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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

2/28/85

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USNRC

'85 MAR -4 A9:58

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
LOUISIANA POWER AND LIGHT COMPANY)
(Waterford Steam Electric Station,)
Unit 3))

Docket No. 50-382 0 L

NRC STAFF'S FURTHER RESPONSE PURSUANT TO THE
APPEAL BOARD'S ORDER OF FEBRUARY 13, 1985

Pursuant to the Atomic Safety and Licensing Appeal Board's Order of February 13, 1985, the NRC Staff ("Staff") herewith files its further response to "Joint Intervenors' Reply to Applicant and NRC Staff's Responses to Joint Intervenors' Motion to Reopen" ("Reply"), filed on January 28, 1985, with respect to those portions of the Reply which supplement the Joint Intervenors' pending motion to reopen on quality assurance and management integrity issues. ^{1/} For the reasons set forth below and in the affidavits attached hereto, ^{2/} the Staff submits that the Joint Intervenors' Reply -- whether read alone or in conjunction

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- 1/ "Joint Intervenors' Motion to Reopen the Record and to Admit For Litigation Three Contentions Concerning Applicant's Quality Assurance Breakdown and Lack of Character and Competence to Operate the Waterford 3 Steam Electric Plant," dated November 8, 1984.
- 2/ Attached hereto are the supplemental affidavits of Dennis M. Crutchfield, Lawrence C. Shao, and John J. Harrison. Messrs. Shao and Crutchfield were unavailable to execute their affidavits in the presence of a notary public, and their affidavits will be refiled in executed form in the immediate future.

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with their motion to reopen -- does not satisfy the standards governing motions to reopen, in that it fails to demonstrate the existence of a significant unresolved safety issue which might affect the outcome of this proceeding. Accordingly, the Staff recommends that the pending motion to reopen, as presently supplemented, should be denied.

DISCUSSION

In the Staff's initial Answer to the Joint Intervenors' Reply, ^{3/} we stated our view that the Joint Intervenors had failed to establish good cause to permit their reply to be filed. In this regard, we responded to the Joint Intervenors' assertion that "a number of misstatements and misleading statements" had been made in the Staff's response to their motion to reopen, ^{4/} supported in part by the affidavit of Dennis M. Crutchfield. (Staff Answer, at 3-7). Similar charges that the Applicant had made "misstatements and misleading statements" were responded to by the Applicant. ^{5/} The Staff observed that other statements made by the Joint Intervenors did not establish "good cause" to support the filing

^{3/} "NRC Staff's Answer to 'Joint Intervenors' Motion for Leave to File Reply to Applicant and NRC Staff's Responses to Joint Intervenors' Motion to Reopen," dated February 12, 1985 ("Staff Answer").

^{4/} See "NRC Staff's Response to 'Joint Intervenors' Motion to Reopen the Record and to Admit for Litigation Three Contentions . . .'", dated December 21, 1984.

^{5/} See "Applicant's Answer In Opposition to Joint Intervenors' Motion For Leave to File Reply," dated February 1, 1985, at 10-13.

of their Reply, and we recommended that the Reply should be rejected (Staff Answer, at 4 n.4). ^{6/}

Much of the Joint Intervenors' Reply consists of supplemental assertions and arguments in support of their motion to reopen on quality assurance and management integrity issues. In our Answer of February 12, 1985, we noted that the Staff was in the process of reviewing those supplemental statements, and that a Staff response is required in order to assure that the Joint Intervenors' Reply does not lead the Appeal Board to obtain an incorrect understanding of SER Supplements 7 and 9 and to correct the record in other respects. Leave to file this further response was provided by the Appeal Board's Order of February 13, 1985.

The Staff has now completed its review of the Joint Intervenors' Reply, giving particular consideration to the questions of (1) whether the Reply presents any significant new information bearing on the motion

^{6/} The other reasons offered by Joint Intervenors in support of the filing of their Reply were as follows:

- (1) they did not receive SSER 9 until January 11, 1985;
- (2) their counsel was involved in another NRC proceeding until "only recently"; and
- (3) the filing of their Reply will not prejudice any party, in light of the Appeal Board's indication that "it will need several months to complete its consideration" of the pending motion to reopen.

