as provided in the initial submittal of this program plan.

#### VII. RESPONSE TO NRC

LP&L has provided responses to seventeen of the 23 issues to date. Responses to the remaining issues will be submitted as they are completed and have undergone the degree of review specified herein. Some of the resolutions may be submitted before completion of all requisite corrective actions, which are underway or defined and scheduled for accomplishment, have been accomplished. Upon completion of responses to all 23 issues and evaluations of the collective significance of the issues LP&L will provide a final report compiling previous submittals of individual issues.

RESPONSE PREPARATION/REVIEW FLOW CHART



\* Task Force Validation Effort is ongoing effort throughout process.

PROGRAM PLAN

ISSUE: 1

DATE: 10/10/84

TITLE:

Inspection Personnel Issues

DESCRIPTION OF ISSUE:

Verify the proper certification of site QA/QC personnel or requalify the work performed by these personnel.

LP&L APPROACH TO RESOLUTION:

A verification program has been established to review the professional credentials of 100% of the site QA/QC personnel, including supervisors and managers who performed safety related functions at Waterford III during its construction. The discussions that follows applies to all contractors except J.A. Jones, Fegles, and GEO, which are addressed in Issues 10 and 20. Criteria for certification or qualification of QA/QC personnel will be based on ANSI N45.2.6-1973 and SNT-TC-1A for QC inspection personnel and contractor QA program requirements for QA personnel.

In addition, background investigations will be performed for personnel in all groups. If certification of an individual can not be verified appropriate site nonconformance documentation will be initiated to document evaluation of safety significance and corrective actions, including reinspections of work performed as necessary.

For Ebasco, LP&L and other site construction related QA/QC personnel remaining on site, a reverification of proper certification is being accomplished in accordance with ANSI-N45.2.6-1973. LP&L operations Quality Control personnel will be reverified in accordance with ANSI N-45.2.6-1978 as committed to in FSAR section 17.2. Quality Control functions currently being undertaken as part of the inspections in progress are being performed by personnel reverified as qualified under ANSI-N45.2.6-1973.

WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	QAI No. 32	Instructions for Verifications of QA/QC Personnel Qualifications
LP&L	QASP 19.12	Review of Contractor QA/QC Personnel Qualification Verification
	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. Verification Education/Experience of QA/QC personnel (except LP&amp;L and Ebasco).</li><li>2. <ol style="list-style-type: none"><li>a. Review program requirements of all contractors, review and collect data (except LP&amp;L and Ebasco) and identify inspectors whose qualifications are not verifiable against ANSI N45.2.6-1973, SNT-TC-1A and QA Program requirements for QA personnel.</li><li>b. Determine, to the extent feasible, inspections performed by personnel whose qualifications are not verifiable.</li><li>c. Disposition quality documentation generated by LP&amp;L in item 5 below.</li></ol></li></ol>	<ol style="list-style-type: none"><li>1. Training Requirements to QAI-32.</li><li>2. Ebasco's Quality Resources Training Manual-1 (QRTM-1) delineates the requirements for qualifying records reviewer. QAI-14, "Training and Qualification Requirements for Quality Assurance Records Personnel" endorses QRTM-1 and requires all reviewers have training on procedures they are reviewing to. For qualification/certification files, training requirements are QAI-32 and ANSI N45.2.6.</li></ol>
LP&L	<ol style="list-style-type: none"><li>1. Audit Ebasco's implementation of QAI-32.</li></ol>	<ol style="list-style-type: none"><li>1. <ol style="list-style-type: none"><li>a. Indoctrination/training to LP&amp;L and Ebasco procedures, ANSI N45.2.6-1973 and 1978, ANSI N45.2.23-78, SNT-TC-1A-75, and interpretations.</li><li>b. Orientation as to task objective, organizations, and associated responsibilities and duties.</li><li>c. OJT for three days to assure knowledge, understanding, and proficiency demonstration.</li></ol></li></ol>



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ORGANIZATIONS INVOLVED:

ORGANIZATION

FUNCTIONS PERFORMED

PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS

LP&L (Continued)

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|  |   | d. Individuals selected have inspection related experience and/or were involved in the training/certification or review of inspection personnel. |
|  |   | e. Personnel involved in this process have not worked for Ebasco or any of the contractors under review.   |
| 2. Review all LP&L and Ebasco as well as those verified by Ebasco.   | 2. Same as item (1).  |  |
| 3. Sample Education/Experience verification of contractors performed by Ebasco.  | 3. Same as items (1).   |  |
| 4. Perform final management determination of the qualifications of individuals who are potentially unqualified.                              | 4. Review Board-Three senior LP&L QA personnel qualified to ANSI N45.2.23 (1978).   |  |
| 5. Initiate suitable quality documentation in cases where inspections were performed by personnel where qualification could not be verified. | 5. LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).  |  |
| 6. Make final determination on dispositioning of quality documentation mentioned in 4. above by Ebasco.                                      | 6. LP&L QA and Project Management   |  |
| 7. Validate response per QASP 19.13 to assure positive statements of fact are substantiated.   | 7. Validation will be performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978). |  |

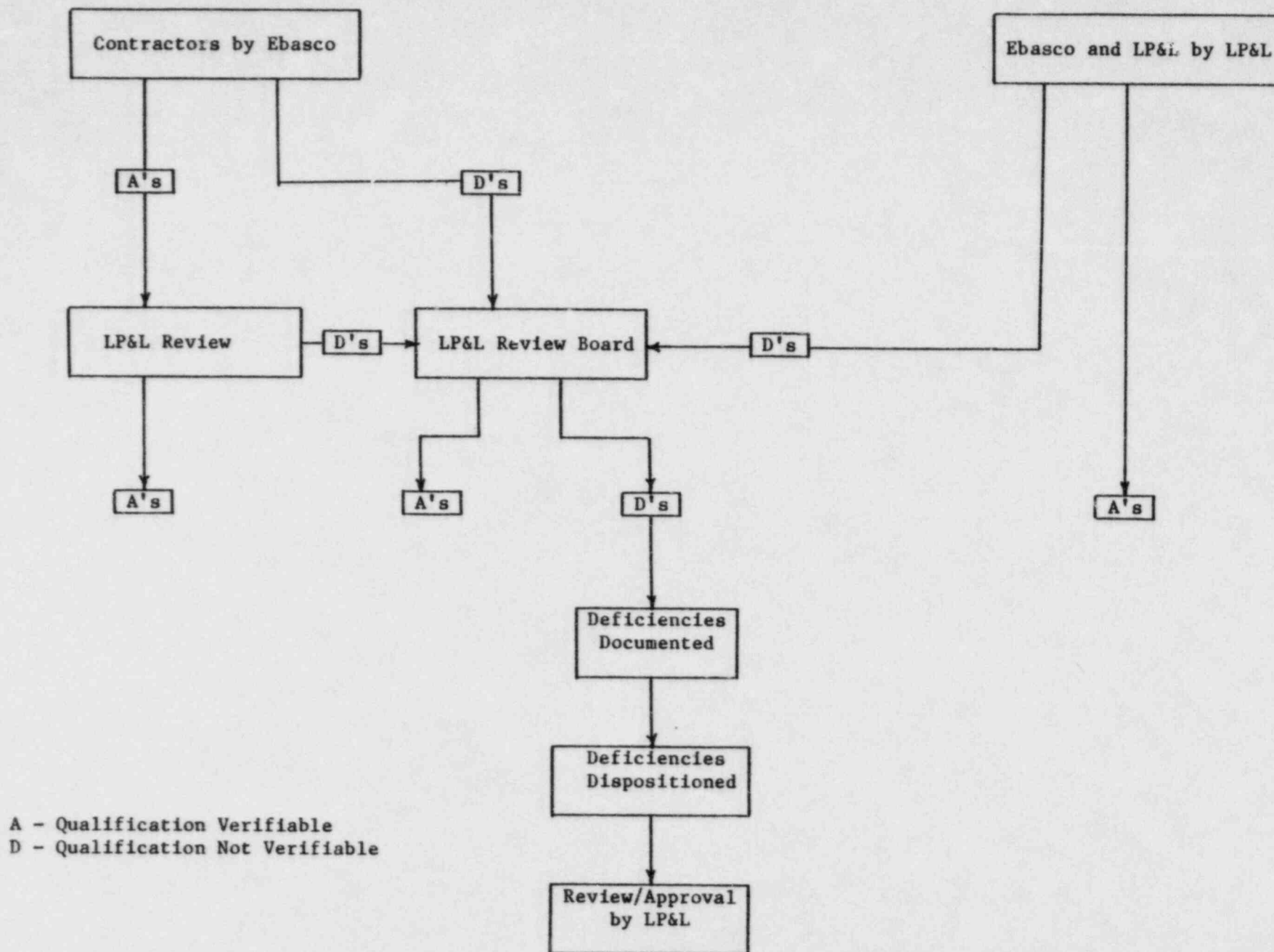
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**ATTACHMENTS:**

1. Flow Chart - Process Control.
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ATTACHMENT 1

FLOW CHART - PROCESS CONTROL



PROGRAM PLAN

ISSUE: 2

DATE: 10/10/84

TITLE:

Missing N1 Instrument Line Documentation

DESCRIPTION OF ISSUE:

Verify compliance with NRC requirements for N1 instrumentation installations.

LP&L APPROACH TO RESOLUTION:

Prior to the NRC inspection, the Ebasco Quality Assurance Installation Records Group had reviewed the ASME Section III portions of the N1 instrument installations. Full documentation on the installations under the scope of this review is available.

The original scope of this concern was narrowed to 12 installations, 4 welded and 8 threaded. The documentation on the ANSI B31.1 portions of these instrument installations that were installed with class breaks (i.e. ASME Section III to ANSI B31.1) was reviewed and is summarized as follows:

1. Final visual inspection documentation is available.
2. Ten installations have documented hydrostatic tests. The remaining two are HVAC welded connections and do not require hydrostatic testing.
3. Material traceability to the point of installation is not available, however, Certificates of Conformance to specification requirements are available.
4. Welder identifications are not available in all cases. However, all Mercury welders were required by procedure to demonstrate qualification for the appropriate welding process prior to being issued weldrod.
5. Nondestructive testing data is not required for these installations.

To ensure that the documentation for all N1 instruments is consistent, the ANSI B31.1 portions of the 12 installations will be reworked, reinspected and documented in accordance with the ASME Code requirements in the site program.

As a result of the inspection effort required to disposition a portion of issue 1, a discrepancy was identified. A further review was initiated which identified 10 additional instruments installed prior to April 7, 1982, 2 of which involved ASME III/ANSI B31.1 class breaks. In addition, 4 cabinet mounted installations were identified with ASME III/ANSI B31.1 Class Breaks. These 6 installations will also have their ANSI B31.1 tubing replaced in accordance with the ASME Code.



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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	QAI-9	Review and Handling of Construction Installation Documentation.
	QAIRGS-15	Documentation Statusing Review Instruction - Mercury of Norwood (W3-NY-15) Instrumentation and Controls.
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1) QAIRG Documentation review of all Mercury safety-related N1 locally mounted and cabinet mounted instruments installed in accordance with ASME Section III.</li><li>2) Identification and Engineering review of all N1 instruments, installed prior to April 7, 1982 when ASME Section III/ANSI B31.1 class break was permitted, to determine extent of ASME Section III documentation available.</li><li>3) Engineering evaluation of those portions of N1 instruments installed in accordance with ANSI B31.1 and comparison to documentation requirements for ASME Section III to assure the quality of installations.</li></ol>	<ol style="list-style-type: none"><li>1) Indoctrination/Training to procedure QAI-9, "Review and Handling of Construction Installation Documentation" and QAIRG-15, "Documentation Statusing Review Instruction for Mercury of Norwood (W3-NY-15) Instrumentation and Controls". Review performed under the supervision of the EC QARC Manager.</li><li>2) I&amp;C Supervising Engineer and Assistant Project Engineer.</li><li>3) I&amp;C Supervising Engineer and Assistant Project Engineer.</li></ol>

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ORGANIZATIONS INVOLVED: (Continued)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	4) Review of Mercury Isometric Drawings against instrument list to determine if additional installations have ASME Section III/ANSI B31.1 class breaks.	4) I&C Supervising Engineer
LP&L	<p>Validation per QASP 19.13 consisted of, but was not limited to, the following:</p> <ul style="list-style-type: none"><li>a. Review of ANSI B31.1 and ASME Section III prior to validation.</li><li>b. Reviewed standard ISA 67.02 (1980) to verify allowance of class break.</li><li>c. Assured that adequate documentation existed to support that the Instrument tubing for LT-SI-0305B and D question was within the hydro boundary for the test performed.</li><li>d. Reviewed and verified adequacy of the dispositioning of all referenced DCN's which downgraded instrument tubing from N1 to N2.</li><li>e. Verified that objective evidence exists to support statements of fact made in response.</li></ul>	<p>Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</p>

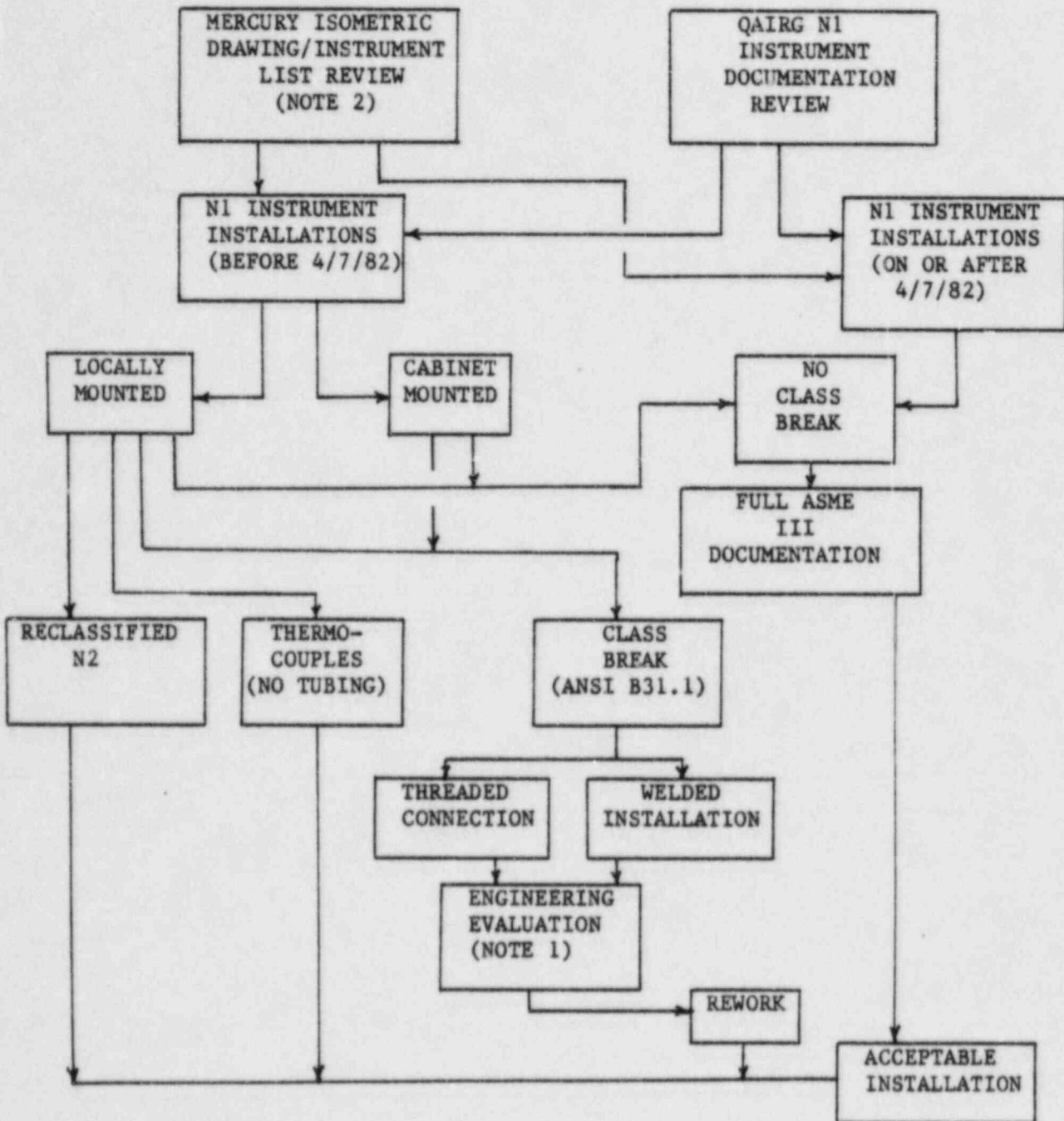
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ATTACHMENTS:

- 1) Process Flow Chart - N1 Instrument Documentation Review
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ATTACHMENT 1

PROCESS FLOW CHART - N1 INSTRUMENT DOCUMENTATION REVIEW  
MISSING N1 INSTRUMENT LINE DOCUMENTATION



NOTE 1: Though it is believed that sufficient documentation exists to assure the quality for these installations, they will be reworked, reinspected, and documented in accordance with the ASME Code.

NOTE 2: With regard to class breaks found during this review, the documentation for the small ANSI B31.1 section was not reviewed further since these installations will be reworked, reinspected and documented in accordance with the ASME Code.

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PROGRAM PLAN

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ISSUE: 3

DATE: 10/10/84

TITLE:

Instrumentation Expansion Loop Separation

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DESCRIPTION OF ISSUE:

Correct separation criteria violations found in system 52A and provide a program for review of other safety-related systems for separation violations and take the necessary corrective actions.

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LP&L APPROACH TO RESOLUTION:

NCR's W3-7702 and W3-7730 covers the system 52A problems cited by the NRC. NCR-W3-7702 has been dispositioned to remove the expansion loops in question and replace with straight tubing.

NCR-W3-7730 was also generated to track the generic concern of tubing separation. In order to provide a basis for determining the scope of our approach, a sample of 45 additional instrument installations was reinspected. Those chosen were in congested areas where separation violations would have the highest probability of occurrence. Thirteen separation violations were found out of 276 locations, and were evaluated. None required rework.

A QC verification of all other lines (72) with redundant tubing runs in proximity of each other has been performed.

Of the deficiencies noted, the engineering evaluation has determined that one rework is required.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.9	QA Inspection to Redundant NI Instrument Impulse Lines for Mechanical Separation.
	QASP 19.13	Response Validation
	QASP 2.12	QA Section Qualification and Certification of Inspection Personnel.

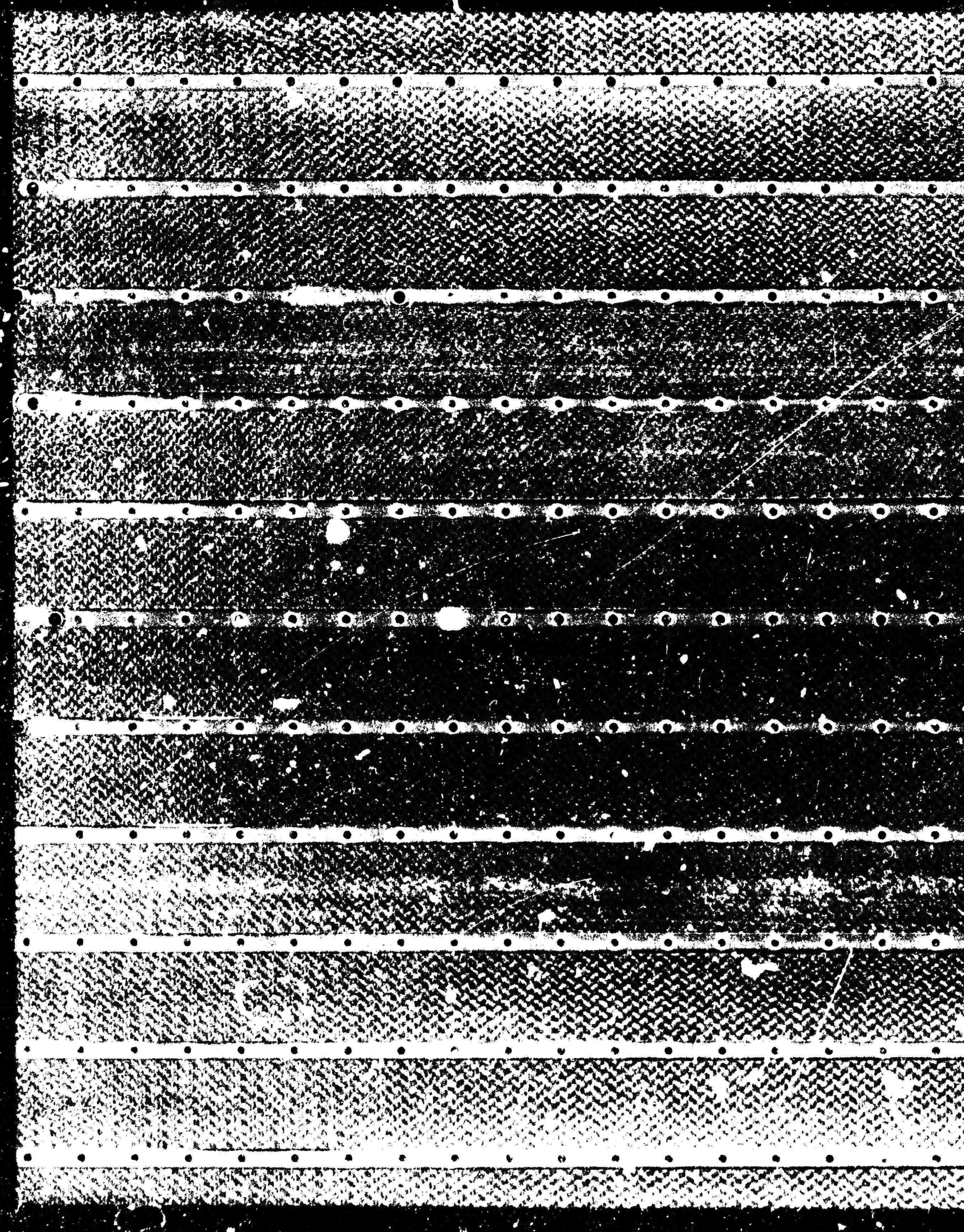
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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	(1) Dispositioned separation criteria violations specifically cited by the NRC (i.e., lines DPT-RC-9116 SMB (HP) and DPT-RC-9116 SMA (HP)), and remaining potential instrumentation expansion loops violations found in system 52A. Expansion loops in question by NRC were removed and replaced with straight tubing.	(1) I&C Supervising Engineer
	(2) Engineering reinspection and disposition of a sample of 45 additional N1 instrument installations.	(2) Indoctrination/Training with mechanical separation criteria of "Instrument Installation Details, Drawing LOU-1564 (B430, Sheet X-23)" and interpretation. Reinspection performed by I&C Engineers under the supervision of the I&C Supervising Engineer.
	(3) Identify potential separation violations which could affect plant safety for inclusion in scope of QC reinspection.	(3) I&C Supervising Engineer
	(4) Disposition of reinspection of 72 additional N1 instrument installation performed in accordance with QASP 19.9 and perform any necessary corrective actions.	(4) I&C Supervising Engineer.
LP&L	(1) Supervised expansion loop separation QC reinspection of 72 additional N1 instrument installations in accordance with QASP 19.9 which have the potential for separation violations.	(1) Indoctrination/Training in accordance with the Mechanical separation criteria and reinspection guidelines contained in QASP 19.9 and interpretation. Inspectors certified to LP&L QA procedure QASP 2.12. QASP 2.12 complies with requirements of ANSI N45.2.6 -- 1973.





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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	(2) Validation per QASP 19.13 consisted of, but not limited to the following:  (a) reviewed NCR 7730 & NCR 7702 for adequacy of dispositioning.  (b) verified that QASP 19.9 was developed for instrument tubing inspection.	(2) Validation was performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).