As we noted in our initial Answer, these statements appear to be intended to justify the filing of a supplement to the Joint Intervenors' motion to reopen, and do not explain why they found it necessary to file a "reply" to the Staff and Applicant's responses to their motion to reopen (Staff Answer, at 4 n.4).

to reopen, ^{7/} and (2) whether the Reply has identified any flaws in the Staff's review of allegations pertaining to the Waterford facility, as documented in SER Supplements 7 and 9 (Crutchfield Affidavit, at 1 and 6-8). The attached affidavit of Dennis Crutchfield responds to various general assertions made by the Joint Intervenors, while the affidavits of Lawrence Shao and John Harrison respond to more specific charges made at pages 8 and 9-21 of the Joint Intervenors' Reply, respectively.

Based upon its review of the Joint Intervenors' Reply, the Staff has concluded that it "does not present any significant new information, that it does not identify any flaws in the staff's review of allegations pertaining to the Waterford facility, and that it does not identify any significant unresolved safety issues which would change any conclusions reached in SSER 7 or SSER 9" (Crutchfield Affidavit, at 1). Further, the Staff has found that "the Joint Intervenors' assertions concerning the adequacy and integrity of the Staff's review of Waterford-related allegations and [the Staff's] documentation of that review in SSERs 7

^{7/} Insofar as the Joint Intervenors' Reply supplements the pending motion to reopen on quality assurance and management integrity issues, it should be evaluated in light of the standards governing motions to reopen. Those standards are well defined, and were previously discussed by the Appeal Board in this proceeding, in ALAB-753, 18 NRC 1321, 1324 (1983). In essence, the movants must demonstrate (1) that the motion is timely, (2) that the motion raises a significant unresolved safety or environmental issue, and (3) that a different result might have been reached initially if the material offered in support of the motion had been considered.

and 9 are totally without merit" (Id., at 8). ^{8/} Detailed comments in this regard are provided in the three attached affidavits, and are not reiterated herein.

In sum, the Staff has concluded that the Joint Intervenors' Reply -- whether read alone or in conjunction with the pending motion to reopen -- fails to demonstrate the existence of a significant unresolved safety issue which might affect the outcome of this proceeding. The matters raised by the Reply constitute little more than a series of questions and innuendoes concerning the manner in which the Staff conducted its review of Waterford-related allegations and documented that review process in SER Supplements 7 and 9. The attached affidavits provide additional information which sheds further light on these matters. These affidavits establish that the Waterford-related allegations were properly analyzed

^{8/} To the extent that the Joint Intervenors' Reply relies upon SSER 7 to supplement their pending motion to reopen (Reply, at 6-13), the Joint Intervenors' supplementation is most untimely. SSER 7 was issued in October 1984, one month prior to the filing of the Joint Intervenors' motion to reopen and three months prior to the filing of their Reply. All of the Joint Intervenors' assertions concerning SSER 7, as well as their claims concerning the Staff's purported "predetermination" of the issues, should have been raised long before now, and most properly should have been included in the motion to reopen. The Joint Intervenors assert that their counsel (presumably Ms. Bernabei, one of their four attorneys of record) was involved in another proceeding until "only recently" and that no prejudice will result from the filing of their Reply (see n. 6, supra). These assertions do not establish good cause to justify their untimely discussion of matters related to SSER 7.

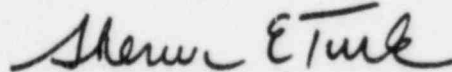
With respect to SSER 9, that document was first made available to the public on January 11, 1985, and the Staff does not assert that the Joint Intervenors are untimely in presenting their assertions as to the adequacy of that document (see Reply, at 14-21).

and reviewed by the Staff, and that the concerns were properly resolved. Neither the Joint Intervenors' lack of in-depth familiarity with these matters, nor their complaints about the manner in which these matters were documented in the Staff's SER Supplements, establishes good cause to support the reopening of the record.

CONCLUSION

For the reasons set forth above and in the attached affidavits, the Staff opposes the motion to reopen on quality assurance and management integrity issues, as that motion has now been supplemented, and recommends that the motion should be denied.

Respectfully submitted,



Sherwin E. Turk
Deputy Assistant Chief
Hearing Counsel

Dated at Bethesda, Maryland
this 28th day of February, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)	
Louisiana Power & light Co.)	Docket No. 50-382
(Waterford Steam Electric)	
Station, Unit 3))	

SUPPLEMENTAL AFFIDAVIT OF DENNIS M. CRUTCHFIELD

1. My name is Dennis M. Crutchfield. I am employed as Assistant Director for Safety Assessment, Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission. A statement of my professional qualifications is attached to my Affidavit filed in this proceeding on August 7, 1984.

2. The purpose of this affidavit is to respond to Joint Intervenors' Reply dated January 25, 1985, to the NRC staff's response to "Joint Intervenors Motion to Reopen the Record and to Admit for Litigation Three Contentions Concerning Applicant's Quality Assurance Breakdown and Lack of Character and Competence to Operate the Waterford 3 Steam Electric Plant."

3. I and members of my staff have reviewed Joint Intervenors' reply and determined that it does not present any significant new information, that it does not identify any flaws in the staff's review of allegations pertaining to the Waterford facility, and that it does not identify any significant unresolved safety issues which would change any conclusions reached in SSER 7 or SSER 9.

4. Included in support of this affidavit are the affidavits of the following NRC Waterford 3 Task Force team leaders, in response to statements made by the Joint Intervenors within their respective areas of responsibility:

J. Harrison	Quality Assurance
L. Shao	Piping/Mechanical

5. Joint Intervenors Reply (pages 2-4), asserts as follows:
"I. The NRC Staff's Response Provides No Independent Analysis Of Joint Intervenors' Motion and Should Be Rejected."

As stated in my affidavit dated December 21, 1984 (at ¶ 3), "Each of the issues has been reviewed by the NRC staff to determine if any significant new issues have been identified which would require additional review by the NRC."

Specifically, each NRC team leader reviewed Joint Intervenors' motion filed November 8, 1984, and independently developed their individual affidavits which were filed as attachments to my affidavit of December 21, 1984. In addition, as noted in ¶ 5 of my prior affidavit, these same individuals also reviewed LP&L's answer to Joint Intervenors' motion and found themselves to be in general agreement with LP&L's answer. If the NRC staff had found significant discrepancies in LP&L's answer, those discrepancies would have been identified.

In addition, contrary to Joint Intervenors' stated belief (Reply at 3), the outcome of the NRC Waterford Task Force was not predetermined, nor was the NRC Staff ordered to find the problems insignificant. At no time during the NRC evaluation of the construction status at Waterford was any pressure exerted by senior NRC management on me to minimize the

NRC Task Force findings at Waterford 3, nor did I ever indicate to my staff that the seriousness of any findings should be minimized. To the contrary, the purpose of the Task Force was to identify and evaluate all safety issues in order that any needed corrective actions could be taken in a timely manner. This was done to the Staff's satisfaction, prior to December 18, 1984 when the NRC Staff issued a low-power license for Waterford 3. Joint Intervenors' comments (Reply at 4) about false statements having been made by LP&L with regard to CAT team inspection findings takes my statement out of context and is in error.

6. Joint Intervenors' Reply (at 5-21) asserts as follows:

"III. SSER 7 and SSER 9 Do Not Provide Reasonable Assurance That the Quality Assurance and Management Integrity Failures During Waterford 3 Construction Have Been Adequately Resolved to Ensure the Safe Construction and Operation of the Plant."

The Joint Intervenors appear to imply that SSER 7 and SSER 9 should stand alone and describe every detail considered in resolving safety issues at Waterford 3. It is impossible to include every item reviewed, every issue considered, or to document in complete detail every justification for every decision made.