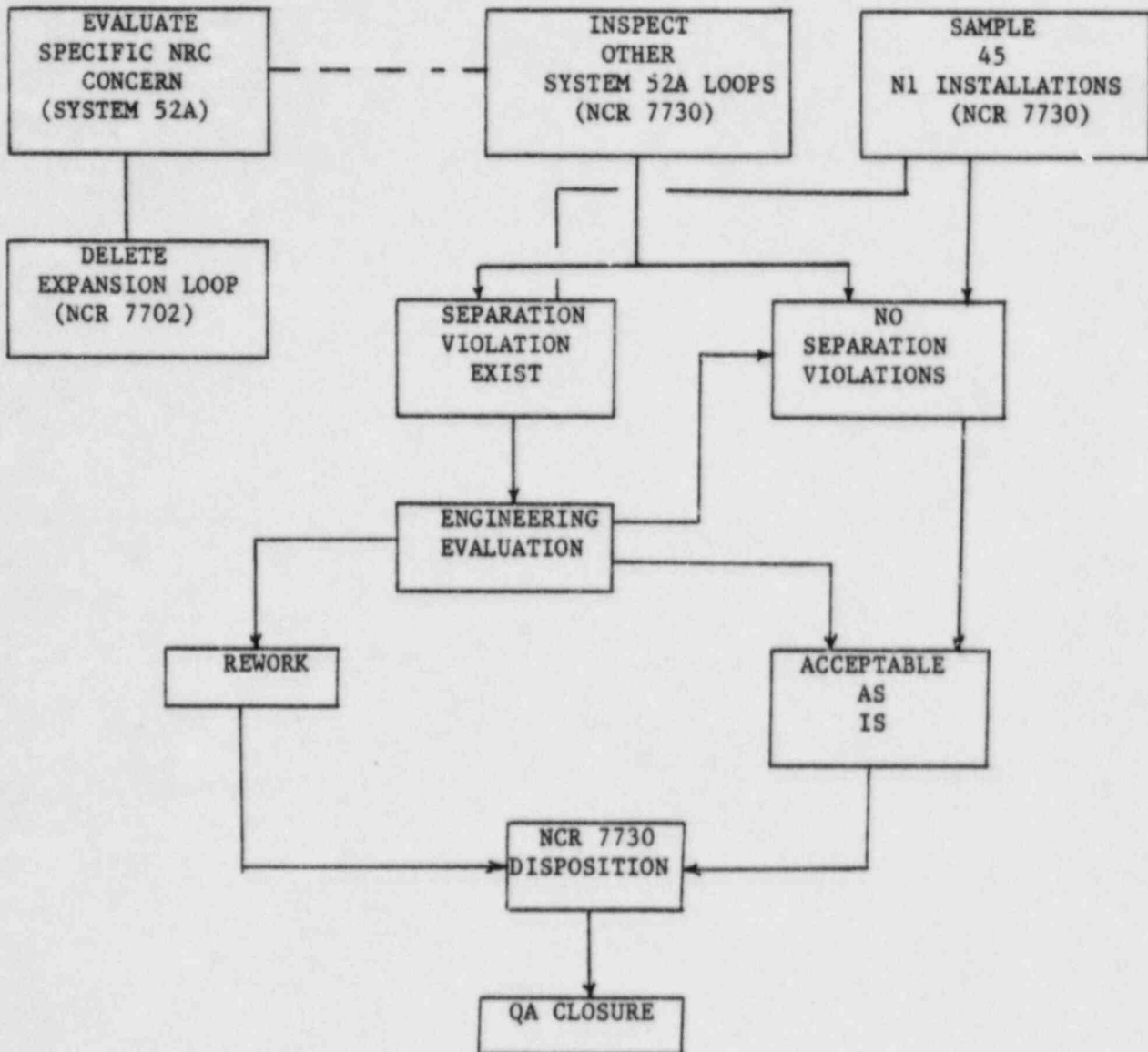
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ATTACHMENTS:

- 1) Process Flow Chart - Ebasco Engineering Reinspection
- 2) Process Flow Chart - LP&L Training, Field Inspection, and Validation
- 3) Process Flow Chart - QC Reinspection

ATTACHMENT 1

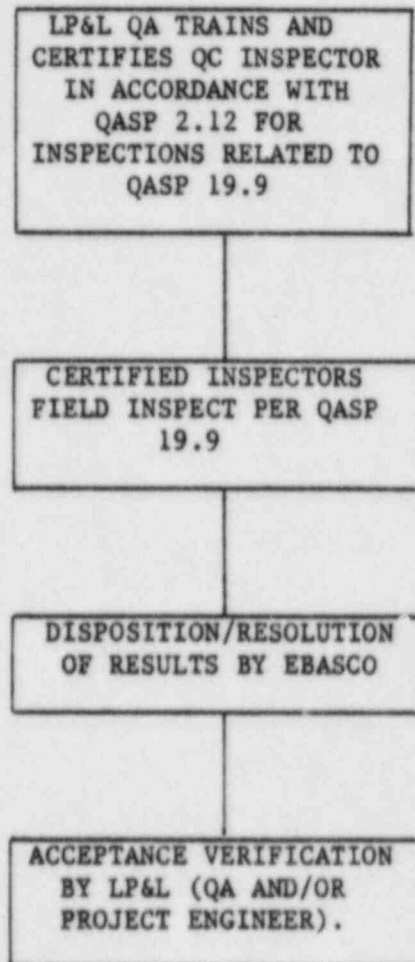
EBASCO ENGINEERING REINSPECTION PROCESS FLOW CHART  
INSTRUMENTATION EXPANSION LOOP SEPARATION





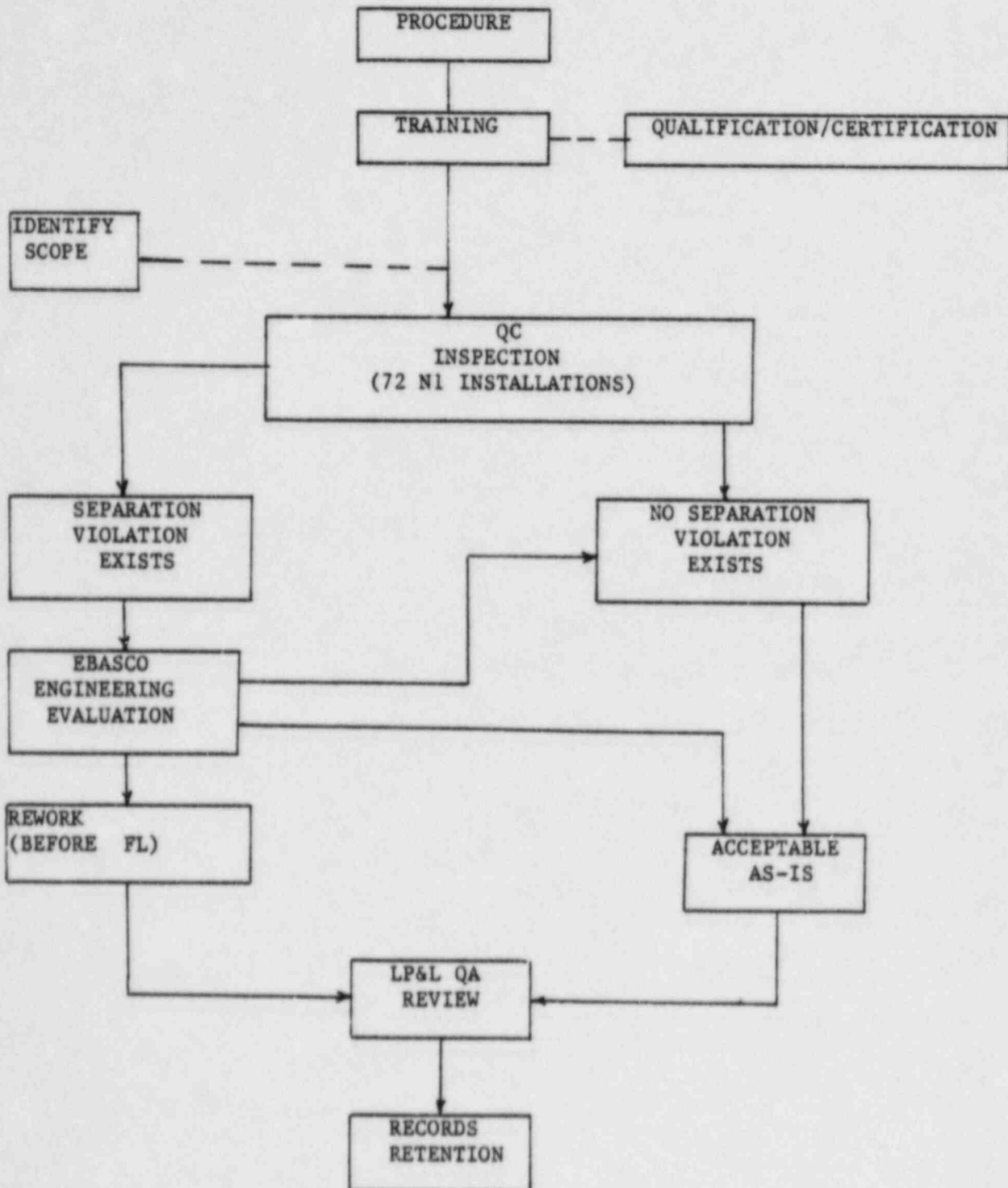
ATTACHMENT 2

PROCESS FLOW CHART - LP&L TRAINING, FIELD INSPECTION & VALIDATION  
INSTRUMENT EXPANSION LOOP SEPARATION



ATTACHMENT 3

QC REINSPECTION PROCESS FLOW CHART  
INSTRUMENT EXPANSION LOOP SEPARATION



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PROGRAM PLAN

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ISSUE: 4

DATE: 10/10/84

TITLE:

Lower Tier Corrective Actions Are Not Being Upgraded to NCRs

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DESCRIPTION OF ISSUE:

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 corrective action shall include the steps required by 10CFR50, 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 discrepancy notices that affected safety-related systems or that were misclassified as safety.

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LP&L APPROACH TO RESOLUTION:

LP&L has to date reviewed all FCRs, DCNs, EDNs, voided EDNs, and Tompkins-Beckwith DNs identified by the NRC in the Description of Concern.

LP&L's review, to date, has established that only six of the 43 identified FCRs/DCNs and four of the 78 identified EDNs and T-B DNs should have required an NCR. In each case however, review established that no safety significance as regards 10CFR50.55(e) and 10CFR21, and that none of the voided EDNs required an NCR that was not generated.

The response to this concern will provide a description of the lower tier document reporting system. The description will show that the program was structured in such a manner that procedures, integral to the Quality Program, provided a sound basis for decisions regarding the severity level of documents used to report deficiencies. The description specifically will consider QA and QC reviews of engineering/construction judgements on deficiencies as it related to the corrective action and nonconformance requirements of 10CFR50 Appendix B and the reporting requirements of 10CFR50.55(e). In addition, the response will assess the voiding of design changes (FCRs, DCNs) and T-B DNs. It will also discuss the review of non-safety related discrepancies/changes to insure that these documents were not misclassified, and will provide a basis for determining whether these concerns represent a issue with safety significance.

A random sample of approximately 900 FCRs, DCNs, EDNs, and T-B DNs have been formally reviewed to determine if any should in fact have been reported as NCRs. Approximately 4% should have been NCRs. None of these were judged to have been reportable under 10CFR50.55(e) or 10CFR21. The review also indicated that the dispositioning would not have changed had the documents been upgraded.

No additional review is required as the sample results, give a 95% confidence level that 98% of the total population contains no reportable issues.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	WI-4-E-1 N-23 E-69 ETR-1001 ASP-III-7	Engineering/QA Review of DCNs, FCRs, EDNs and T-B DNs. Reporting a Defect/Noncompliance to the NRC. Design Change Notice-Field Change Request Ebasco Nuclear Quality Assurance Program Manual. Processing Nonconformances and Audits.
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Review of specific FCRs, DCNs, EDNs and T-B DNs cited by the NRC to determine if any should have been upgraded to NCRs and evaluated for reportability under 10CFR50.55(e) or 10CFR21.	1) The Review was performed under the direct supervision of Assistant Project Engineer-NYO and required his review and approval. A Quality Assurance Engineer whose primary responsibility is the review of NCRs for reportability under 10CFR50.55(e), 10CFR21 and the Nuclear Licensing Supervisor responsible for the review for safety significance, evaluated potential NCRs in accordance with Ebasco procedure N-23.
	2) Review of all voided EDNs and T-B DNs including an assessment of voided DCNs/FCRs.	2) Assistant Project Engineer-NYO Senior Resident Engineer - Mechanical
	3) Random sample review of safety related FCRs, DCNs, EDNs and T-B DNs to determine if any should have been upgraded to NCRs and evaluation for reportability under 10CFR50.55(e) or 10CFR21.	3) See Item 1 above

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ORGANIZATIONS INVOLVED: (Continued)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	4) Evaluation of PCR's, DCNs, EDNs and T-B DNs to assure that non-safety related discrepancies/design changes were not misclassified and do not represent a safety issue.	4) Assistant Project Engineer-NYO Senior Resident Engineer - Site
LP&L	Validation per QASP 19.13 will consist of but not be limited to the following:  1) Validate that lower tier documents were reviewed by Ebasco and justification provided where necessary.  The validator will review the documents within the designated sample for reportability concurrence. All cited examples will be reviewed for reportability based on the content of the document cover sheet. A portion of the designated sample will be reviewed to determine if an NCR should have been written.	1) Validation will be performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23-1978.

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ORGANIZATIONS INVOLVED: (Continued)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	2) A committee consisting of two LP&L and two Ebasco Engineers will conduct an indepth review of documents specifically identified by the NRC. The review will provide a basis for determining that proper/handling of conditions adverse to quality were properly handled and will determine if the item is reportable pursuant to 10CFR50.55(e) and 10CFR21.	

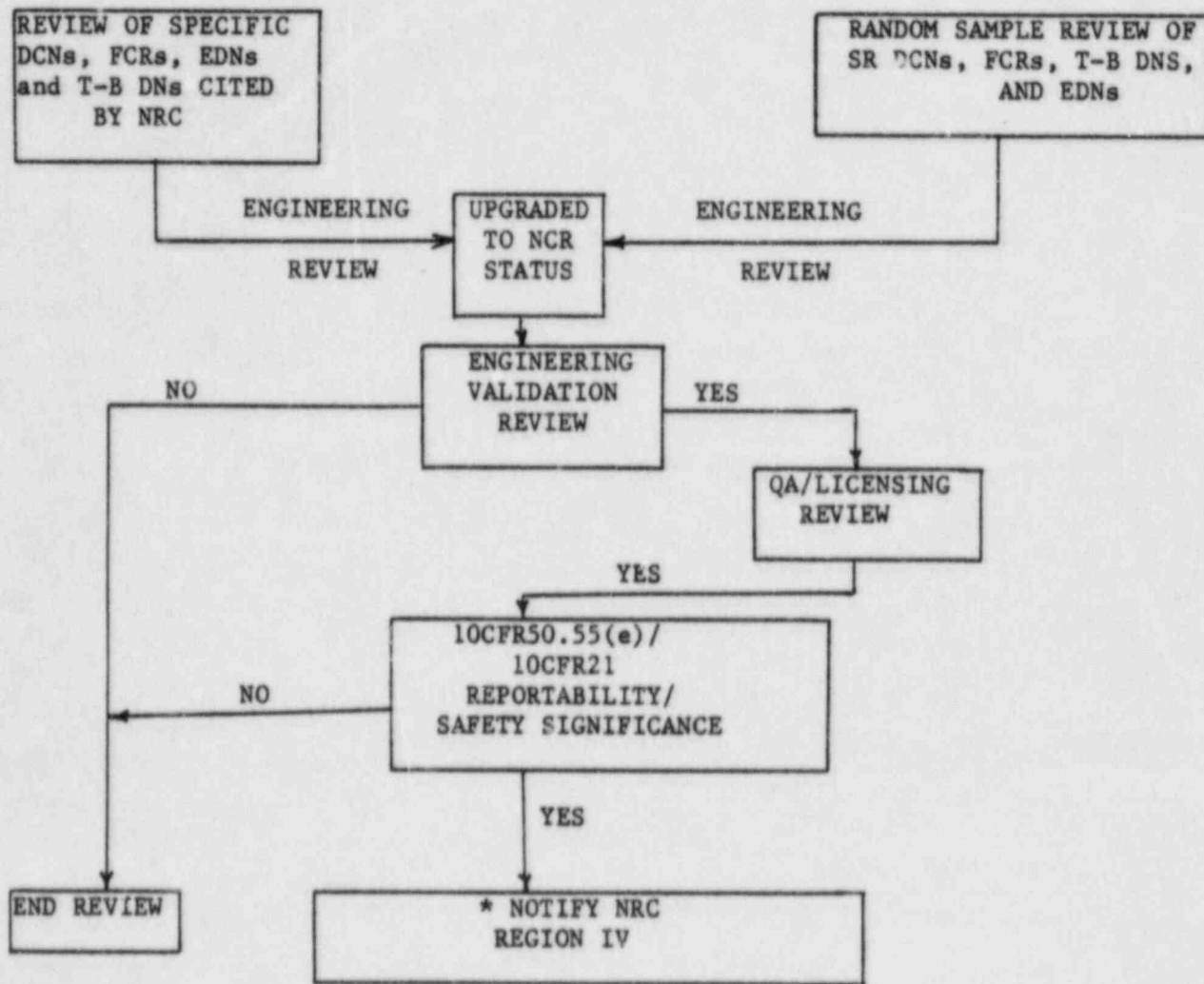
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ATTACHMENTS:

- 1) Ebasco Review of DCNs, FCRs, EDNs and T-B DNs
  - 2) LP&L Review of DCNs, FCRs, EDNs, and T-B DNs.
-

ATTACHMENT 1

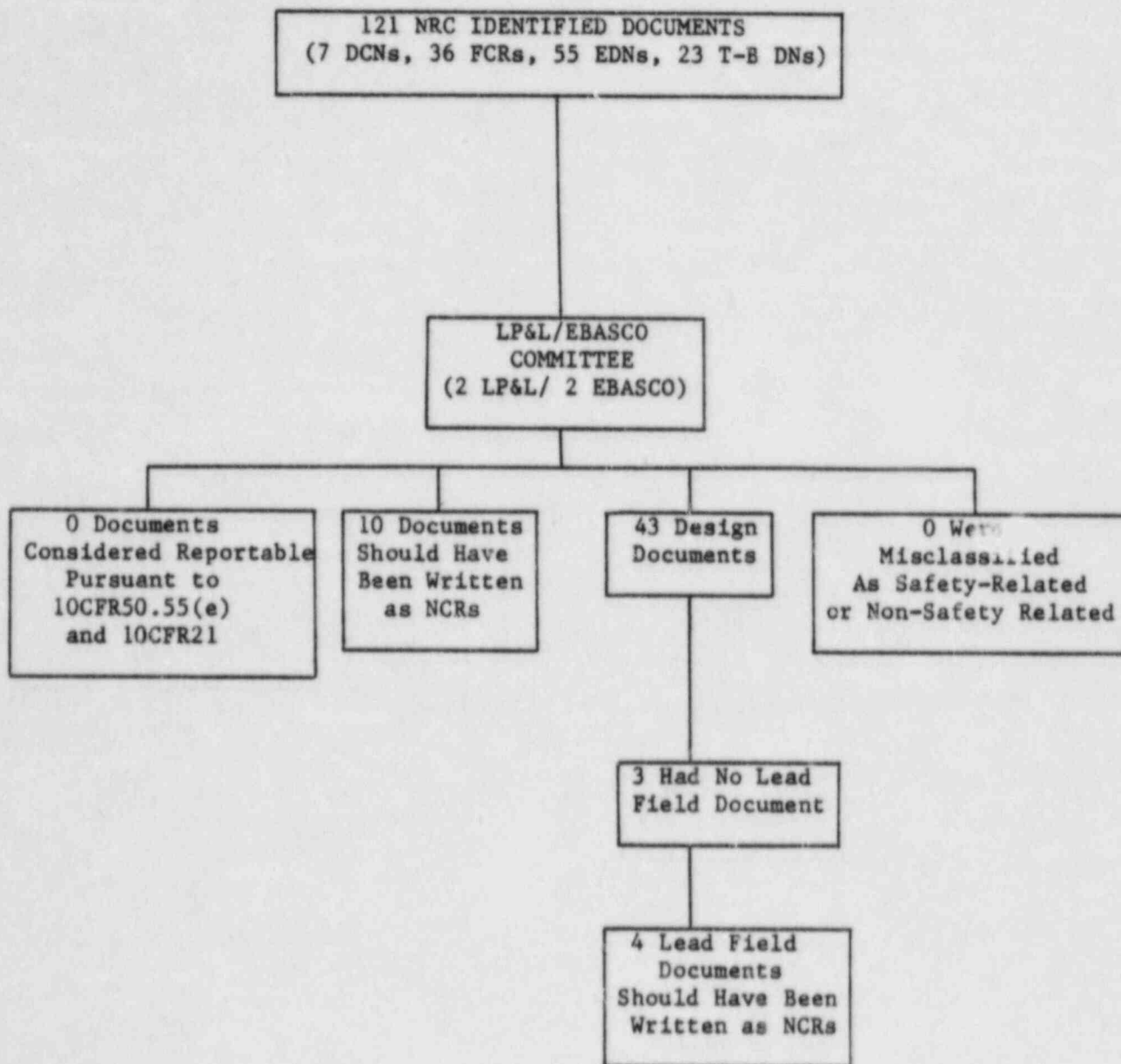
EBASCO REVIEW OF DCNs, FCRs, EDNs and T-B DNs.



\* NONE WERE CONSIDERED TO HAVE ANY SAFETY SIGNIFICANCE AS DEFINED BY 10CFR 50.55(e)/10CFR21.

ATTACHMENT 2

LP&L REVIEW OF DCNs, FCRs, EDNs, and T-B DNs





PROGRAM PLAN

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ISSUE: 5

DATE: 10/10/84

TITLE:

Vendor Documentation Conditional Releases

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DESCRIPTION OF ISSUE:

The concern relates to whether shortcomings in contractor's documentation, particularly Combustion Engineering's, which existed at the time the material was supplied have been resolved.

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LP&L APPROACH TO RESOLUTION:

Records associated with CE material and equipment were re-reviewed and Conditional Certifications identified. An assessment of the potential for the existence of other manufacturing open items not being tracked in the site tracking system was conducted. It led to the conclusion that the potential for a similar situation existed only in areas where problems are identified off-site. As a result of this concern, the following areas were evaluated.

- ° Concerns noted by VENDOR QA Reps on Release for shipment forms.
- ° NCRs controlled by Ebasco's Home Office.
- ° Material received at the site under manufacture, deliver and erect type contracts.

All CE Conditional Certifications have been changed to Unconditional Certification. The review conducted on the other three areas of potential concern is complete. No items adversely affecting plant safety were identified.

In addition, a review is being conducted on the CE purchase orders that had identified Conditional Certifications to determine if these conditions could have affected the operability of equipment.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Determination of those CE Purchase Orders that had Conditional C of E.	1) The Ebasco review effort was carried out by QA Engineers and QA Records Personnel under the supervision of the Ebasco Regional QA Manager. The response itself was authored by the Ebasco Regional QA Manager.
	2) Review of concerns noted by Ebasco VQARs on the Release for shipment form.	2) Same as item (1)
	3) Review of NCRs controlled by Ebasco's Home Office.	3) Same as item (1)
	4) Review of material received at the site under manufacture, deliver and erect type contracts.	4) Same as item (1)
	5) Review of Conditional C of E's for any affect on the operability of the plant and potential safety significance.	5) Review performed under the direct supervision of the Senior Resident Engineer.

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ORGANIZATIONFUNCTIONS PERFORMEDPERSONNEL QUALIFICATION/TRAINING REQUIREMENTS

LP&amp;L

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|--|--|
| <p>1) Validation per QASP 19.13 consisted of but was not limited to the following:</p> <ul style="list-style-type: none"><li>1) Reviewed procedures:<ul style="list-style-type: none"><li>a) UNT-8-011 "Administrative Procedure for Storing, Issuing, Shipping, and Receiving".</li><li>b) QI-010-006 "Materials Receipt Inspection".</li><li>c) WQC-1 "Control of Receiving, Handling &amp; Storage of Materials".</li><li>d) QAI-1 "QA Records Management Instructions" for Adequacy of Tracking and Closure of Conditional Certifications of Equipment (C of E)</li></ul></li><li>2) Reviewed CE Conditional C of E's for content and verified adequate tracking of the 2 Conditional C of E's. Also verified CE's assurance that the Conditional C of E's will not effect the equipment operation.</li><li>3) Verified, by sampling, that an informal method of tracking did exist previously for Conditional C of E's.</li><li>4) Verified, by sampling, Ebasco review of generic implications.</li><li>5) Verified that objective evidence exists to support statements of fact made in the response.</li></ul> | <p>1) Validation was performed under the direct supervision of the LP&amp;L lead Auditor who is qualified to ANSI N45.2.23-1978.</p> |
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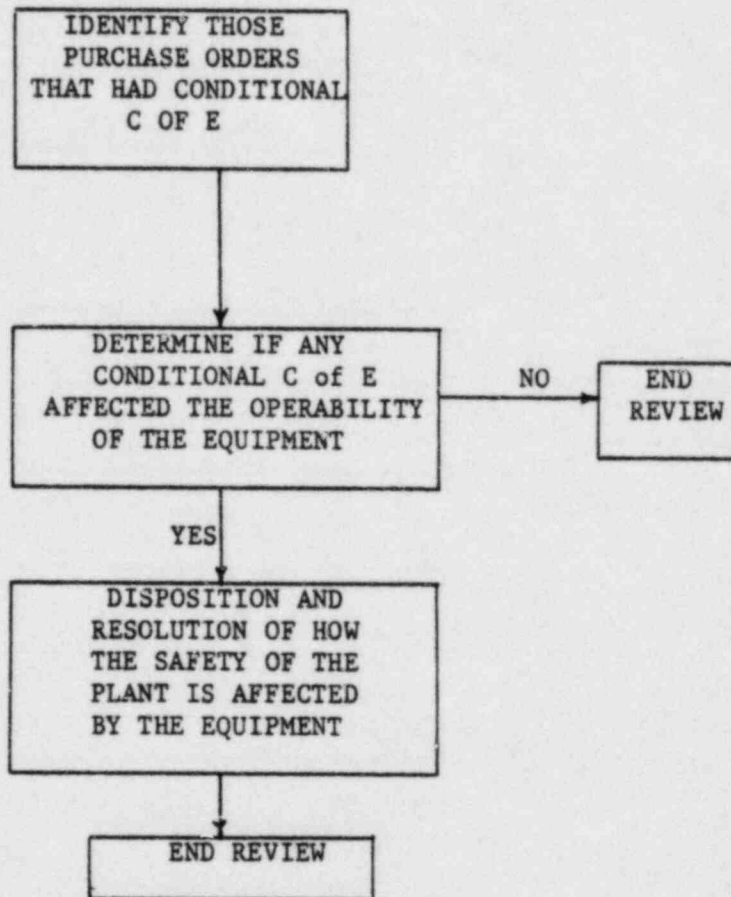
ATTACHMENTS:

- 1) Process Flow Chart - Review of CE Conditional C of E's.
  - 2) Process Flow Chart - Review of Concerns Noted by VQARs on the Release for Shipment Forms
  - 3) Process Flow Chart - Review of NCRs Controlled by Ebasco's Home Office Open NCRs as of June, 1984.
  - 4) Process Flow Chart - Review of NCRs Controlled by Ebasco's Home Office Verification of Disposition
  - 5) Process Flow Chart - Review of Material Received at the Site Under Manufacture, Deliver and Erect Type Contracts
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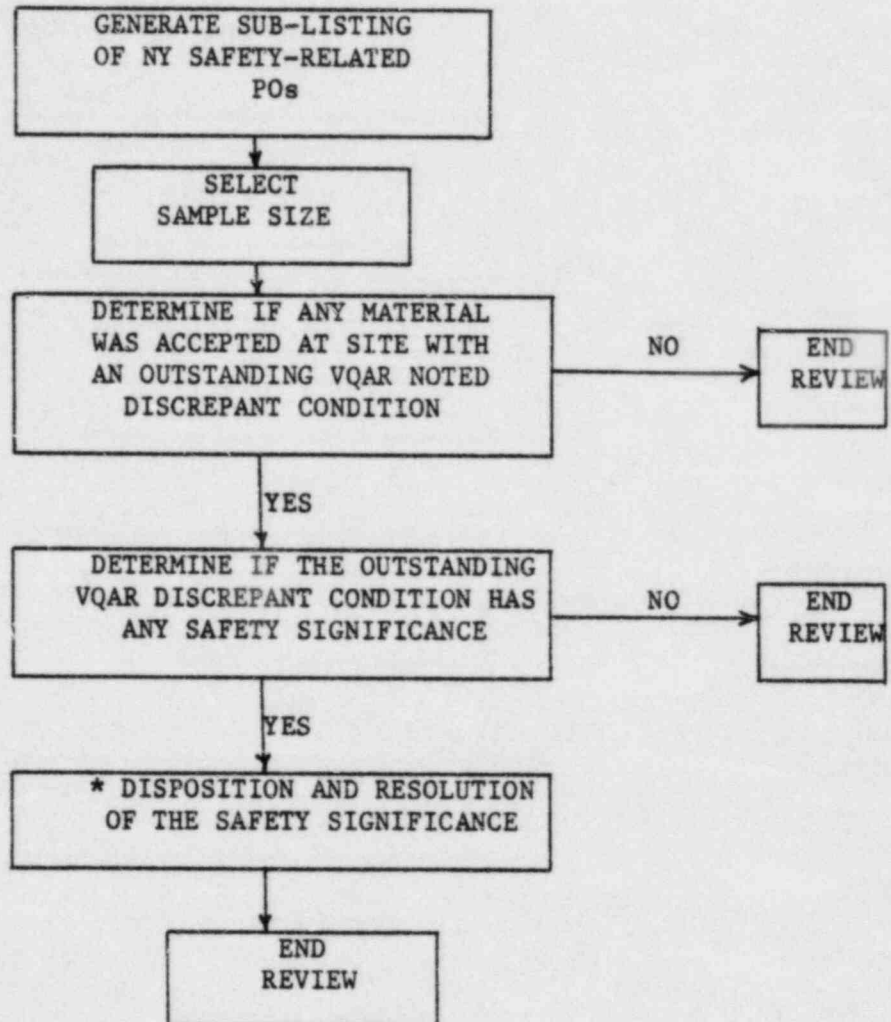
ATTACHMENT 1

PROCESS FLOW CHART  
REVIEW OF CE CONDITIONAL C of E's



ATTACHMENT 2

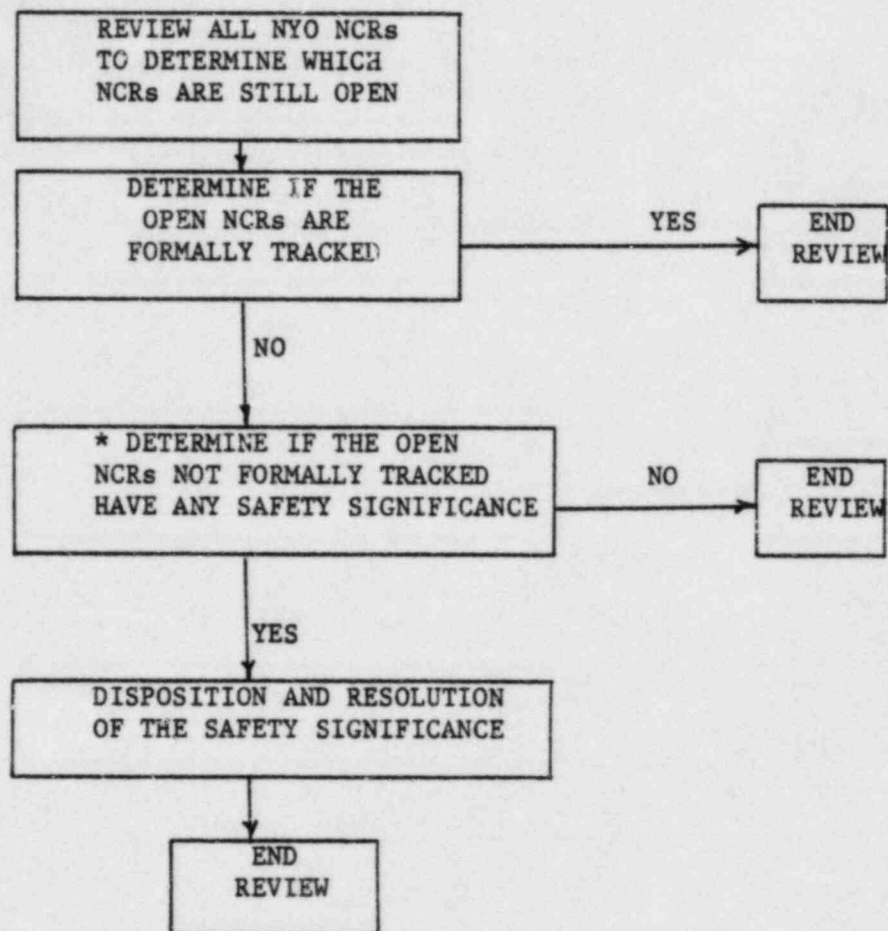
PROCESS FLOW CHART  
REVIEW OF CONCERNS NOTED BY VQARs ON THE RELEASE FOR SHIPMENT FORMS



\* NONE OF THE SAMPLE REACHED THIS POINT

ATTACHMENT 3

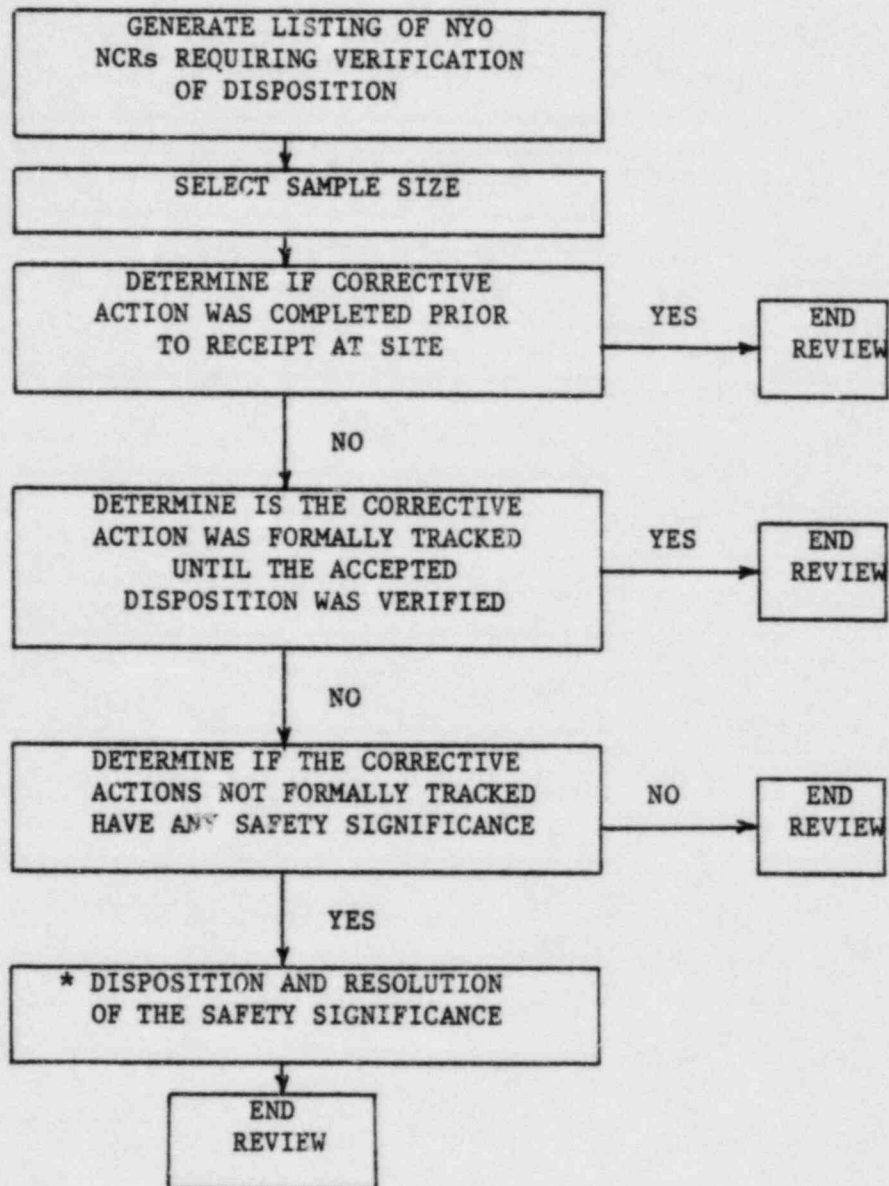
PROCESS FLOW CHART  
REVIEW OF NCRs CONTROLLED BY EBASCO's HOME OFFICE  
OPEN NCRs AS OF JUNE, 1984



\* NONE OF THE NYO NCRs REACHED THIS POINT

ATTACHMENT 4

FLOW CHART  
REVIEW OF NCRs CONTROLLED BY EBASCO's HOME OFFICE  
VERIFICATION OF DISPOSITION

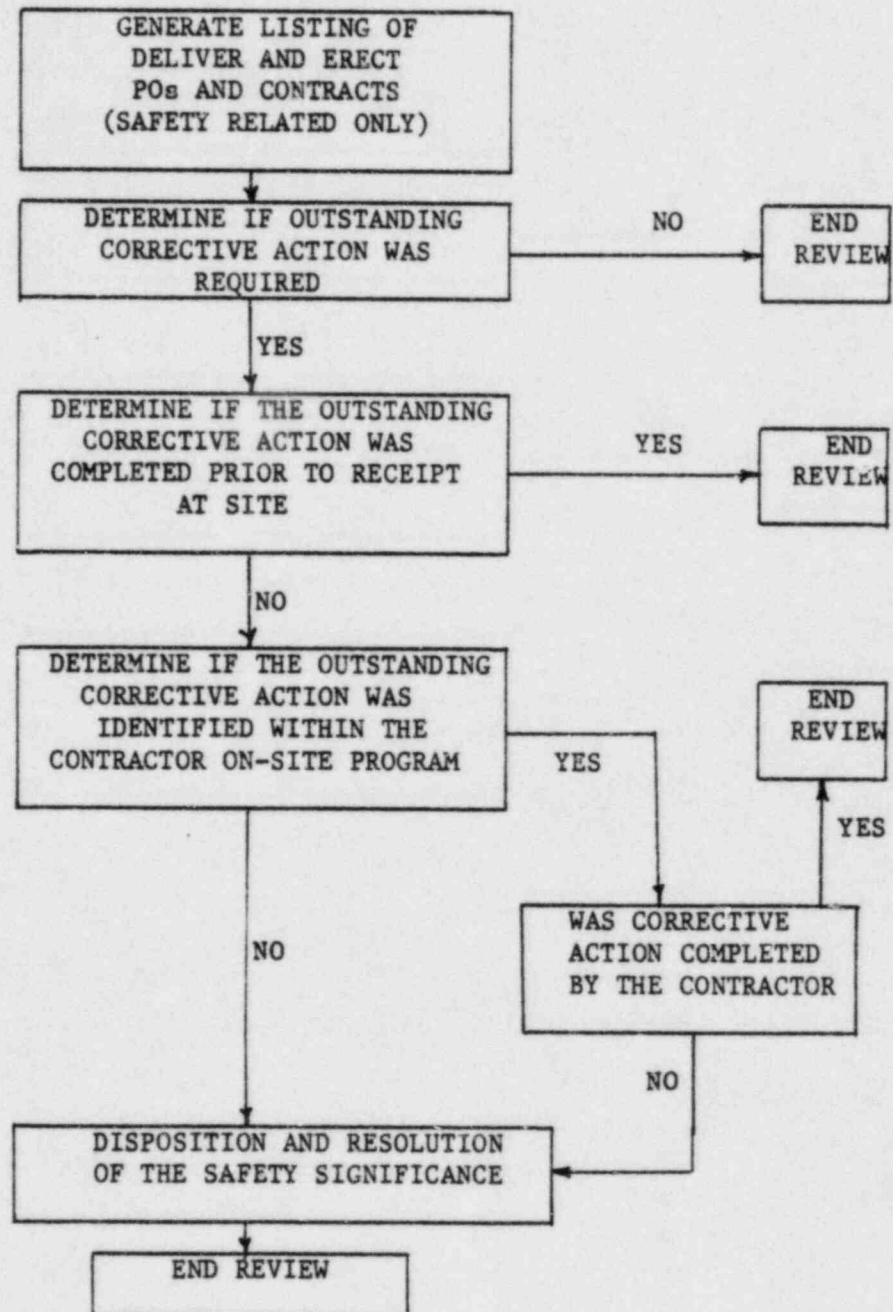


\* NONE OF THE SAMPLE REACHED THIS POINT



ATTACHMENT 5

FLOW CHART  
REVIEW OF MATERIAL RECEIVED AT THE SITE UNDER MANUFACTURE, DELIVER  
AND ERECT TYPE CONTRACTS



NOTE: DUE TO THE DIFFERING NATURE OF THE POs AND CONTRACTS THE FLOW CHART IS A GENERALIZATION OF THE REVIEW.

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PROGRAM PLAN

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ISSUE: 6

DATE: 10/10/84

TITLE:

Dispositioning of Non-conformance and Discrepancy Reports

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DESCRIPTION OF ISSUE:

Some Ebasco and Mercury NCRs and Ebasco DRs were questionably dispositioned and LP&L shall propose a program to assure all NCRs and DRs are appropriately upgraded, adequately dispositioned and corrective action completed and that any problems detected are corrected.

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LP&L APPROACH TO RESOLUTION:

First, the specific Ebasco and Mercury NCRs and Ebasco DRs cited by the NRC will be evaluated for proper disposition, implementation of corrective action, appropriate documentation, and proper closure. To date, though some minor deficiencies have been identified, no physical rework has been required.

Second, a program review of Ebasco NCRs closed prior to February, 1984 was started by LP&L in February, 1984 to assess the validity of the disposition, the review for reportability per 10CFR50.55(e) or 10CFR21, and proper closure. Approximately 115 of the more than 7100 NCRs reviewed have been identified as having deficiencies in the above attributes. These are being evaluated. The deficiencies that have thus far been evaluated have no safety significance.

Third, an indepth verification has been conducted by LP&L on a random sample of 124 of the above noted potentially deficient Ebasco NCRs to assure that the hardware and/or software corrective action had been completed. This included an evaluation of documentation for the required corrective action. Approximately forty-five NCRs were identified as having minor deficiencies. The deficiencies that have thus far been evaluated have no safety significance.

Fourth, an additional set of approximately 530 Ebasco NCRs closed since February, 1984 have been reviewed by LP&L for proper disposition, adequate documentation to support the required corrective action, required software changes completed and proper closure. To date, one deficiency has been identified that involves physical rework. This deficiency has been evaluated and has no safety significance.

Fifth, a review of Mercury NCR's will be performed as follows: a) A sample of NCRs that were dispositioned rework/repair or reject for reportability per 10CFR50.55(e), b) NCR dispositioned Use-As-Is to assure they were upgraded to Ebasco NCRs, c) a random sample of sixty-five (65) NCRs that were dispositioned rework/repair for proper disposition, adequate documentation of corrective actions required, and proper closure.

Finally, a random sample of 230 Mercury and 230 T-B DRs have been reviewed to verify proper closure.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	QAI-33	Instruction for Reporting Deficiency Report Sheets
LP&L	QASP 19.13 WI-L-6.1	Response Validation Nonconformance Report Review

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Review of NCRs cited in concern	1) The review was performed by QA Engineers under the supervision of the Lead QA Engineer.
	2) Review of DRs cited in Concern	2) The review was performed by <sup>Q.A. personnel</sup> <del>Engineers</del> under the supervision of the QAIRG QA Engineer.
	3) Review random sample of Mercury and T-B DRs.	3) Same as item 2.
	4) Review random sample of Mercury NCRs.	4) The review was performed by QA Document Reviewers under the supervision of the EC-QA Manager.
LP&L	1) LP&L QA engineers performed a review of Ebasco dispositioned NCR's in accordance with Work Instruction "Non-Conformance Report Review". This review included:  1) Performing and documenting special reviews of specified NCR's. 2) Documenting and processing potential deficiencies through resolution and closure, and 3) Field verification of selected NCR's.	1) Review conducted by the LP&L lead auditor who is qualified to ANSI N45.2.23-1978.

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ORGANIZATIONS INVOLVED: (Continued)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	2) Validation per QASP 19.13 will consist of but not limited to the following:  Validate that Ebasco reviewed the nonconforming conditions and provided justification where necessary for the dispositioning of the NCR.	2) Validation was performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23-1978.
	3) Verify that objective evidence exists to support statements of fact made in the response.	3) Same as Item 2.