The information in SSER 7 and SSER 9 extensively, but not exhaustively, documents the findings of the NRC Waterford 3 Task Force. The basis for determining the significance of a safety issue is the actual inspection or review activity itself. The documentation of this activity describes the findings and conclusions but is not represented as documenting every detail of the review process. These inspections or review activities were reported to NRC supervisors and management

routinely while in progress and at the conclusions of the activities. Therefore, NRC management generally knew what the findings of an activity were before a report on that activity was published. This was the case with SSER 7 and SSER 9.

In Paragraph 2 (page 6), the Joint Intervenors indicate that the staff had predetermined the outcome of its review of the allegations "...prior to much of its now-heralded inspection efforts during the summer and early fall of 1984 and prior to any review or reinspection by LP&L in response to the NRC-defined concerns." The Joint Intervenors fail to recognize that there was a substantial onsite review effort from April 2, 1984 through the end of May 1984. During that period (as noted in SSER 7, pp. 3-4), the staff completed the necessary site work to reach a conclusion on the allegations it had in hand at that time, other than those items for which the staff needed additional information. Additional information for 23 issues was requested in the June 13, 1984 letter from Mr. Eisenhut to Mr. Cain. An SSER write-up was prepared for all of the items listed in SSER 7, except for wrongdoing issues under investigation by OI, OIA issues, and nine remaining allegations listed in SSER 9 as being under review when SSER 7 was issued. The staff's subsequent conclusions relative to the issues listed in the June 13, 1984 letter were reached as a result of our review of LP&L's responses and the Staff's onsite efforts, continuing through the end of 1984. Contrary to Joint Intervenors' assertions, these issues were not closed out before we had reviewed LP&L's responses and corrective actions.

The statement made by Mr. Dircks, cited by the Joint Intervenors at page 7, note 3, was contained in a memorandum dated March 12, 1984,

a copy of which was provided to the Appeal Board and parties as an attachment to a Staff motion on April 11, 1984. The actual statement contained in this memorandum was as follows:

Construction of the Comanche Peak and Waterford facilities is nearing completion. There remain a number of issues that need to be resolved before the staff can make its licensing decisions. The issues remaining for these plants are quite complex and span more than one Office. In order to assure the overall coordination/integration of these issues and to assure issues are resolved on a schedule to satisfy hearing and licensing decision needs, I am directing NRR to manage all necessary NRC actions leading to prompt licensing decisions. . . .

* * *

The first phase of this program will be the identification of issues needed to be resolved for each plant prior to hearing and licensing decisions. Once the issues have been identified a Program Plan for resolution of each item should be developed and implemented. The Program Plan should address the scope of the work needed, the identification of the responsible line organization, and the schedule for completion. In principle, this effort will therefore be similar to the effort undertaken regarding the allegation review on Diablo Canyon except that this effort should encompass all licensing, inspection, hearing, and allegation issues.

Mr. Dirck's memorandum of March 12, 1984, led to the formation of the Waterford Task Force. Contrary to the Joint Intervenors' assertion, this memorandum was written prior to Chairman Palladino's memorandum of April 23, 1984 (Reply at 7 n.3), and clearly establishes that the staff was to review all significant allegations. There was never any directive "to ensure the expeditious licensing of the plant," as is asserted by the Joint Intervenors (Reply, at 7).

Joint Intervenors, in Section III.A (at 7-11) provide examples of how they believe SSER 7 was organized in order to "obfuscate" the NRC staff's findings. In Section III.B (at 11-13), they provide examples

which they contend represent unduly restrictive analyses and staff conclusions which lack a factual basis. Finally, in Section III.C (at 13-21) they attempt to show that SSER 9 provides no assurance that safety problems at Waterford do not persist. The Joint Intervenors have misinterpreted these issues, as described in detail in the attached affidavits of Lawrence C. Shao and John J. Harrison. In addition, the following general comments are provided.