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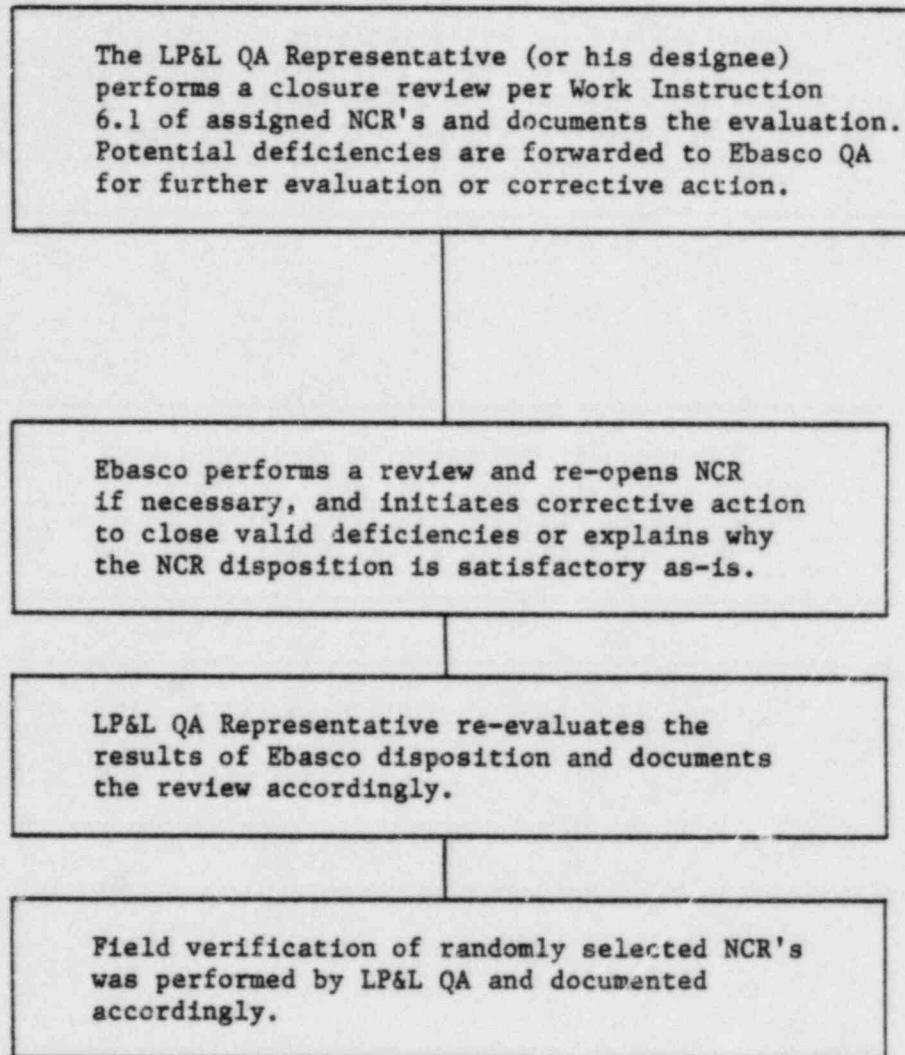
ATTACHMENTS:

- 1) Process Flow Chart - Nonconformance Report Review
  - 2) Process Flow Chart - Specific NCR Review
  - 3) Process Flow Chart - Mercury NCR Review
  - 4) Process Flow Chart - Review of DRS
-



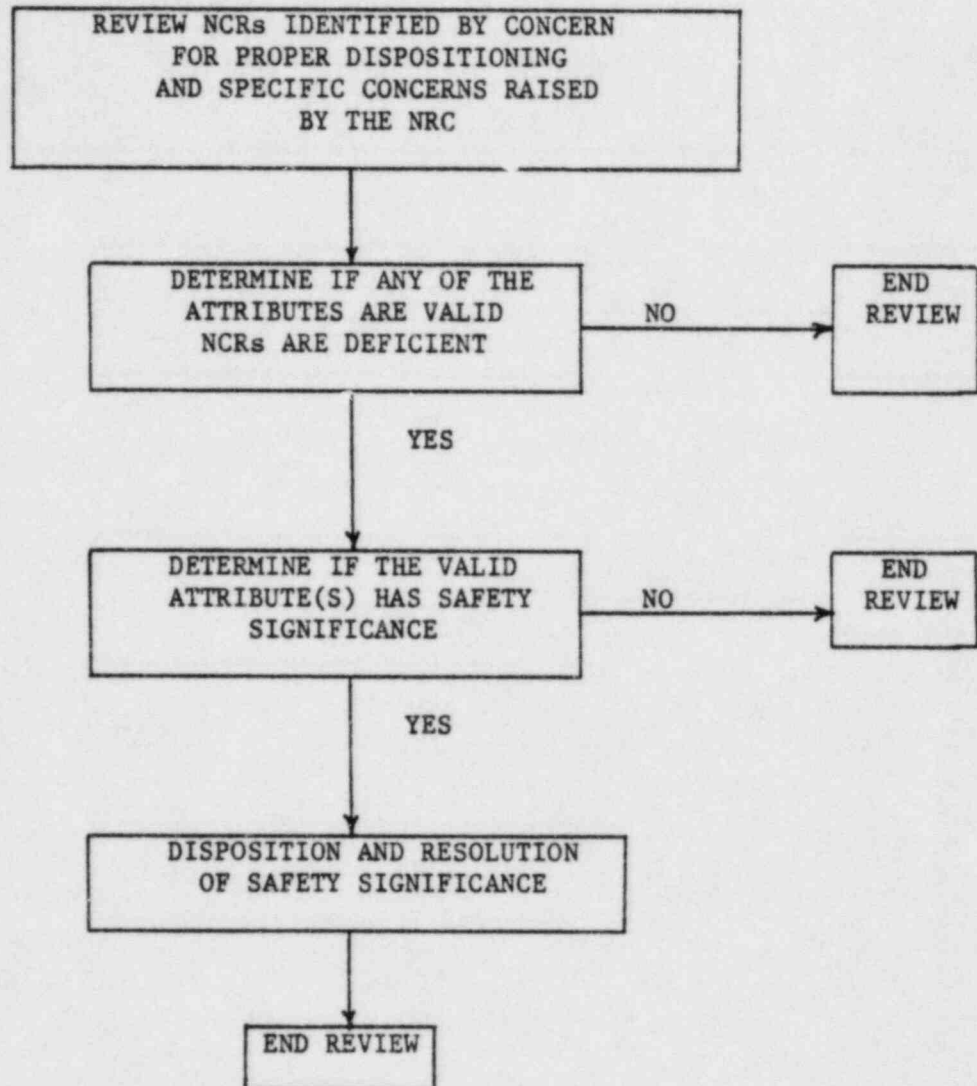
ATTACHMENT 1

PROCESS FLOW CHART  
LP&L NON-CONFORMANCE REPORT REVIEW



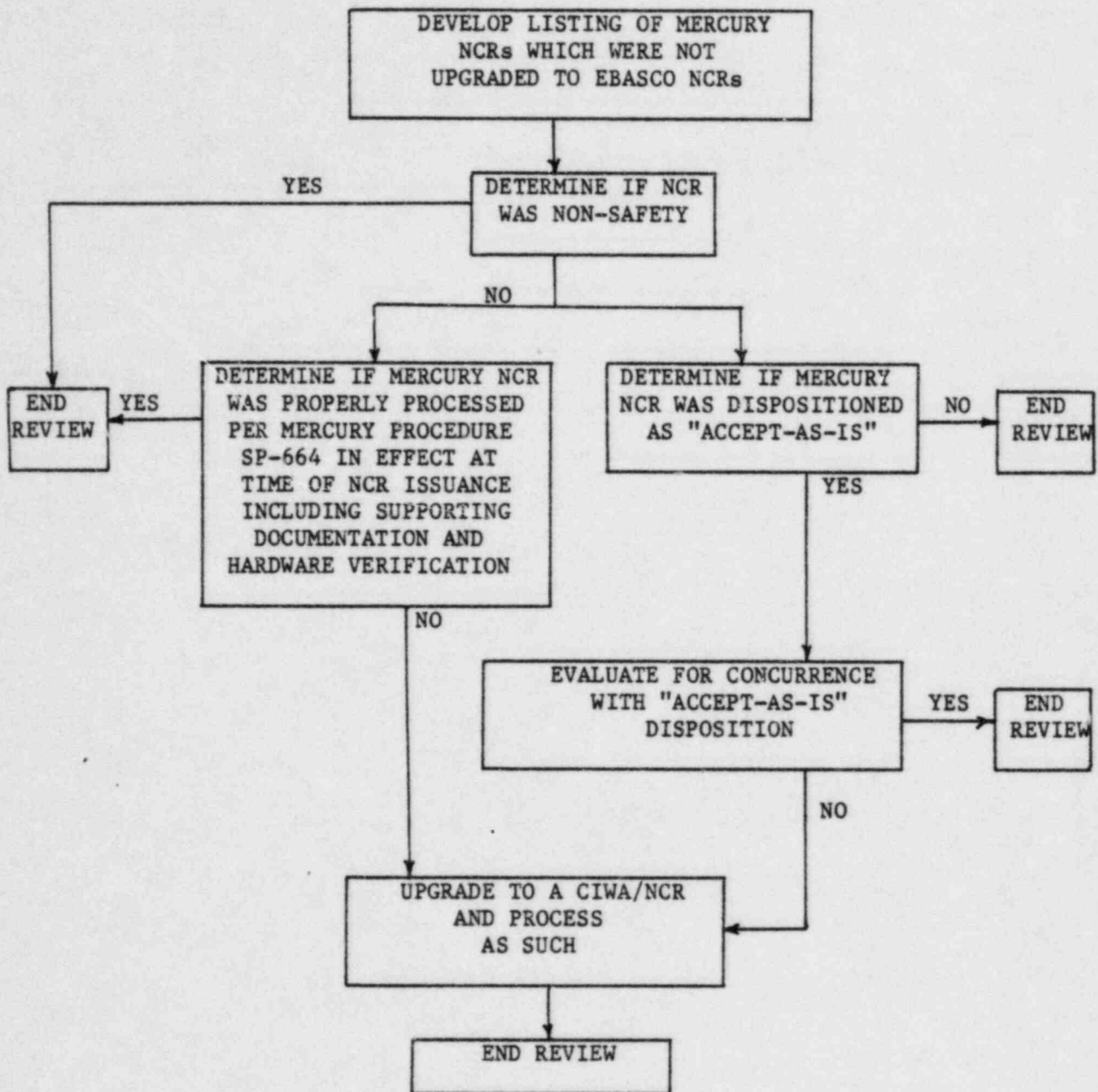
ATTACHMENT 2

PROCESS FLOW CHART-  
SPECIFIC NCR REVIEW



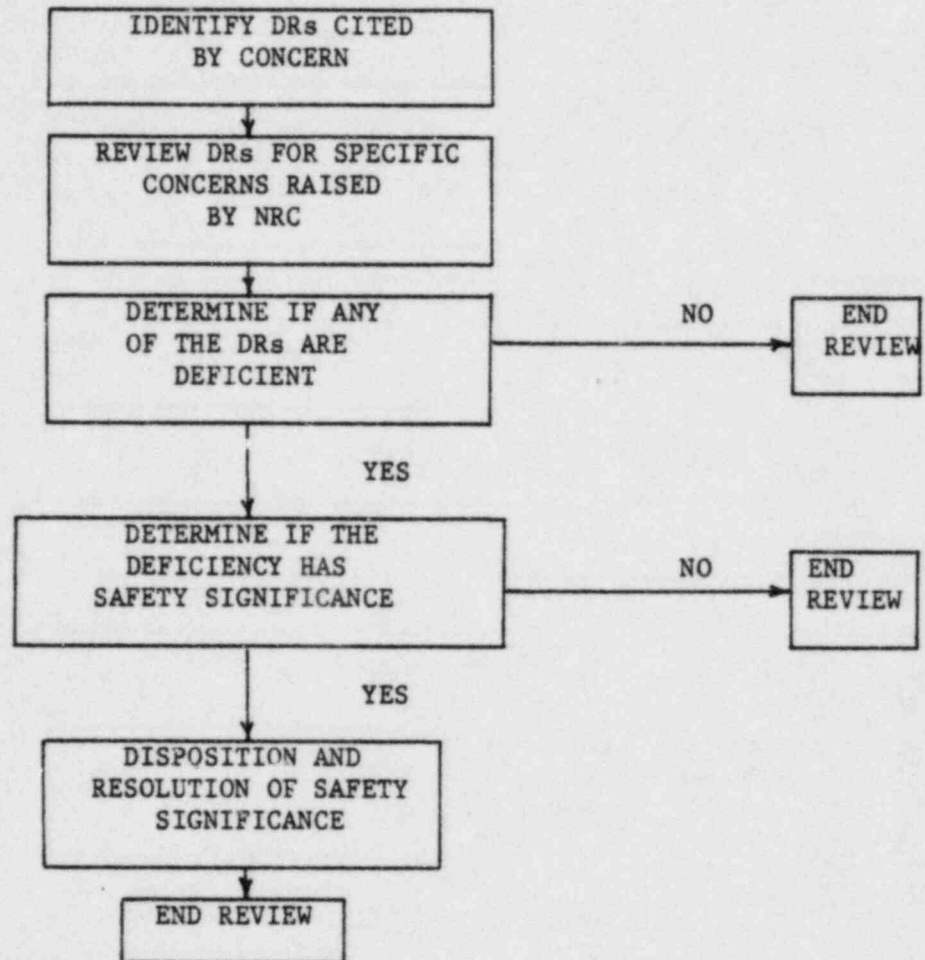
ATTACHMENT 3

PROCESS FLOW CHART-  
MERCURY NCR REVIEW



ATTACHMENT 4

PROCESS FLOW CHART-  
REVIEW OF DRs



PROGRAM PLAN

ISSUE: 7

DATE: 10/10/84

TITLE:

Backfill Soil Densities

DESCRIPTION OF ISSUE:

Conduct a review of all soil packages for completeness and technical adequacy. Where records are missing or technical problems are defined, take corrective action.

LP&L APPROACH TO RESOLUTION:

A review of backfill records (i.e. backfill soil density laboratory test data and inspection reports) was initiated to determine completeness and technical adequacy. A three stage program for the evaluation of soil backfill densities was implemented to (a) locate all backfill soil data, (b) review the test records for completeness and utilize these for the construction of relative density overlay plots, and (c) evaluate documentation and overlays for compliance with specification requirements.

It was determined that a complete set of soil test data exists at the site, and that the field and laboratory testing and insitu relative density of the class A backfill were in compliance with specification requirements.

A review for completeness of the remainder of the soil package data for attributes other than density, which includes all inspection reports, was completed; results indicate specifications were met.

WORK INSTRUCTIONS AND  
PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation



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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1) Detailed search to locate documentation on soil backfill data.</li><li>2) Review of documentation for completeness and compilation of data into a format to facilitate NRC review.</li><li>3) Review of documentation for technical adequacy with respect to Ebasco Specification LOU-1564.482.</li></ol>	<ol style="list-style-type: none"><li>1) The review was conducted by engineers and designers under the supervision of the Ebasco Site Soils Engineer who was present during the performance of the majority of the actual backfilling operations. The Ebasco Site Soils Engineer was the author of the response.</li><li>2) Same as item (1).</li><li>3) Same as item (1).</li></ol>
LP&L	<p>Validation per QASP 19.13 consisted of but not limited to the following:</p> <ol style="list-style-type: none"><li>1) Ensured positive statements of fact could be substantiated with documentation.</li><li>2) Ensured that missing documentation was retrieved and adequate.</li><li>3) Reviewed a sample of overlays to ensure adequate sampling.</li><li>4) Reviewed Ebasco statistical studies.</li></ol>	<p>Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</p>

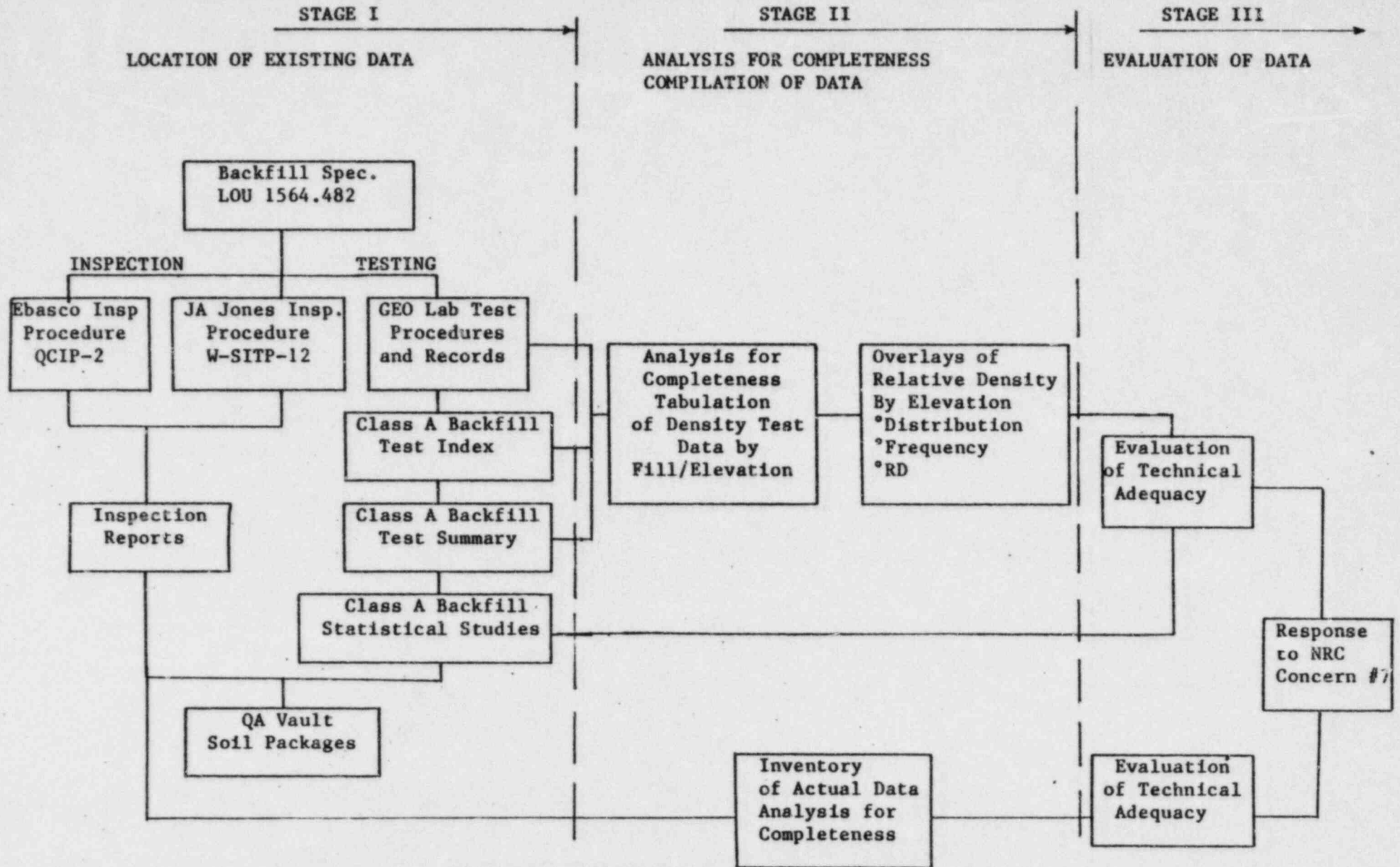
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ATTACHMENTS:

- 1) Process Flow Chart - Review of Backfill Soil Density Documentation
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ATTACHMENT 1

PROCESS FLOW CHART - REVIEW OF BACKFILL SOIL DENSITY DOCUMENTATION



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PROGRAM PLAN

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ISSUE: 8

DATE: 10/10/84

TITLE:

Visual Examination of Shop Welds during Hydrostatic Testing

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DESCRIPTION OF ISSUE:

Document inspections of shop welds during hydro tests or otherwise verify such inspection.

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LP&L APPROACH TO RESOLUTION:

Shop welds were inspected and accepted during hydrostatic tests by an Authorized Nuclear Inspector.

The ASME N-5 code data reports also confirmed that there was inspection of shop welds.

The methodology of the field hydrostatic tests provided additional assurance that shop welds were inspected.

A statement from the authorized Nuclear Inspector has been received confirming that shop weld were inspected.

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WORK INSTRUCTIONS & PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation
Ebasco	ASP-IV-63	Guidelines for Hydrostatic and Pneumatic Integrity Tests.

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Review of applicable ASME code requirements, site procedures, the function of the Authorized Nuclear Inspector (ANI) and documentation to verify that all ASME Class 1 and 2 piping and welds including shop welds were hydrostatically tested.	1) Ebasco Senior Resident Engineer-Mechanical

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
LP&L	<p>1) Validation per QASP 19.13 consisted of but was not limited to the following:</p> <p>a) Reviewed all referenced correspondence from ANI's to Ebasco &amp; T&amp;B which supports positive statements of fact contained in response including documentation from T&amp;B which states that "During the hydrostatic test, an examination is made of all joints, connections, and regions of high stress which were included in the test boundary of ASME Section III, Division 1, Class 1 &amp; 2 piping systems regardless of whether these items were fabricated by T&amp;B or Dravo.</p> <p>b) Reviewed a sample of flow diagrams which highlight the hydrostatic test boundaries. Reviewer confirmed that these diagrams did not show welds.</p> <p>c) Reviewed Hydrostatic/Pneumatic Test Instructions.</p>	<p>1) Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</p>

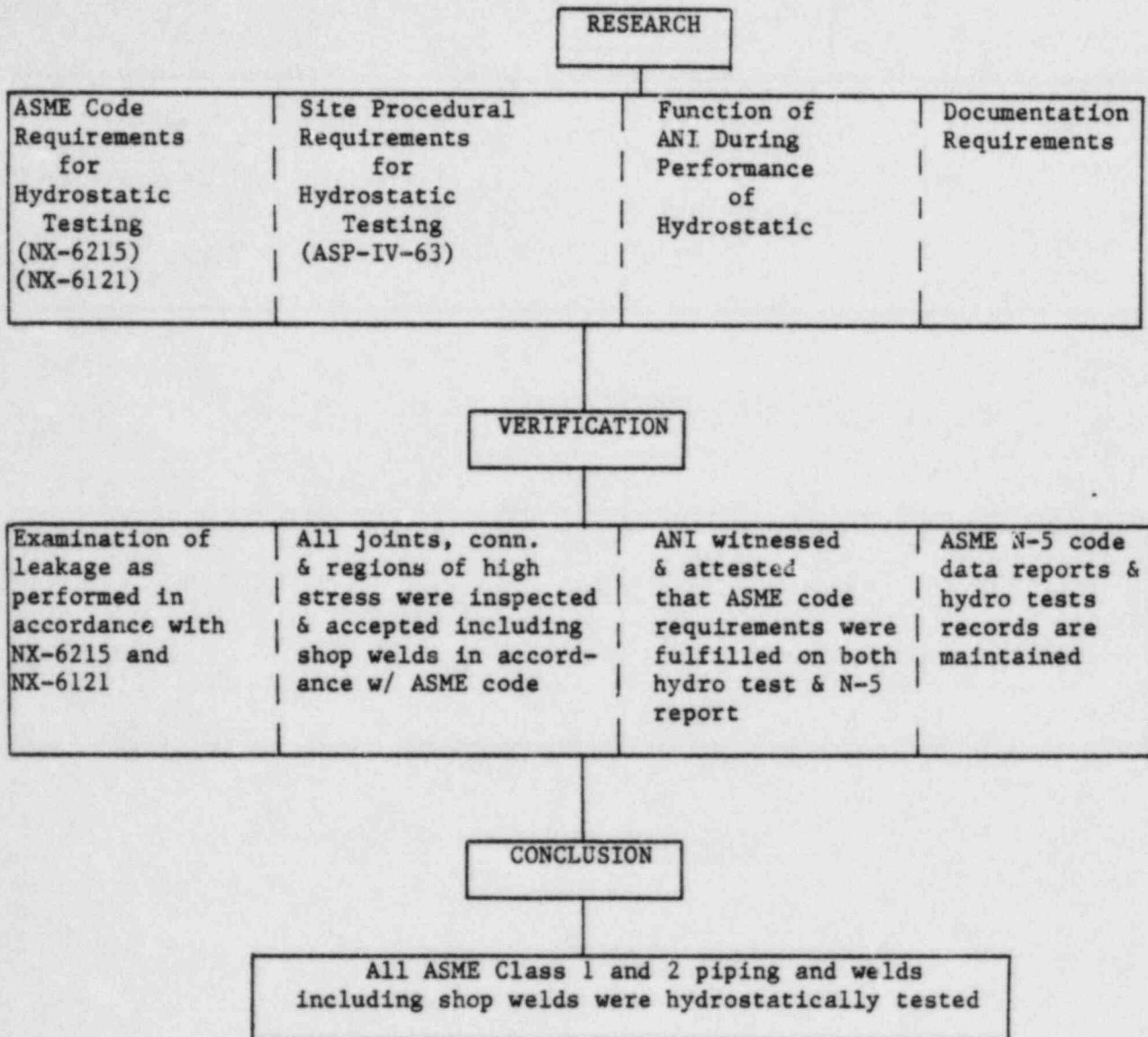
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ATTACHMENTS:

- 1) Process Flow Chart - Visual Examination of Shop Welds During Hydrostatic Testing.
-

ATTACHMENT 1

PROCESS FLOW CHART  
VISUAL EXAMINATION OF SHOP WELDS  
DURING HYDROSTATIC TESTING





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PROGRAM PLAN

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ISSUE: 9

DATE: 10/10/84

TITLE:

Welder Certification

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DESCRIPTION OF ISSUE:

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

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LP&L APPROACH TO RESOLUTION:

NCR W3-7549 was generated on 2/1/84 to track this problem. No documentation was found on three of the eighteen cabinets and partial documentation found on four. All seven were reinspected and found acceptable. While documentation was found for the welds in the remaining eleven (11) instrument cabinets, these welds are being reinspected. The results of this reinspection and analysis thereof will be used as a basis for determining whether additional welds require reinspection.

As a result of the missing documentation, a review was performed to determine other safety related welding performed by J.A. Jones. Documentation for the welding identified was then reviewed. No other documentation was found to be missing.

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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

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ORGANIZATIONS INVOLVED:

ORGANIZATION	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. Scoping of documents where J.A. Jones potentially performed welding.</li><li>2. Determination of all specific welding performed by J.A. Jones and determination that proper documentation exists.</li><li>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.</li><li>4. Reinspection of other eleven (11) instrument cabinet welds in accordance with QASP 19.10.</li><li>5. Engineering evaluation of those welds where supporting documentation could not be located.</li><li>6. Engineering evaluation of those welds for the eleven (11) cabinets with all supporting documentation.</li></ol>	<ol style="list-style-type: none"><li>1. The review was carried out by Construction Engineers under the supervision of the Resident Civil Engineer.</li><li>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.</li><li>3. Reinspection of welds was performed under the supervision of the Material Applications Engineer.</li><li>4. Same as item 3) above.</li><li>5. Evaluation performed by a Civil Engineer under the direction of the ESSE Civil Supervisor.</li><li>6. Same as item 5) above.</li></ol>

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ORGANIZATIONS INVOLVED: (CONT'D)

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

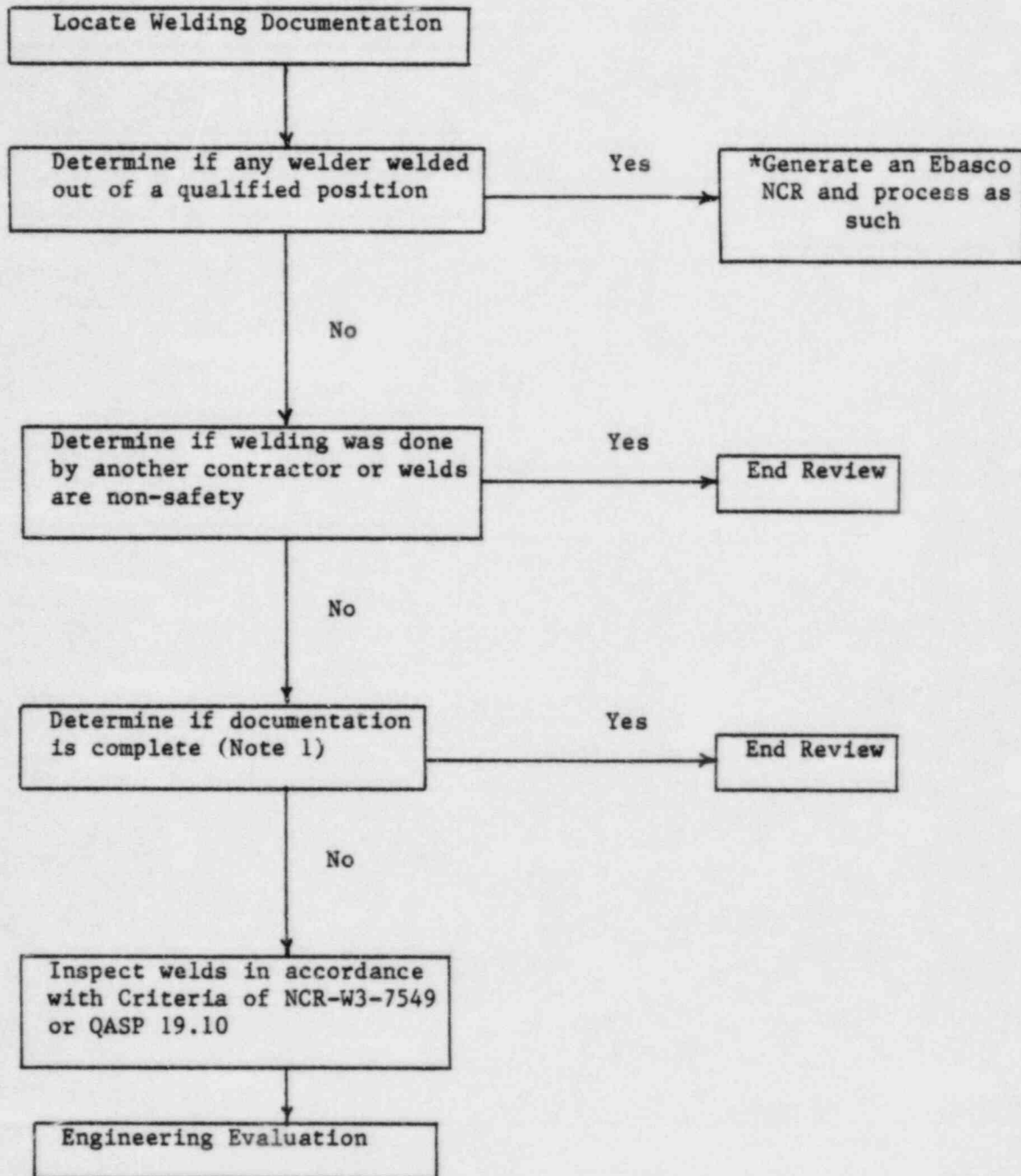
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ATTACHMENTS:

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.

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PROGRAM PLAN

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ISSUE: 10

DATE: 10/10/84

TITLE:

Inspector Qualification (J.A. Jones and Fegles)

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DESCRIPTION OF ISSUE:

Verify the proper certification of QA/QC personnel and evaluate the impact of any deficiencies found.

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LP&L APPROACH TO RESOLUTION:

A verification program has been established to review the professional credentials of 100% of the site QA/QC personnel for J.A. Jones and Fegles, including supervisors and managers who performed safety related functions at Waterford III during its construction. Criteria for certification or qualification of QA/QC personnel will be based on ANSI N45.2.6-1973 and SNT-TC-1A for QC inspection personnel and construction QA program requirements for QA personnel.

In addition, background investigations will be performed for all personnel. If certification on an individual cannot be verified, appropriate site nonconformance documentation will be initiated to document evaluation of safety significance and corrective actions, including reinspection of work performed as necessary.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	QAI No. 32	Instructions for Verifications of QA/QC Personnel Qualifications.
LP&L	QASP 19.12	Review of Contractor QA/QC Personnel Qualification Verification.
	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<p>(1) Verify Education/Experience of QA/QC personnel.</p> <p>(2) a. Review program requirements of J.A. Jones and Fegles, and identify inspectors whose qualifications are not verifiable against ANSI N45.2.6-1973, SNT-TC-1A and QA program requirements for QA personnel.</p> <p>b. Determine, to the extent feasible, inspections performed by personnel whose qualifications are not verifiable.</p> <p>c. Disposition Quality Documentation generated by LP&amp;L in item (5) below.</p>	<p>(1) Training Requirements to QAI-32.</p> <p>(2) Ebasco's Quality Resources Training Manual-1 (QRTM-1) delineates the requirements for qualifying records reviewer. QAI-14, "Training and Qualification Requirements for Quality Assurance Records Personnel" endorses QRTM-1 and requires all reviewers have training on procedures they are reviewing to. For qualification/certification files training requirements are QAI-32 and ANSI N45.2.6.</p>
LP&L	<p>(1) Audit Ebasco's implementation on QAI-32.</p>	<p>(1) (a) Indoctrination/training to LP&amp;L and Ebasco procedures, ANSI N45.2.6-1973 and 1978, ANSI N45.2.23-78, SNT-TC-1A-75 and interpretations.</p> <p>(b) Orientation as to task objectives, organizations, and associated responsibilities and duties.</p> <p>(c) OJT for three days to assure knowledge, understanding, and proficiency demonstration.</p> <p>(d) Individuals selected have inspection related and/or were involved in the training/certification or review.</p>

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ORGANIZATIONS INVOLVED: (Continued)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
		(1) (e) Personnel involved in this process have not worked for Ebasco, J.A. Jones, or Fegles.
	(2) Review all those verified by Ebasco.	(2) See Item 1 above.
	(3) Sample Education/Experience verification of J.A. Jones and Fegles performed by Ebasco.	(3) See Item 1 above.
	(4) Perform final management determination of the qualifications of individuals who are potentially unqualified.	(4) Review Board - Three Senior LP&L QA personnel qualified to ANSI N45.2.23 (1978).
	(5) Initiate suitable quality documentation in cases where inspections were performed by personnel where qualifications could not be verified.	(5) LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).
	(6) Initiate final determination on dispositioning of quality documentation mentioned in (4) above by Ebasco.	(6) LP&L QA and Project Management.
	(7) Validate response per QASP 19.13 to assure positive statements of fact are substantiated.	(7) Validation will be performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).

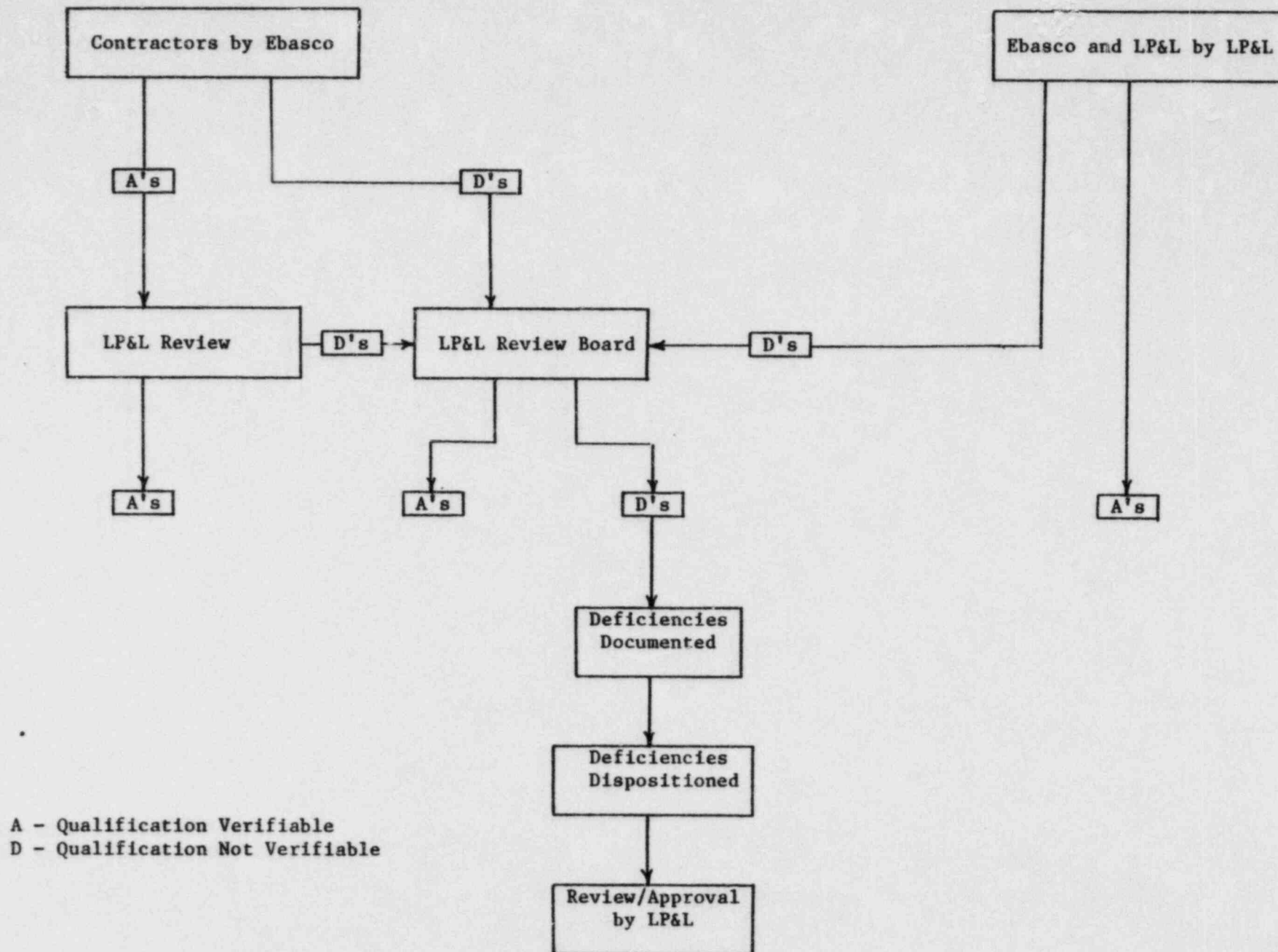
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ATTACHMENTS:

1. Flow Chart - Process Control
-

ATTACHMENT 1

FLOW CHART - PROCESS CONTROL



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PROGRAM PLAN

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ISSUE: 11

DATE: 10/10/84

TITLE:

Cadwelding

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DESCRIPTION OF ISSUE:

Provide the cadweld data for the project in such a form that it can be readily compared to the testing criteria used for the Waterford 3 project with data broken down by various categories. Provide data on welder qualification and requalification including dates.

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LP&L APPROACH TO RESOLUTION:

The cadweld records have been transcribed onto computer data storage. This includes the placement area, cadweld number, cadwelder, bar size, bar position, visual test, production test, sister test, cadwelder qualification dates, and inspector name and qualification dates.

In this form, the cadweld data can be called up by any of these attributes to expedite review for specification compliance or other reasons. Also, physical location of cadwelds may then be readily obtained by reference to the concrete placement lift diagrams which locate the placements.

Prior reviews have already been accomplished under NCR W3-6234 (opened 5/16/83) and nonconforming conditions resolved. A re-evaluation was conducted now that the cadweld data is in a more systematic, auditable format. In this new form, the cadweld data has been re-reviewed for specification compliance on testing and inspection. This review identified three (3) minor deficiencies which required further engineering evaluation, and were determined to be not significant. Therefore, the cadweld data confirms compliance with specification requirements for testing and inspections, that the splices are structurally sound, and the cadwelds are capable of sustaining design loading conditions.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ATTACHMENTS:

1. Process Flow Chart - Cadwelding
-



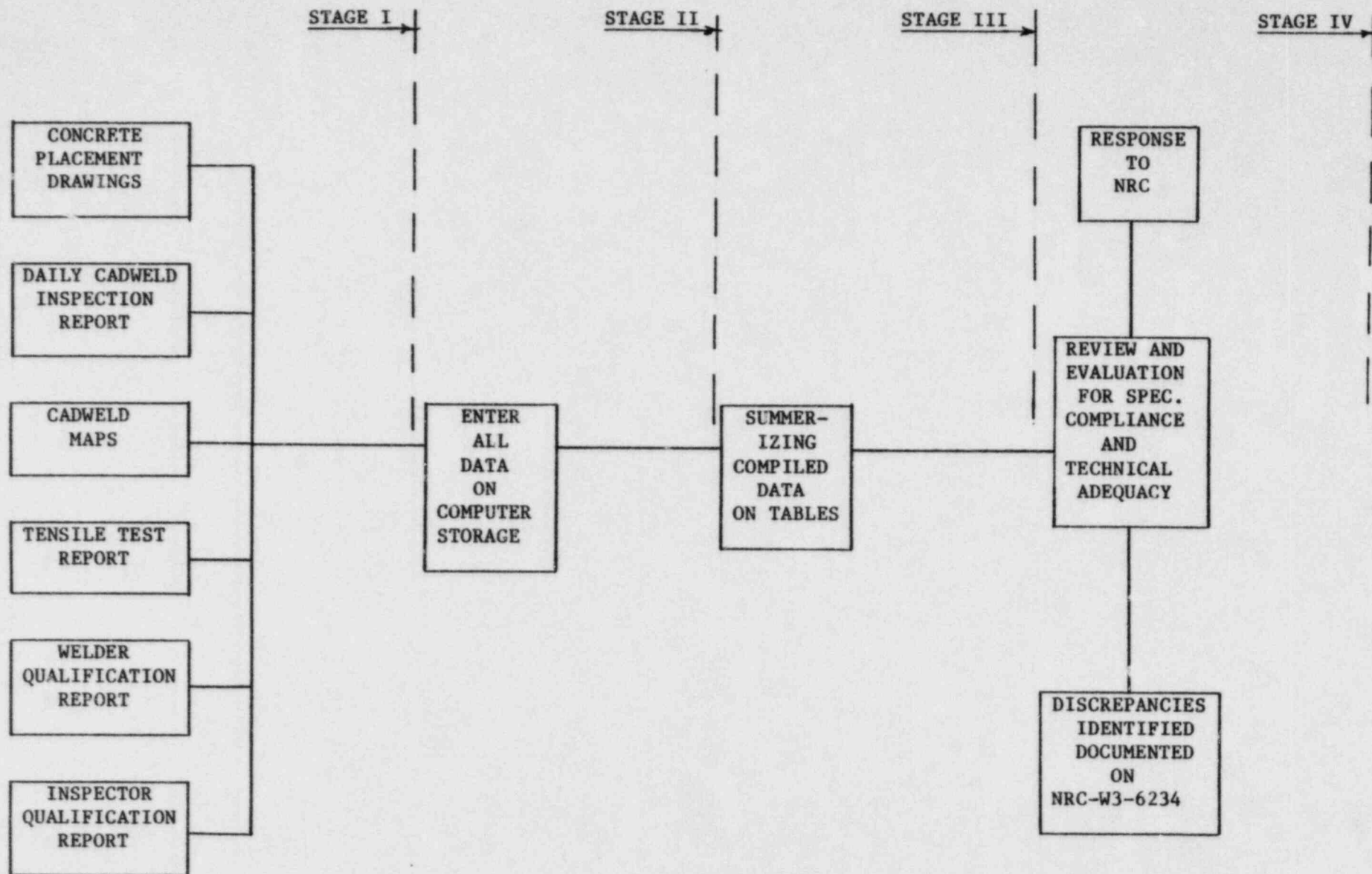
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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. Gather and reformat documentation.</li><li>2. Review reformatted documentation against Specification LOU 1564.479, Rev. 3.</li></ol>	<ol style="list-style-type: none"><li>1. This work was performed by Civil Engineers and Designers under the supervision of the ESSE Civil Supervisor.</li><li>2. Same as Item 1.</li></ol>
LP&L	<ol style="list-style-type: none"><li>1. Validation per QASP 19.13 consisted of, but was not limited to, the following:<ol style="list-style-type: none"><li>a) Reviewed Ebasco computer printouts on cadwelds to determine adequacy of information.</li><li>b) Reviewed printouts of Inspector qualifications to ensure qualifications.</li><li>c) Reviewed sampling of actual cadweld records and inspector qualifications in the vault to compare to computer printouts.</li><li>d) Reviewed NCR on cadweld deficiencies to determine if all problems were addressed in the cadweld report.</li><li>e) Verified that objective evidence exists to support statements of fact made in the response.</li></ol></li></ol>	<ol style="list-style-type: none"><li>1. Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23(1978).</li></ol>

ATTACHMENT 1

PROCESS FLOW CHART - CADWELDING



PROGRAM PLAN

ISSUE: 12

DATE: 10/10/84

TITLE:

Main Steamline Framing Restraints

DESCRIPTION OF ISSUE:

Incomplete documentation for connections in the steam generator framing.

LP&L APPROACH TO RESOLUTION:

SCD #78 was resolved and subsequently reopened upon discovery that inspections in the steam generator framing were not complete. NCR-W3-7736 was issued to track resolution of the deficiency. A 100% QC reinspection of steam generator framing bolted connections as well as a review of the American Bridge work scope against the scope of SCD #78 reinspections was performed.

Reinspection of all steam generator bolted connections is complete. Corrective Action is complete with the exception of coating the new bolts.

WORK INSTRUCTION AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	ASP-IV-129, Issue C	Reinspection and Rework of American Bridge Bolted Connections.
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. QC Reinspection of Connections in the Steam Generator Framing developed under the corrective action of SCD #78, 10CFR50.55(e) report.</li><li>2. Review of the total scope of American Bridge work and comparison to reinspections performed under SCD #78, 10CFR50.55(e) report.</li><li>3. Evaluation and dispositions of deficiencies identified during reinspection of steam generator framing.</li></ol>	<ol style="list-style-type: none"><li>1. Indoctrination/training to procedure ASP-IV-129 with reinspections performed under the guidance of the QC Civil supervisor.</li><li>2. Review performed by Civil engineers under the supervision of the Resident Engineer-Civil.</li><li>3. Review performed by Civil engineers under the supervision of the Resident Engineer-Civil. Evaluations were performed by Civil Engineers under the supervision of the ESSE Civil Supervisor as required.</li></ol>
LP&L	<p>Validation per QASP 19.13 consisted of but was not limited to the following:</p> <ol style="list-style-type: none"><li>1) Reviewed ASP-IV-129 for technical content, acceptance criteria, and proper management approval.</li><li>2) Assured on a sample basis, heat no. traceability to Purchase Orders.</li><li>3) Walkdown on a sample basis, bolting on S.G. framing to assure A490 bolts were installed.</li><li>4) Page by page review of S.G. framing Information Requests (IR's) to ensure QC inspectors signed and dated inspection sheets.</li></ol>	<p>Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</p>

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ORGANIZATIONS INVOLVED:

ORGANIZATION

FUNCTIONS PERFORMED

PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS

- 5) Verified that QC inspectors were trained to ASP-IV-129 prior to inspection.
- 6) Verified on a sample basis QC certification to ANSI N45.2.6 was within personnel folders.
- 7) Briefly reviewed certification exams and background of QC inspectors within personnel folders.
- 8) Review of sample Ebasco scoping effort to assure that all discrepancies of American Bridge work has been identified and justified/reworked where necessary.
- 9) Verified that objective evidence exists to support statements of fact made in the response.

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ATTACHMENTS:

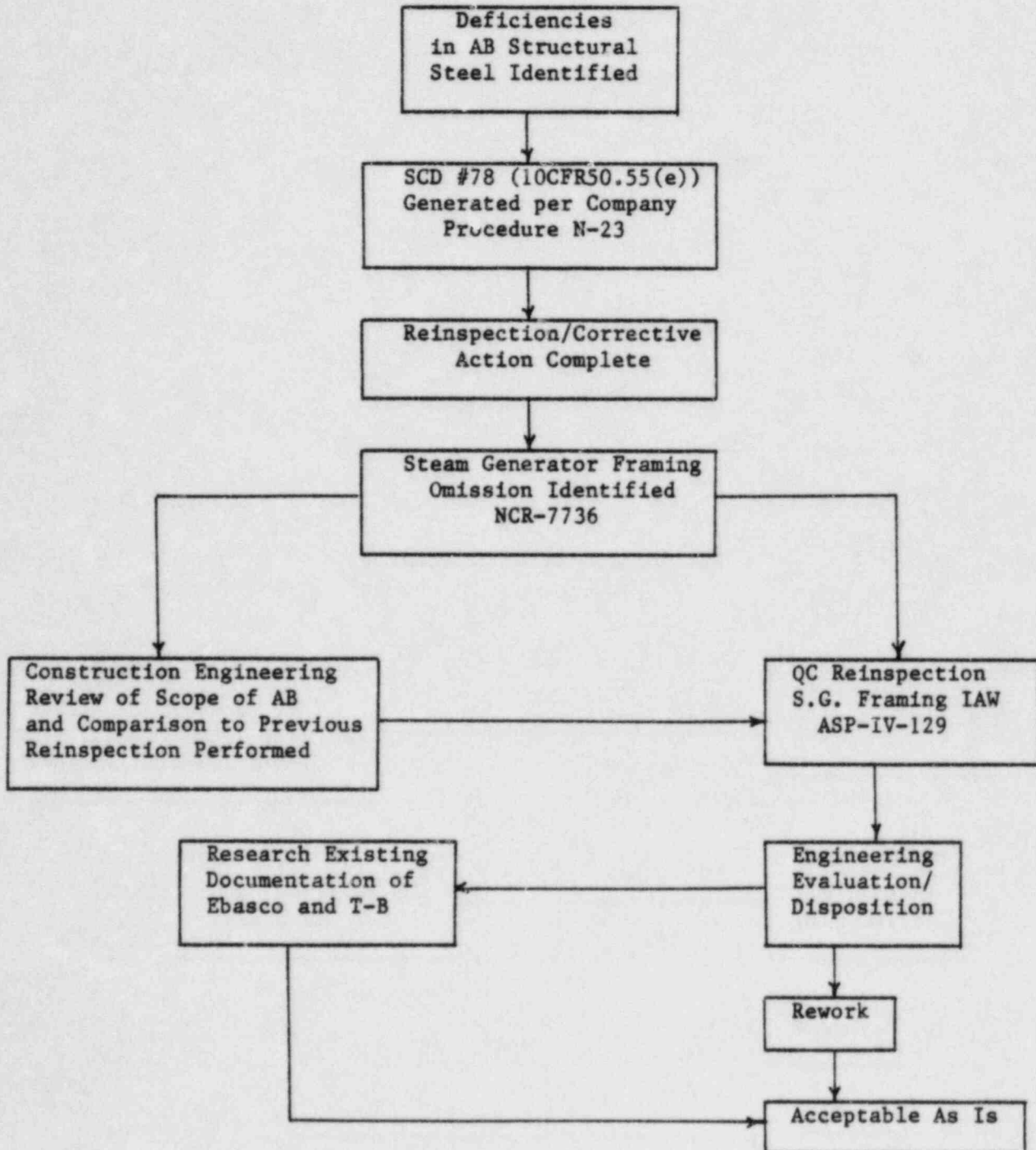
1. Process Flow Chart - Main Steamline Framing Restraints



ATTACHMENT 1

PROCESS FLOW CHART

MAIN STEAMLINE FRAMING RESTRAINTS



PROGRAM PLAN

ISSUE: 13

DATE: 10/10/84

TITLE:

Missing NCRs

DESCRIPTION OF ISSUE:

LP&L shall obtain the missing NCRs, explain why these NCRs were not maintained in the filing system, review them for proper voiding, and assure that when an issue is raised to an NCR, it is properly filed for tracking and closure.

LP&L APPROACH TO RESOLUTION:

The concern specifically stated that there were 10 NCR numbers missing from the QA vault and card index file. The review indicates this is because all of these NCRs were voided or cancelled prior to issuance as indicated in the manual log that was maintained at that time. The purpose of the card index file is to locate NCRs which are actually on file in the vault, not those that were voided or never issued.

However, in response to the NRCs general statement that "Others were also noted to be missing from the Ebasco QA Vault", LP&L has:

- o Reviewed for accountability all Ebasco Site and New York Office issued closed or voided NCRs for accountability (more than 8200 NCRs).
- o Provided substantiating evidence on those NCRs indicated as void in the logs.
- o Provided substantiating evidence that NCR numbers in the sequence indicated not to have been assigned to an NCR is correct.

A review for accountability of the approximately 3700 Mercury NCRs has been performed.

WORK INSTRUCTION AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. Review Site-issued NCRs for accountability of closed or voided NCRs.</li><li>2. Review NYO-issued NCRs for accountability of closed or voided NCRs.</li><li>3. Review Mercury NCRs, including voided and administratively closed NCRs, for accountability.</li></ol>	<ol style="list-style-type: none"><li>1. QA Program Manager (at the Site) who had worked with the site NCR tracking system.</li><li>2. Experienced QA Engineer (at the NYO) who had worked with the NYO NCR tracking system.</li><li>3. Review performed by the QA Engineer under the Supervision of the Site QA Supervisor.</li></ol>
LP&L	<ol style="list-style-type: none"><li>1. Validation per QASP 19.13 consisted of, but was not limited to, the following:<ol style="list-style-type: none"><li>a) Reviewed the Ebasco QA Manual Tracking Log, NCR Transmittal Log, Index Tracking Cards, and the QA Vault Index Cards to confirm specific statements made for each NCR.</li><li>b) Reviewed missing NCRs (both Site and NYO issued) in detail to validate statements made in response.</li><li>c) Reviewed Master Tracking System printout to verify that NCR numbers which were not assigned to a NCR had never been entered in the MTS.</li></ol></li></ol>	<ol style="list-style-type: none"><li>1. Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</li></ol>

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ORGANIZATIONS INVOLVED:

ORGANIZATION

FUNCTIONS PERFORMED

PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS

- d) Reviewed Ebasco QA Audit  
WO-78-3-1 for appropriate  
correction action.
- e) Verified that objective evidence  
exists to support statement of  
fact made in the response.

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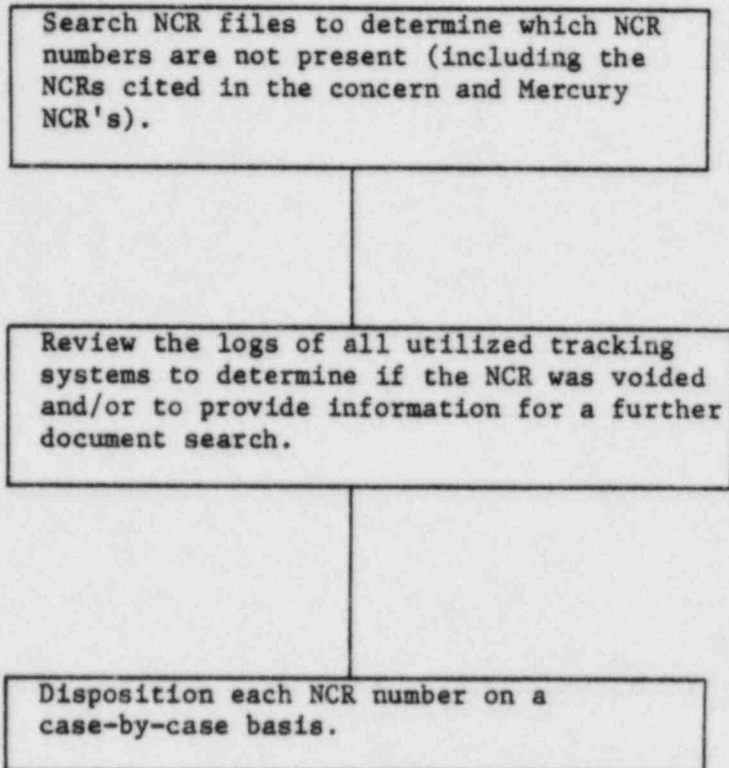
ATTACHMENTS:

1. Process Flow Chart - Missing NCRs (Both Site and NYO issued)
-

ATTACHMENT 1

PROCESS FLOW CHART

MISSING NCRS (BOTH SITE AND NYO ISSUED)





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PROGRAM PLAN

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ISSUE: 14

DATE: 10/10/84

TITLE:

J.A. Jones Speed Letters and EIRs

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DESCRIPTION OF ISSUE:

During the Ebasco QA review of J.A. Jones speed letters and engineering information requests, several items that could affect plant safety were noted. Based on its sample of these actions, the staff does not expect that any of these items will significantly affect plant safety. Nevertheless, the applicant should complete the actions identified in these reviews and issues raised shall be resolved promptly.

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LP&L APPROACH TO RESOLUTION:

First, a review has been conducted of correspondence between J.A. Jones and Ebasco via speed letters and EIRs. Second, a review of correspondence which conveyed design changes to J.A. Jones without reference to follow-up action to formalize the changes was conducted to determine safety significance.

Of approximately 2100 J.A. Jones documents reviewed, 271 appear to convey design changes. These 271 have been evaluated and researched on a case-by-case basis and determined to be acceptable as is even though they represent a procedure violation. No safety problems have been identified. The basis for accept-as-is justification is available.

Third, a minimum 10% sample of engineering information requests generated by other safety-related contractors was performed to determine if they were design changes conveyed by such informal documents. The sample size was expanded depending on the results of the initial review.

Fourth, any design changes identified were reviewed for safety significance.

The initial review of the other safety related contractors has been completed. No problems of safety significance have been identified to date, although additional concerns were identified during the review of American Bridge information requests. The resolution of these concerns, along with any rework, will be documented and dispositioned via open Significant Construction Deficiency No. 78. Also, a full scope review of Mercury generated information requests has been initiated, given the number of design control program violations (5.2%) and other concerns related to the Mercury Program. An additional 10% sample of Fischbach and Moore generated information requests has been initiated though the number of control violations were small (1.6%) and none had safety significance.

Individual nonconformance reports will be written for contractors, if required, to document the conditions found during the sampling of that contractors information requests and track the information and approval of corrective action.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	N/A	Sampling Methodology for Review of Safety Related Contractor Information Requests as discussed in response to concern.
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"><li>1. Review and disposition of J.A. Jones information requests and speed letters.</li><li>2. Review and disposition of information requests and speed letters related to other safety-related contractors.</li></ol>	<ol style="list-style-type: none"><li>1. Civil Engineers under the supervision of the ESSE Civil Supervisor.</li><li>2. Construction Engineers under the supervision of the Resident Engineers. The Resident Engineer who normally interfaced with a particular safety-related contractor, supervised the group looking at the contractor's documentation. Engineering evaluations, where required, were performed under the direct supervision of the disciplines involved.</li></ol>
LP&L	<ol style="list-style-type: none"><li>1. Validation per QASP 19.13 consisted of but was not limited to the following:<ol style="list-style-type: none"><li>a) Reviewed samples of Ebasco responses to speed letters and EIRs from J. A. Jones and other contractors to determine what types of information was in the requests and the adequacy of the evaluations.</li></ol></li></ol>	<ol style="list-style-type: none"><li>1. Validation was performed under the direct supervision of the LP&amp;L Lead Auditor who is qualified to ANSI N45.2.23-1978.</li></ol>

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	b) Reviewed ASP-IV-56 "Procedure for Control of Information Requests between Ebasco and Site Contractors" to determine that it adequately addresses handling of Information Requests.	
	c) Verified that the method of tracking existing documentation problems is by UNT-5-002 "Condition Identification and Work Authorization."	
	d) Verified that the method of updating documentation and recommending hardware changes is through the use of PE-2-006 "Station Modification Interfaces".	

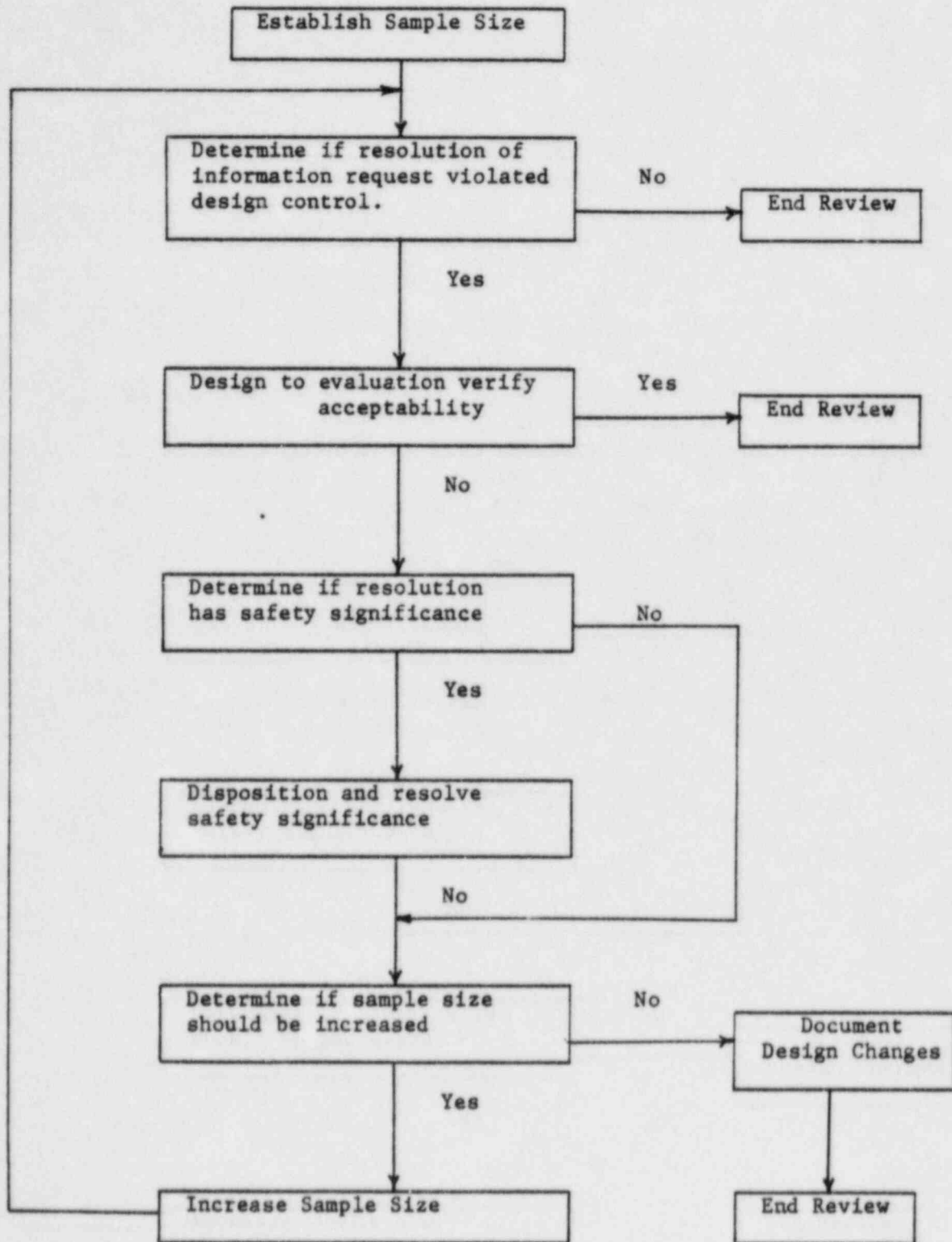
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ATTACHMENTS:

1. Process Flow Chart - Review of Safety-Related Contractors Information Requests.

ATTACHMENT 1

PROCESS FLOW CHART - REVIEW OF SAFETY-RELATED CONTRACTORS INFORMATION REQUESTS —



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PROGRAM PLAN

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ISSUE: 15

DATE: 10/10/84

TITLE:

Welding of "D" level Material Inside Containment

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DESCRIPTION OF ISSUE:

Locate the documentation for "D" level material welding and verify the adequacy of the information or perform a material analysis and NDE work, or rework the welds.

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LP&L APPROACH TO RESOLUTION:

The CB&I QA manual requirements for documentation of fit-up and final weld inspections do not apply, per their manual, to "D" material welds. This documentation is therefore not available for all "D" material welds.

Under the CB&I program, the "D" material welds were generally performed by the same welders and inspected by the same welding supervisors and to the same standards as the rest of the CB&I work for which documentation is provided. Considering this, and the quality of CB&I work on this project, it is not expected that any quality problem exists with "D" material welds.

LP&L has inspected a sample of the welds on the Polar Crane Girder assembly and the Maintenance Hatch (all other "D" welds were either a non-safety application, determined to be minor structures or not a structural application). These particular welds sampled comprise more than 10% of the total number of Category 1 "D" material welds. Approximately half of these welds were stripped of paint before being inspected. The remaining welds were inspected without stripping paint. It was concluded that the design requirements are satisfied for the entire sample of welds inspected and on this basis all CB&I "D" material welds are considered satisfactory and acceptable-as-is.

To address the NRC's specific concerns, an evaluation of the containment spray piping weld attachments was performed. All containment spray piping weld attachments were installed and documented by Tompkins-Beckwith except for two. The results demonstrate that failure of these two welds will not preclude the piping from performing its design basis function.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.10	QA Inspection of Structural Steel Weldments
	QASP 19.13	Response Validation
	QASP 2.12	QA Section Qualification and Certification of Inspection Personnel

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Determination of number of "D" welds.  2) Determination and evaluation of final use of "D" welds.	1&2) Civil Engineers under the supervision of the ESSE Civil Supervisor.
LP&L	I. LP&L supervised inspection of "D" level welds in accordance with QASP 19.10.  II. Validation per QASP 19.13 has consisted of but will not be limited to the following:	I. Qualification/Certification was accomplished in accordance with ANSI N45.2.6 (1973).  II. Validation performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	<ol style="list-style-type: none"><li>1. A review of applicable NCR's.</li><li>2. A review of T&amp;B documentation relative to the Containment Spray Header piping supports.</li><li>3. A review of CB&amp;I Program Manual to access the requirements of Class "D" material.</li><li>4. A review, by sampling, of CB&amp;I welding material certification records for technical adequacy.</li><li>5. A review of the majority of CB&amp;I welder qualification records.</li><li>6. A review of the Ebasco listing of Class "D" shop and field welds.</li><li>7. Reviewed CIWA's for inspection of weldments.</li><li>8. Reviewed QASP 19.10.</li><li>9. Reviewed welding inspection records for the 405 visual inspections for types of defects as well as ESSE evaluation/disposition of the majority of welds.</li><li>10. Reviewed Ebasco Specification LOU 1564.717 for assurance of Seismic I Classification of structures.</li><li>11. Verified that a CIWA has been initiated to remove arc strikes.</li><li>12. Verified that objective evidence exists to support statements of fact made in the response.</li></ol>	

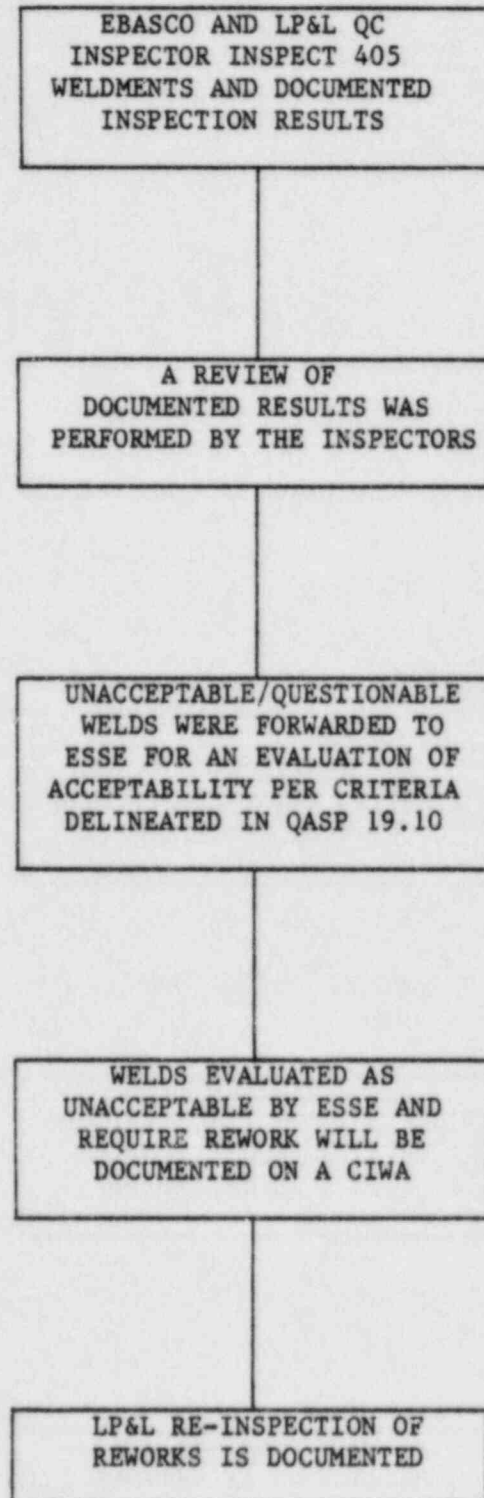
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ATTACHMENTS:

- 1) Process Flow Chart - Review of Class "D" Welds Inside Containment
  - 2) Process Flow Chart - LP&L Training, Field Inspection and Validation
  - 3) Process Flow Chart - QA Inspection/Engineering Evaluation of Structural Steel Weldments
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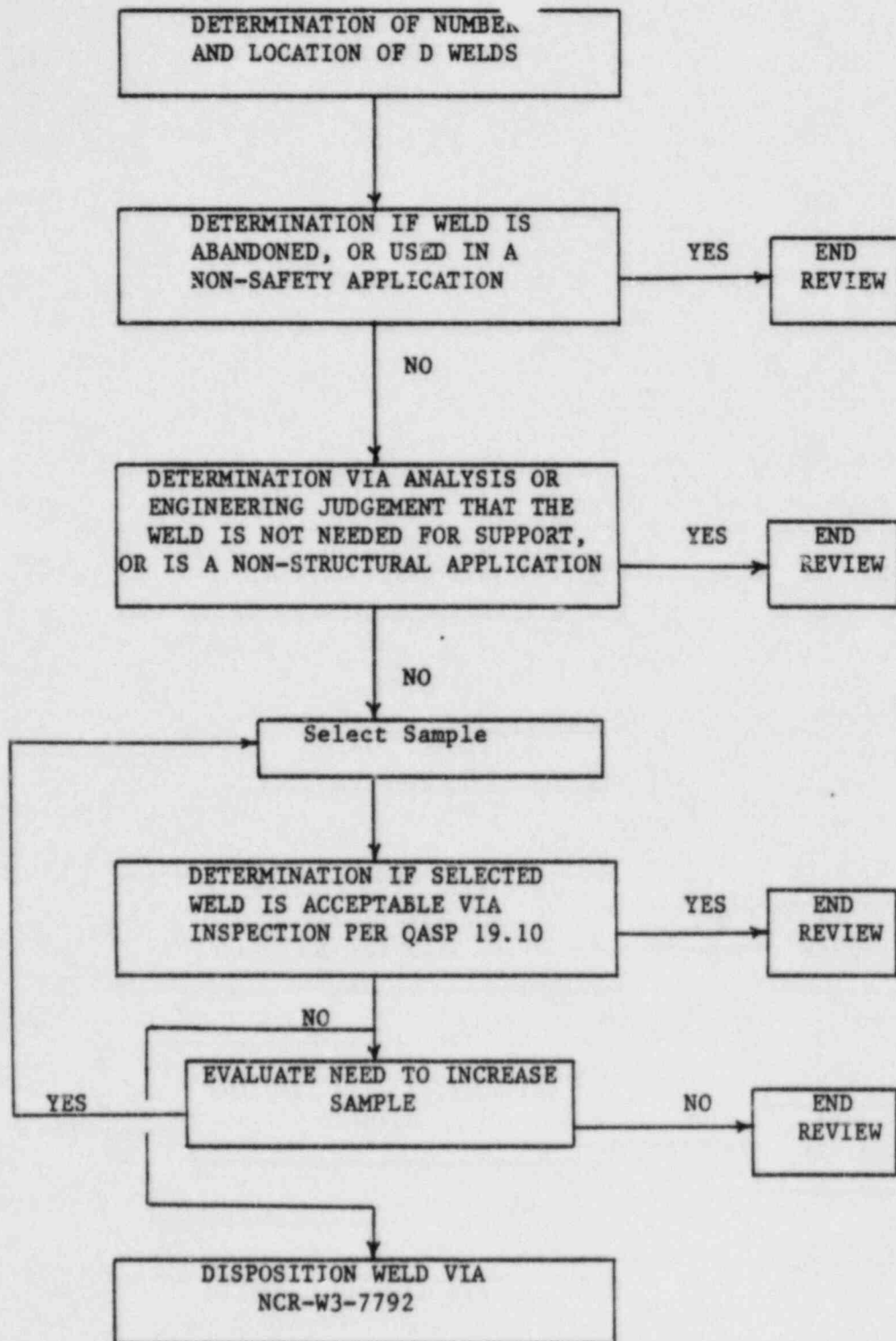
ATTACHMENT 3

PROCESS FLOW CHART - QA INSPECTION/ENGINEER EVALUATION OF  
STRUCTURAL STEEL WELDMENTS



ATTACHMENT 1

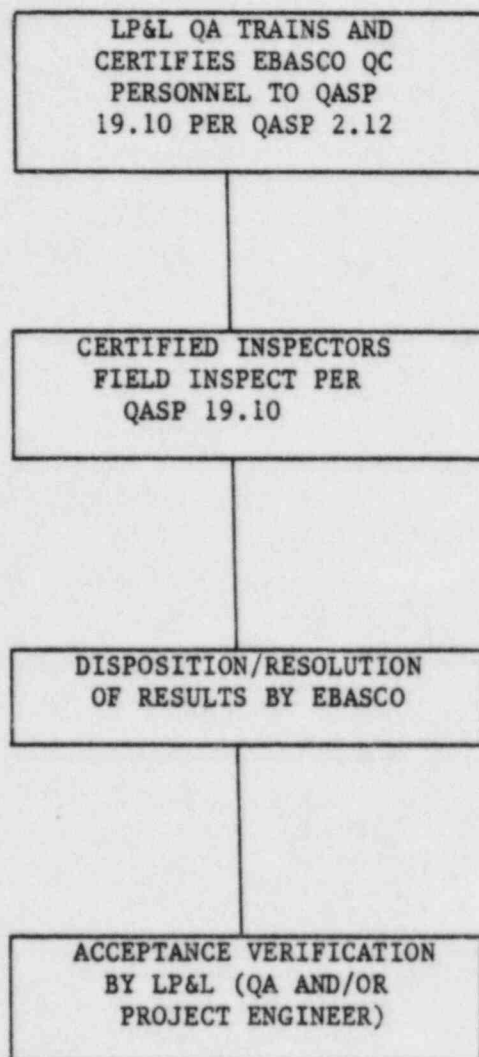
PROCESS FLOW CHART -  
REVIEW OF CLASS "D" WELDS INSIDE CONTAINMENT





ATTACHMENT 2

PROCESS FLOW CHART - LP&L TRAINING, FIELD INSPECTION, AND VALIDATION



PROGRAM PLAN

ISSUE: 16

DATE: 10/10/84

TITLE:

Surveys and Exit Interviews of QA Personnel

DESCRIPTION OF ISSUE:

The NRC was critical of the manner in which a program for interviewing site QA/QC personnel in order to identify and take appropriate action regarding their concerns was conducted.

LP&L APPROACH TO RESOLUTION:

LP&L has secured the services of Quality Technology Company (QTC) to implement an enhanced program to conduct exit interviews of personnel departing the site. QTC will also review the interviews conducted to date to assess whether the corrective actions for the concerns identified thereon are appropriate. Procedures have been approved which assure management involvement.

WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.11	Quality Team Operating Procedure
	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Quality Technology Company	<p>I.</p> <ol style="list-style-type: none"><li>1. Development Procedure.</li><li>2. Initially staff team.</li><li>3. Review past interview sheets to ensure all concerns are identified and classified.</li><li>4. Establish methods to solicit concerns from other sources.</li><li>5. All personnel are requested to provide concerns upon terminating employment. Those that will not or do not are provided future contact information.</li><li>6. Investigate concerns.</li><li>7. Identify corrective action where appropriate.</li><li>8. Response to concerned individual.</li><li>9. Provide management with trends.</li><li>10. Provide management with concern resolution/status.</li></ol>	<p>I.</p> <ol style="list-style-type: none"><li>a. Experience in some aspect of nuclear field Technology/Quality Assurance.</li><li>b. Indoctrination/training to LP&amp;L QASP 19.11.</li><li>c. Orientation as to task objectives.</li><li>d. Personnel may have NRC experience/one per team desired.</li><li>e. One or more team members will have investigative experience/training.</li><li>f. Ability to communicate verbally and in writing.</li><li>g. Indoctrination in 10CFR50.7 IE Notice 84-08.</li></ol>
LP&L	<p>II. Verified that objective evidence exists to support statements of fact made in the response.</p>	<p>II. Validation was performed under the direct supervision of the LP&amp;L Lead auditor who is qualified to ANSI N45.2.23(1978).</p>

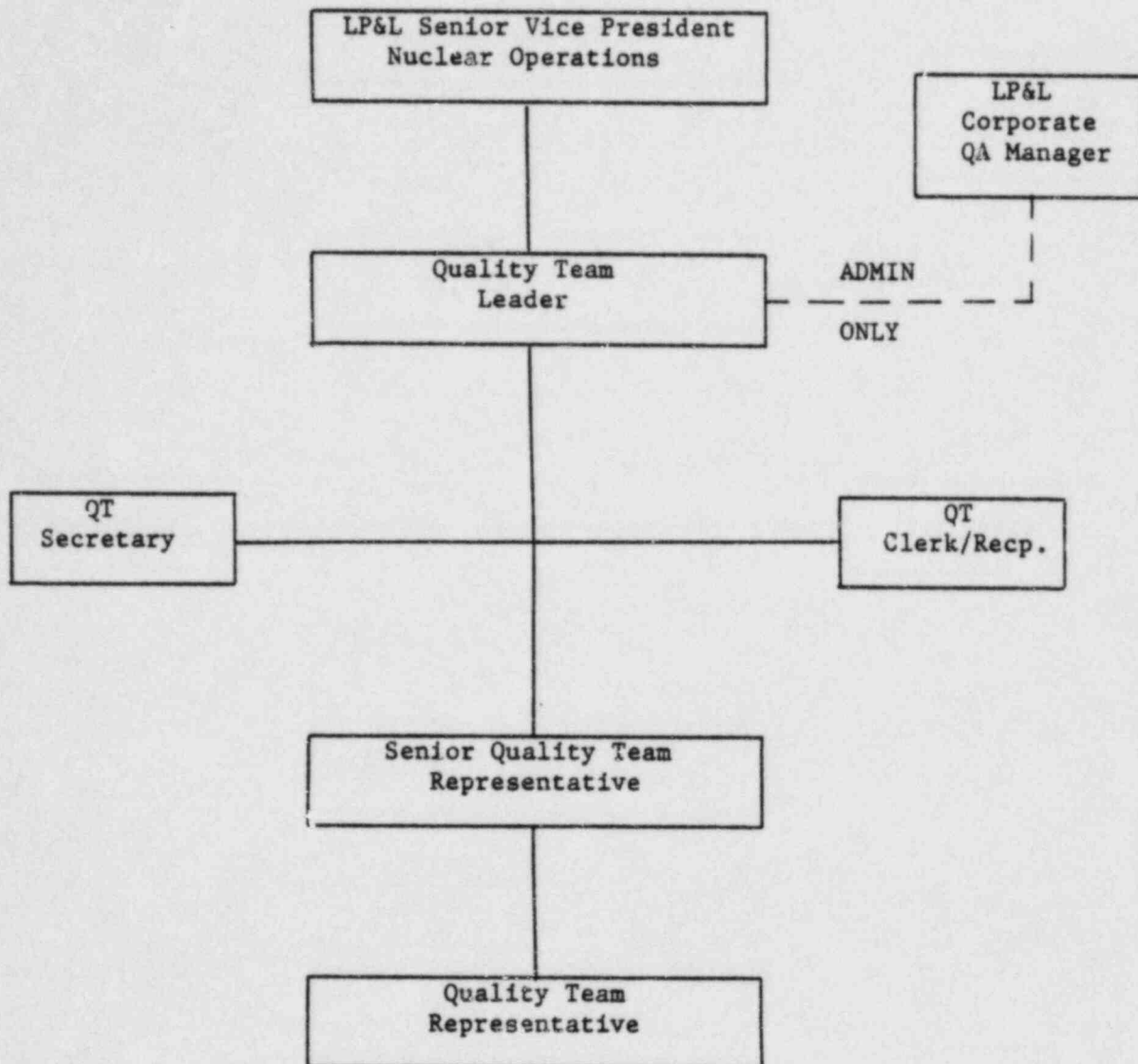
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ATTACHMENTS:

1. LP&L Quality Team Organization Chart
  2. Process Flow Chart - Exit Interviews
-

ATTACHMENT 1

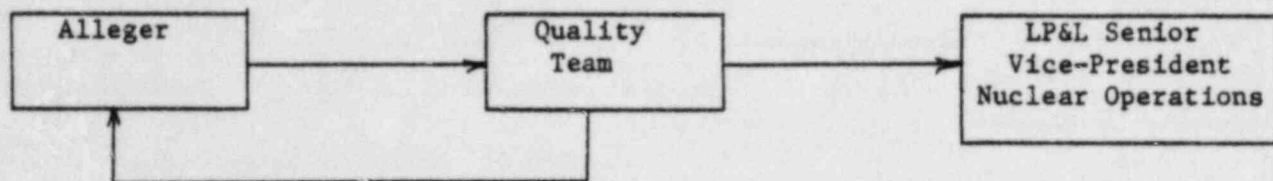
LP&L QUALITY TEAM ORGANIZATION CHART





ATTACHMENT 2

PROCESS FLOW CHART - EXIT INTERVIEWS



PROGRAM PLAN

ISSUE: 17

DATE: 10/10/84

TITLE:

QC Verification of Expansion Anchor Characteristics

DESCRIPTION OF ISSUE:

The NRC is concerned whether there was sufficient QC verification of the characteristics necessary to ensure proper installation of concrete expansion anchors installed by Mercury.

LP&L APPROACH TO RESOLUTION:

The review of this matter indicates that six of the seven cited QC reviews were made as required by the procedure or by the drawings which were referenced on the inspection forms. This was substantiated by a thorough review of Mercury quality records. LP&L will prepare a response discussing the incorporation of drawings into the procedure, training of Mercury personnel, the QC review and substantiation of records and evaluation of the cause of the problem.

The seventh attribute cited by the NRC is spacing between anchor and embedded plate. The response will refer to Ebasco design drawings which allow anchor plates to overlap and be welded to embedded plates. It will also provide the results of an analysis performed on worst case situations of Mercury anchor plates butting up against embedded plates of different sizes which demonstrates that the anchor and embedded plates are still capable of withstanding the original design loads.

Since LP&L is performing a sample reinspection of Mercury installations, attributes have been incorporated into the program for spacing and embedment. This will provide assurance that installations are according to design.

No revision is necessary to procedure SP-666 since this procedure is no longer in use at the site.

WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation
	QASP 19.15	QA Inspection of Instrument Installations
	QASP 2.12	QA Section Qualification and Certification of Inspection Personnel

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ul style="list-style-type: none"><li>1) Review of the concerns raised by the NRC.</li><li>2) Review of applicable documentation (both Ebasco and Mercury) and past inspections and corrective actions taken.</li><li>3) Provide analyses showing holding capacity of an anchor plate next to an embedded plate.</li></ul>	<ul style="list-style-type: none"><li>1) This review was performed by QA Engineers/Specialists under the supervision of the QA Site Supervisor.</li><li>2) Review performed by QA Document Reviewers.</li><li>3) This evaluation was performed by Civil Engineers under the supervision of the ESSE Lead Civil Engineer.</li></ul>
LP&L	<ul style="list-style-type: none"><li>1) Validation per QASP 19.13 will consist of but not be limited to the following:<ul style="list-style-type: none"><li>a) Reviewed Mercury procedure SP-666 for inclusion of appropriate requirements.</li><li>b) Reviewed Hilti and Mercury Training Documentation to ensure personnel were trained.</li><li>c) Reviewed Ebasco Corrective Action Report C.A.R. 82-3-2 to verify corrective action by appropriate contractors.</li><li>d) Reviewed LP&amp;L Reinspection of Mercury N1 instrument installations.</li></ul></li></ul>	<ul style="list-style-type: none"><li>1) Validation will be performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI N45.2.23 (1978).</li></ul>

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ORGANIZATIONS INVOLVED: (CONT'D)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
1) Cont'd	e) Verified that objective evidence exists to support statements of fact made in the response.	
	2) Supervised inspection of N1 instruments in accordance with QASP 19.15.	2) Qualification/Certification was accomplished in accordance with ANSI N45.2.6(1973).

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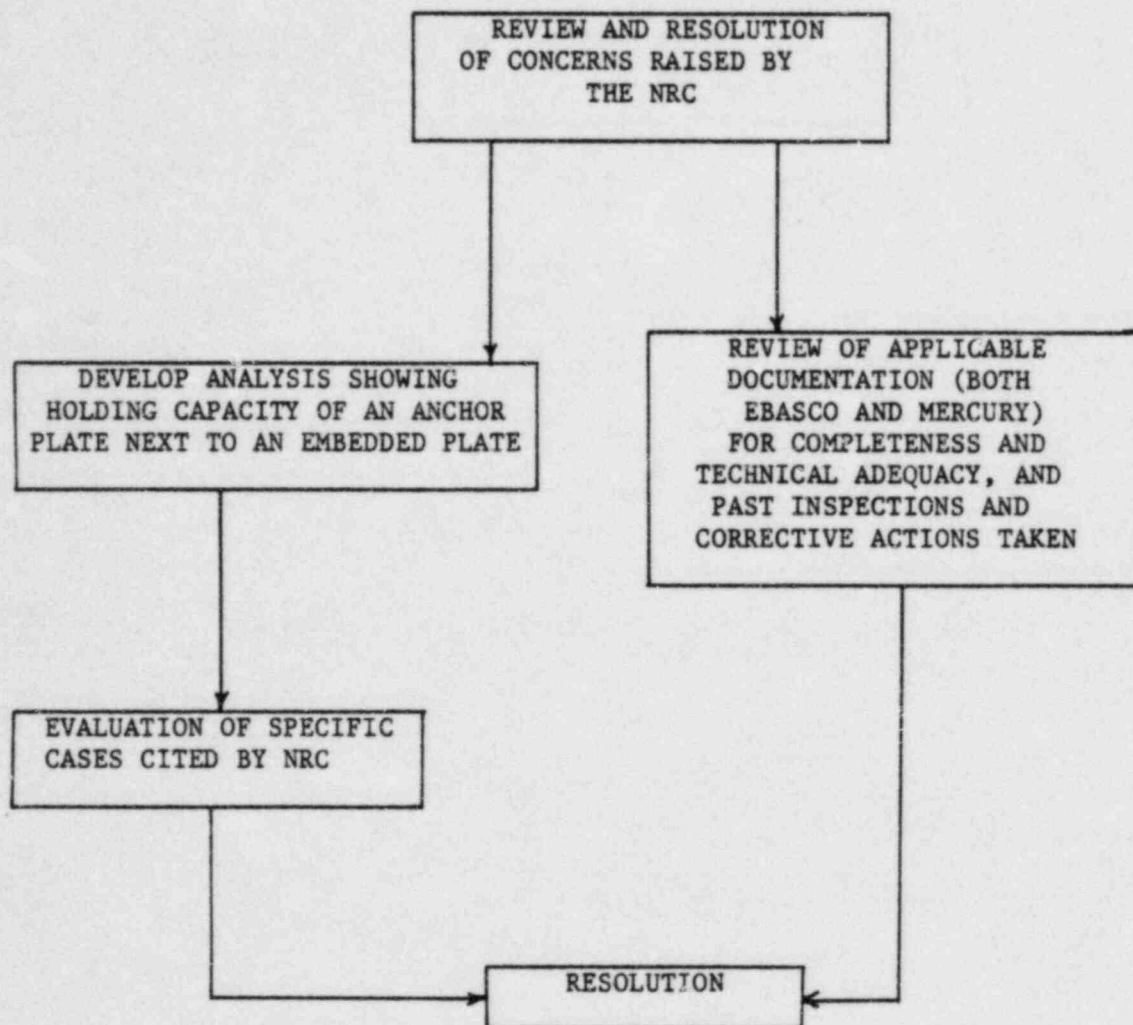
ATTACHMENTS:

1) Process Flow Chart - Review of Expansion Anchor Characteristics

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ATTACHMENT 1

PROCESS FLOW CHART  
REVIEW OF EXPANSION ANCHOR CHARACTERISTICS





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PROGRAM PLAN

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ISSUE: 18

DATE: 10/10/84

TITLE:

Documentation of Walkdowns of Non-Safety Related Equipment

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DESCRIPTION OF ISSUE:

Documentation should be provided that clearly shows what equipment was reviewed during the walkdowns and on what bases it was concluded that the installation was acceptable.

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LP&L APPROACH TO RESOLUTION:

Documentation attesting to the scope, conduct, criteria and results of the walkdowns will be provided. LP&L will provide documentation that shows the equipment that was reviewed during the walkdowns.

The response to this issue will also establish that, in our opinion, the design and installation adequately considered the effects of interactions of non-seismic with safety related systems during an SSE.

The response will describe and provide the results of two additional walkdowns conducted under formal LP&L procedures which documented all potential adverse interactions of non-seismic Category I components over safety-related equipment. These walkdowns were of the Instrument Air System piping, tubing, and supports and two specific areas in the RAB. The objective was to provide additional basis for judgement of the adequacy of the inherent design considerations and the plant wide walkdowns previously conducted.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	PMP-313	Evaluation of Instrument Air Piping/Tubing/Supports Potential to Damage Safety-Related Components.
	PMP-314	Non-Seismic Over Safety-Related Area Walkdown.
	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
LP&L	1. Supervised walkdown of Instrument Air System in accordance with PMP-313.	1) Supervisor, I&C Engineering
	2. Supervised walkdown of two RAB areas in accordance with PMP-314.	2) Same as Item 1 above.
	3. Validation per QASP 19.13 consisted of, but was not limited to the following:  a) Reviewed for adequacy PMP Procedures (PMP-313 and PMP 314) used for additional walkdowns of IA and two RAB areas.  b) Conducted general walkdown of a portion of IA located inside the RCB to evaluate interactions, tube track installations and instrument protection/separation.  c) Conduct QC administrative review of packages generated from item a) procedures.	3) Validation was performed under the direct supervision of the LP&L Lead Auditor who is qualified to ANSI N45.2.23 (1978).
Ebasco	1. Performed original plant wide walkdowns.	1) Supervisor, Stress Analysis Group and Lead Piping Engineer.
	2. Engineering evaluations for items identified as not meeting acceptance criteria of procedures.	2) Same as item #1 above.

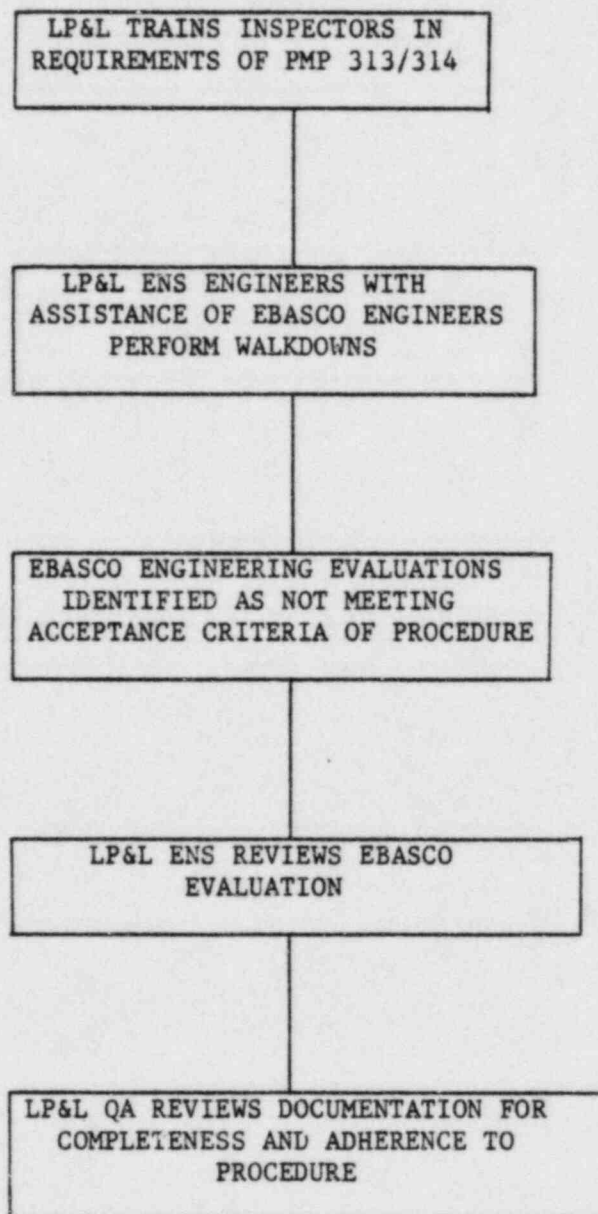
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ATTACHMENTS:

1. Process Flow Chart - Evaluation of Instrument Air System (PMP-313) and Area Walkdowns (PMP-314).
-

ATTACHMENT 1

PROCESS FLOW CHART - EVALUATION OF INSTRUMENT AIR SYSTEM  
(PMP-313) AND AREA WALKDOWNS (PMP-314)



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PROGRAM PLAN

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ISSUE: 19

DATE: 10/10/84

TITLE:

Water in Basemat Instrumentation Conduit

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DESCRIPTION OF ISSUE:

Review all conduit that penetrates the basemat and terminates above the top of the basemat to assure that these potential direct access paths of water are properly sealed.

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LP&L APPROACH TO RESOLUTION:

A walkdown was performed which identified 28 places where wetness due to seepage from conduits was found and 12 places where evidence of past leaking from conduits was found. Review of the design and as-built condition demonstrates that neither the present slow seepage thru some of the seals nor the seepage that would result from a gross failure of the seals presents a flooding hazard. Temporary conduits which enter the basemat from outside, and which once allowed passage of ground water in quantities that required periodic pumping, have now all been pressure grouted and their temporary blockout pits filled with concrete and no longer serve as a leak path for ground water. The decision to replace the seals will be based strictly on operational and maintenance considerations. Any replacement seals will consist of a light density silicone elastomer which has the capability to stop the seepage.

The standpipe of one piezometer no longer in use will be pressure grouted.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation
	CP 693	Grouting of Temporary Pipelines in Construction Facilities Abandoned Inplace

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ol style="list-style-type: none"> <li>1. Perform walkdown and document findings.</li> <li>2. Civil Engineering review and evaluation of the walkdown findings using station design drawings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ebasco Engineers performed the walkdown under the supervision of the ESSE Lead Electrical Engineer, who also reviewed the results of the walkdown.</li> <li>2. Ebasco Civil Engineers performed the review under the supervision of the ESSE Civil Supervisor.</li> </ol> <p>The response was co-authored by the ESSE Lead Electrical Engineer and the ESSE Civil Supervisor.</p>
LP&L	<p>A review was performed of:</p> <ol style="list-style-type: none"> <li>1. The review of the Ebasco list of identified conduits or boxes indicating leakage and individual conduits in the boxes which exhibited leakage were identified.</li> <li>2. Reviewed new seal material which was recommended to replace the previous seal material.</li> <li>3. Validation per QASP 19.13 by LP&amp;L QA consisted of but was not limited to the following: <ul style="list-style-type: none"> <li>- Reviewed results of Ebasco walkdown.</li> <li>- Reviewed corrective actions taken.</li> <li>- Reviewed drawings to determine locations of sealed conduits.</li> <li>- Reviewed method of sealing temporary conduits.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Engineer in the Project Engineering Group.</li> <li>2. Engineer in the Project Engineering Group.</li> <li>3. Validation was performed under the direct supervision of the LP&amp;L lead auditor who is qualified to ANSI 5.2.23 (1978).</li> </ol>



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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION REQUIREMENTS</u>
LP&L	3. CONT'D - Reviewed conduit list to determine that conduits were previously sealed.	
	4. Verify that objective evidence exists to support statements of fact made in response.	4. Same as item 3.

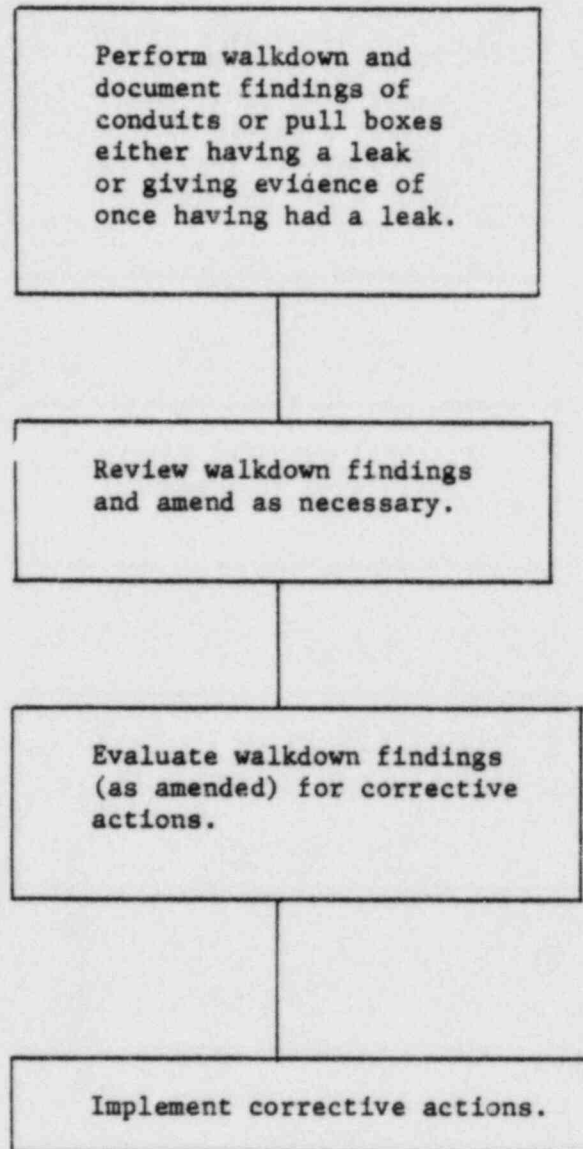
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ATTACHMENTS:

1. Process Flow Chart - Review of Water in Basemat Instrumentation Conduit.
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ATTACHMENT 1

PROCESS FLOW CHART - REVIEW OF WATER IN BASEMAT INSTRUMENTATION CONDUIT



PROGRAM PLAN

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ISSUE: 20

DATE: 10/10/84

TITLE:

Construction Materials Testing (CMT) Personnel Qualification Records.

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DESCRIPTION OF ISSUE:

Verify the proper certification of construction materials testing personnel.

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LP&L APPROACH TO RESOLUTION:

GEO has been contacted to assist in providing additional background information or justification for certification of QA/QC personnel identified as part of NCR W3-F7-116.

A verification program has been established to review the professional credentials of 100% of the GEO CMT site QA/QC personnel, including supervisors and managers who performed safety related functions at Waterford III during its construction. Criteria for certifications or qualification of QA/QC personnel will be based on ANSI N45.2.6-1973 and SNT-TC-1A for QC inspection personnel and construction QA program requirements for QA personnel.

In addition background investigations will be performed for personnel in all groups. If certification of an individual can not be verified, appropriate site nonconformance documentation will be initiated to document evaluation of safety significance and corrective actions, including reinspection of work performed as necessary.

For GEO QC Inspectors remaining on site, a reverification is being completed of proper certification in accordance with ANSI-N45.2.6-1973.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
Ebasco	QAI No. 32	Instructions for Verifications of QA/QC Personnel Qualifications.
LP&L	QASP 19.12	Review of Contractor QA/QC Personnel Qualification Verification.
	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	<ul style="list-style-type: none"><li>1) Verify Education/Experience of QA/QC personnel.</li><li>2a) Review program requirements of GEO, review and collect data and identify inspectors whose qualifications are not verifiable against ANSI N45.2.6-1973. SNT-TC-1A and QA program requirements for QA personnel.</li><li>b) Determine, to the extent feasible, inspections performed by personnel whose qualifications are not verifiable.</li><li>c) Disposition quality documentation generated by LP&amp;L in item (5) below.</li></ul>	<ul style="list-style-type: none"><li>1) Training requirements to QAI-32.</li><li>2) Ebasco's Quality Resources Training Manual-1 (QRTM-1) delineates the requirements for qualifying records reviewer. QAI-14, "Training and Qualification Requirements for Quality Assurance Records Personnel" endorses QRTM-1 and requires all reviewers have training on procedures they are reviewing to. For qualification/certification filed training requirements are QAI-32 and ANSI N45.2.6.</li></ul>
LP&L	<ul style="list-style-type: none"><li>1) Audit Ebasco's implementation of QAI-32.</li></ul>	<ul style="list-style-type: none"><li>1) (a) Indoctrination/training to LP&amp;L &amp; Ebasco procedures, ANSI N45.2.6-1973 &amp; 1978, ANSI N45.2.23-78 SNT-TC-1A-75 &amp; interpretations.</li><li>(b) Orientation as to task objectives, organizations, and associated responsibilities and duties.</li></ul>

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ORGANIZATIONS INVOLVED: (CONT'D)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
LP&L	Cont'd	(c) OJT for three days to assure knowledge, understanding, and proficiency demonstration.
		(d) Individuals selected have inspection related and/or were involved in the training/certification or review of inspection personnel types.
		(e) Personnel involved in this process have not worked for Ebasco or GEO.
	2) Review all those verified by Ebasco.	2) See Item 1 above.
	3) Sample Education/Experience verification of GEO performed by Ebasco.	3) See Item 1 above.
	4) Perform final management determination of the qualifications of individuals who are potentially unqualified.	4) Review Board - Three Senior LP&L QA personnel qualified to ANSI N45.2.23 (1978).
	5) Initiate suitable quality documentation in cases where inspections were performed by personnel where qualifications could not be verified.	5) LP&L Lead Auditor who is qualified to ANSI N45.2.23 (1978).
	6) Make final determination on dispositioning of quality documentation mentioned in 4) above by Ebasco.	6) LP&L QA and Project Management.
	7) Validate response per QASP 19.13 to assure positive statements of fact are substantiated.	7) Validation will be performed under the direct supervision of the LP&L Lead Auditor who is qualified to ANSI N45.2.23 (1978).

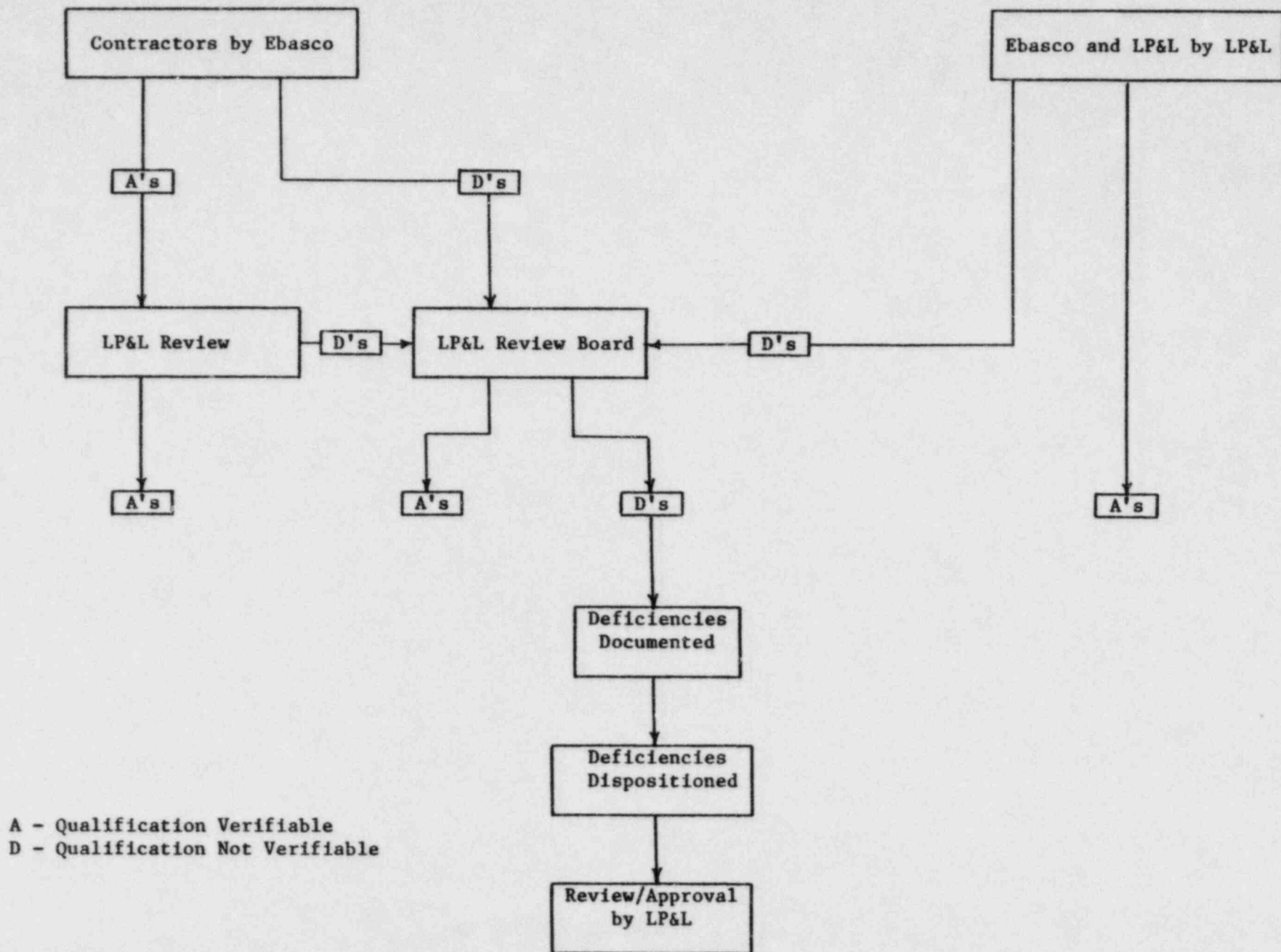


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**ATTACHMENTS:**

- 1) Process Control
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## FLOW CHART - PROCESS CONTROL



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PROGRAM PLAN

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ISSUE: 21

DATE: 10/10/84

TITLE:

LP&L Construction System Status and Transfer Reviews

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DESCRIPTION OF ISSUE:

A concern exists over whether construction deficiencies were properly closed out or identified during the process of transferring systems from construction to plant operation.

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LP&L APPROACH TO RESOLUTION:

A review of transfer correspondence on the systems which were the cause of this concern has been performed. In addition, a review has been conducted to verify that deficiencies in transferred systems had no impact on testing.

A review was also conducted of hardware and software comments generated during status and transfer of safety-related systems.

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WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION REQUIREMENTS</u>
LP&L	(1) Review of LP&L QA and Ebasco QA Correspondence on the disposition of System Status and Transfer Reviews.  (2) Validation per QASP 19.13 will consist of a review of documentation to assure positive statements of fact are substantiated by existing documentation.	(1) The LP&L Review was performed by QA Engineers under the supervision of the LP&L Construction QA Manager.  (2) Validation was performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).
Ebasco	(1) Review of LP&L QA and Ebasco QA Correspondence on the disposition of System Status and Transfer Reviews.	(1) The Ebasco review was performed by QA Engineers under the supervision of an Ebasco QA Specialist Engineer.

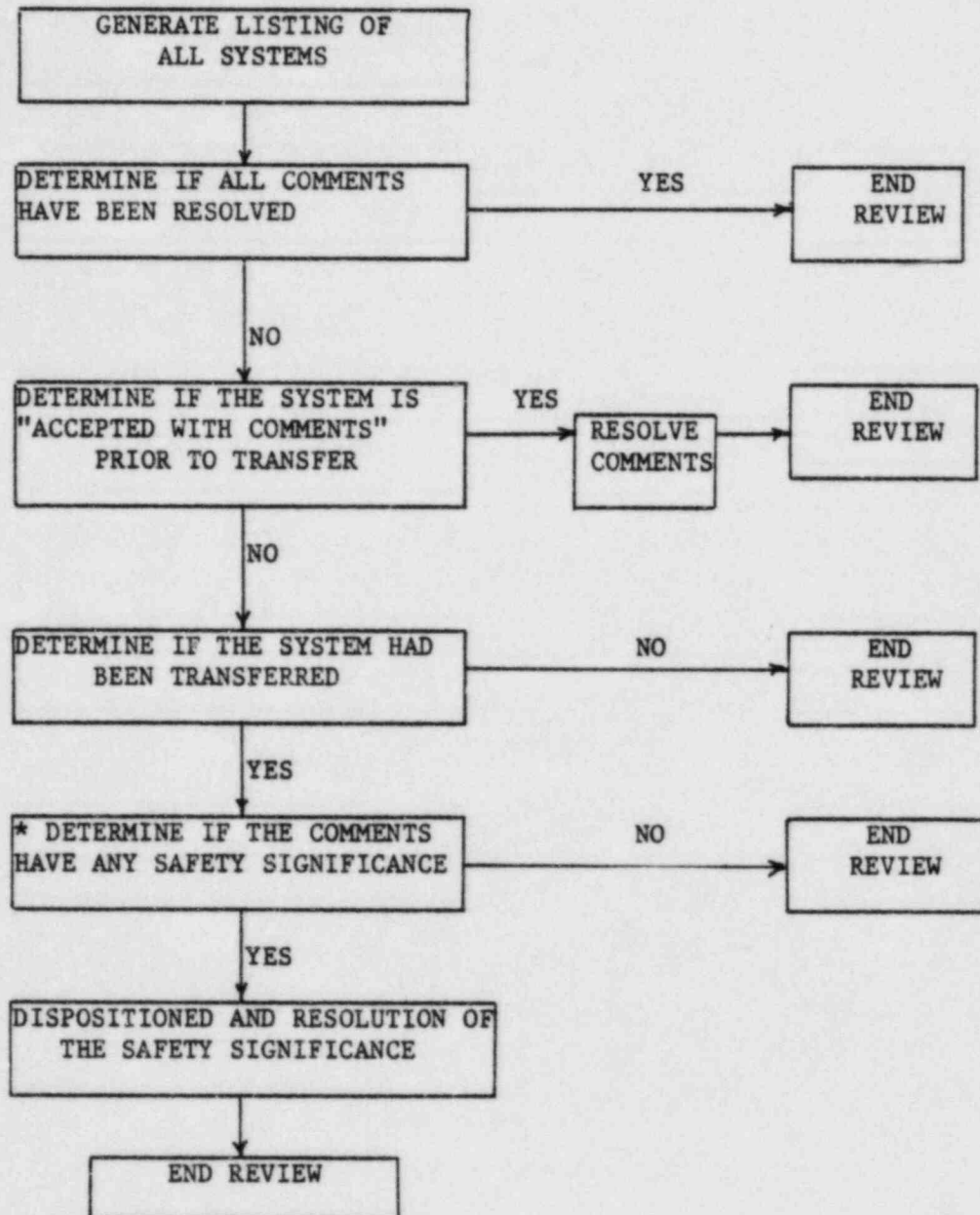
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ATTACHMENTS:

- 1) Process Flow Chart - Review of Status and Transfer Review Correspondence
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ATTACHMENT 1

FLOW CHART  
REVIE OF STATUS AND TRANSFER REVIEW CORRESPONDENCE



\* NONE OF THE SYSTEMS REACHED THIS POINT



PROGRAM PLAN

ISSUE: 22

DATE: 10/10/84

TITLE:

Welder Qualification (Mercury) and Filler Material Control (Site Wide)

DESCRIPTION OF ISSUE:

Verify welder qualifications or assure the quality of all welds. Provide engineering justification for the allowance of "rebake" temperatures and holding times that differ from the requirements of the ASME and AWS Codes.

LP&L APPROACH TO RESOLUTION:

The welder documentation is available which demonstrates that the welders were properly qualified.

A review of all site procedures for receiving, storage, issuing and control of welding electrodes was performed. In summary, the response demonstrates that 1) the weld material control program at Waterford meets the intent of both ASME and AWS Code requirements. 2) that the site procedures were designed to avoid the need for rebaking. 3) in the isolated instances where deviations from site procedures occurred, the corrective action was adequate to maintain the moisture content limitations specified by the codes for low hydrogen electrodes. 4) the adequacy of the weld material control program is substantiated by the acceptable results of the NDE examination, when performed, of welds where low hydrogen electrodes were used.

In addition, a review of all Ebasco Nonconformances Reports and Tompkins-Beckwith Discrepancy Notices (DNs) where deviations from weld rod control procedures occurred was performed and additional testing verified the adequacy of corrective action taken.

WORK INSTRUCTIONS AND PROCEDURES EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
Ebasco	1) Review of Procedures governing use of weld rod to demonstrate compliance with ASME and AWS D1.1 Code requirements.	1) Review performed by the Senior Resident Engineer-Mechanical and the Ebasco Welding Engineer.
	2) Review of Ebasco Nonconformance Report and T-B DN's to determine where deviations from control procedures occurred.	2) Same as Item 1
	3) Testing to verify the adequacy of corrective action taken for control procedure deviations.	3) Testing performed by the electrode manufacturer, Alloy Rods Division of Chemtron Corporation.
LP&L	1) Reviewed welder qualification documentation.	1) QA Engineers under the supervisor of a LP&L Construction QA Engineer.
	2) Verified corrective actions on NCRs 7218, 7219, 7724.	2) QA Engineers under the supervision of a LP&L Construction QA Engineer.

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ORGANIZATIONS INVOLVED: (CON'T)

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION/TRAINING REQUIREMENTS</u>
	3) Validation per QASP 19.13 by LP&L QA consisted of but was not limited to the following: <ul style="list-style-type: none"><li>- reviewed various welding procedures</li><li>- reviewed welding qualification records of welders listed in Attachment 1 of the response</li><li>- reviewed in detail NCRs 7218, 7219, 7724 and 7548</li><li>- review approximately 100 Mercury Filler Material Withdrawal Authorizations</li><li>- reviewed ASME Section 2 Part C</li><li>- reviewed AWS D1.1 Part B Paragraph 4.9</li></ul>	3) Validation use performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).

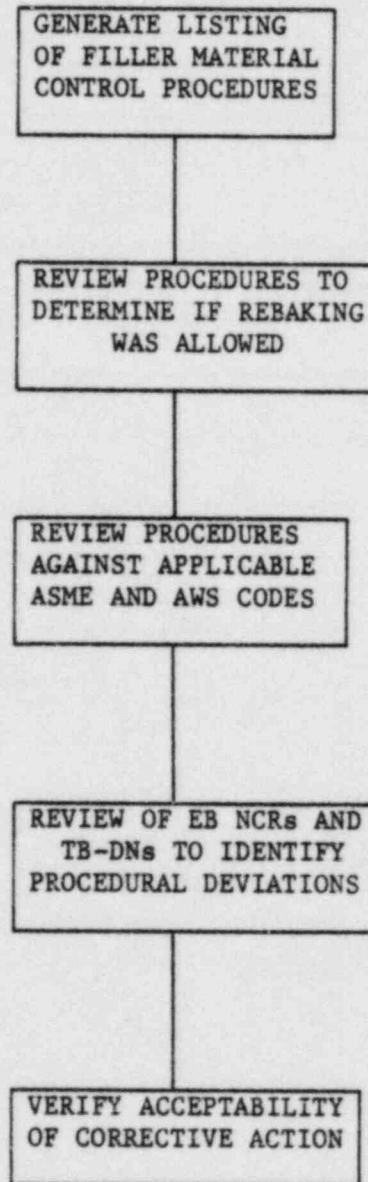
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ATTACHMENTS:

- 1) Process Flow Chart - Review of Filler Material Control Procedures (Site Wide)
  - 2) Process Flow Chart - Welder Qualification Review
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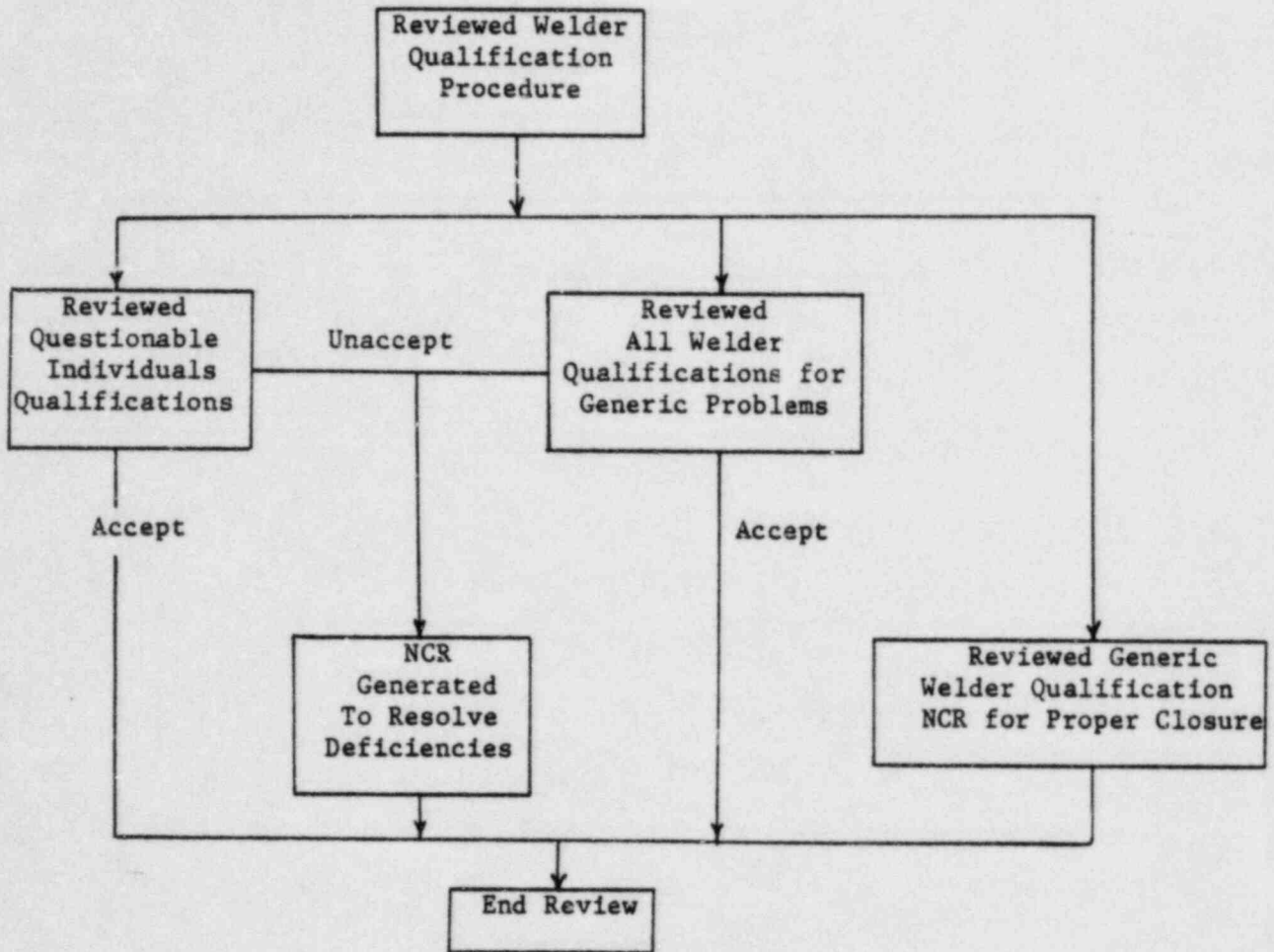
ATTACHMENT 1

PROCESS FLOW CHART  
REVIEW OF FILLER MATERIAL CONTROL PROCEDURES (SITE WIDE)



ATTACHMENT 2

PROCESS FLOW CHART - WELDER QUALIFICATION REVIEW





## PROGRAM PLAN

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ISSUE: 23

DATE: 10/10/84

TITLE: QA Program Breakdown between Ebasco and Mercury

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### DESCRIPTION OF ISSUE:

The NRC Staff review indicated that LP&L, Ebasco and Mercury did not followup on corrective action commitments made to the NRC following NRC enforcement action, that LP&L, Ebasco and Mercury failed to audit the entire QA Programs as required, and that a failure to determine root cause and the lack of corrective action allowed the Mercury problem to persist.

LP&L shall provide an assessment of the overall QA program and determine cause of the breakdown, together with corrective action to prevent recurrence. This overall assessment is necessary to provide assurance that the QA program can function adequately when the plant proceeds into operation.

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### LP&L APPROACH TO RESOLUTION:

First, LP&L is conducting a thorough review of the underlying causes and corrective actions associated with the 1982 NRC enforcement actions and civil penalty to determine the adequacy of follow-up related to corrective action.

Second, LP&L is conducting a thorough review of its QA audit program, which has been in effect since January 1982, as it related to Mercury activities. Attention will be placed on the adequacy of the audit schedule and whether such audits could have identified the Mercury problem earlier.

Third, LP&L is performing an overall assessment of the LP&L QA construction program based on the results of the 23 NRC concerns to identify lessons learned and to determine if any improvements are required to assure adequacy of future operational QA program activities. This response will include lessons learned from the Item 23 review. Overall assessment of the operational QA program will be presented in a separate submittal addressing collective significance of the 23 issues.

This response demonstrates that the extensive management and quality assurance actions taken by LP&L, Ebasco and Mercury subsequent to June 1982, were appropriate; that most of the problems identified were part of the corrective actions on work previously done and are not indicative of continued inferior performance; and that the partial program breakdown did not persist.

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PROCEDURES & INSTRUCTIONS EMPLOYED:

<u>COMPANY</u>	<u>PROCEDURE NUMBER</u>	<u>TITLE</u>
LP&L	QASP 19.13	Response Validation

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ORGANIZATIONS INVOLVED:

<u>ORGANIZATION</u>	<u>FUNCTIONS PERFORMED</u>	<u>PERSONNEL QUALIFICATION TRAINING REQUIREMENTS</u>
LP&L	1) Evaluate data and develop response.	1) Orientation as to task objectives - Ability to communicate verbally and in writing
	2) Response validation will be performed by LP&L QA.	2) Validation was performed under the direct supervision of the LP&L lead auditor who is qualified to ANSI N45.2.23 (1978).
Ebasco	1) Provide historical research and documentation including interviews with Ebasco personnel present on site in 1982-1983.	1) Research performed by the Project Engineer.

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ATTACHMENTS:

1. None