The last paragraph before Item C (page 13) in the Joint Intervenors reply states "...that SSER 7 was intended to disguise the significance of the QA and "character" breakdown at Waterford 3..." The QA team findings on pages 13 and 14 of SSER 7, the Summary on page 15 of SSER 7, many of the allegation writeups such as A-48 on pages 96 through 100, all point to a partial breakdown of the site QA program. SSER 9 also indicates that there was a partial breakdown involving some subcontractors. The Staff has been forthright in describing these matters and did not attempt to "disguise" their significance.

Joint Intervenors (at 14) stated that solutions to problems at Waterford were "negotiated." No such negotiation occurred. In fact, the NRC staff, while reviewing corrective actions, in some cases required additional information and additional actions, beyond those which it initially required, in order to thoroughly evaluate the facts and to ensure the adequacy of corrective actions taken.

7. I and members of my staff have reviewed Exhibits 1-5 attached to Joint Intervenors' reply. Exhibit 1 is a memorandum from Nunzio J. Palladino to the Commissioners on the subject of taking steps to avoid licensing delays. The Joint Intervenors contend that this letter was

part of an effort by the NRC "to ensure the expeditious licensing of the plant" as a predetermined activity. This is not a valid interpretation. My understanding of this memorandum and the referenced direction (JI Reply at 6) from the Executive Director for Operations, is that the NRC Waterford Task Force was formed to identify issues so that decisions could be made with respect to the issuance of a license in a manner that avoided unnecessary regulatory delays. The thrust of the NRC effort has been to focus on potential safety issues in an expeditious manner, not to avoid them. Further discussion of this matter is provided above, at pages 4-5.

Exhibit 2 is a marked up draft of an LP&L Policy Statement. It is neither signed nor dated. Joint Intervenors represent this exhibit as supporting the allegation that construction had control over day-to-day operations of the QA department. However, LP&L's management and QA organization at the approximate time the draft was written were well known to the Staff. LP&L's QA organization was approved by the Staff as providing sufficient independence of the QA function, because the QA organization reported to a senior management position sufficiently high in the LP&L organization to ensure that the QA function would not be compromised.

Exhibits 3, 4, and 5 are offered as examples to support Joint Intervenors' proposition that LP&L did not maintain adequate oversight of procurement activities. Exhibit 3 is an LP&L Response to Violations identified in NRC Inspection Report 50-382/76-08. The NRC reviewed LP&L's corrective action and found it acceptable in December 1976 (NRC Inspection Report 50-382/76-11). Exhibits 4 and 5 are mostly illegible

handwritten notes which cannot be fully evaluated. However, the NRC Waterford Task Force and NRC Region IV are not aware of any significant unresolved problems with LP&L's oversight of procurement activities during construction. This conclusion is based on routine inspections as well as a recent Task Force evaluation of procurement documents in connection with our review of allegations.

8. Based upon the matters set forth herein and in the attached affidavits, I and other members of the Staff are satisfied that SSERs 7 and 9 adequately and properly treat each of the matters referred to in the Joint Intervenors' reply. In our view, the Joint Intervenors' assertions concerning the adequacy and integrity of the staff's review of Waterford-related allegations and our documentation of that review in SSERs 7 and 9 are totally without merit.

Dennis M. Crutchfield

Subscribed and sworn to before me
this day of 1985

Notary Public

My commission expires: _____

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NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
LOUISIANA POWER AND LIGHT COMPANY)
(Waterford Steam Electric Station,)
Unit 3))

Docket No. 50-382

SUPPLEMENTAL AFFIDAVIT OF LAWRENCE C. SHAO

I, Lawrence C. Shao, depose and say:

1. I am the Deputy Director, Division of Engineering Technology, Office of Nuclear Regulatory Research, United States Nuclear Regulatory Commission. My Professional Qualifications are attached to my affidavit filed on December 21, 1984. The instant affidavit is submitted in response to Joint Intervenors' Reply, dated January 25, 1985.

2. I have been the civil/structural and mechanical/piping team leader assigned to the Waterford Task Force from March 1984 to the present. As part of my recent responsibilities in this regard, I have reviewed or supervised the review of certain issues submitted as part of Joint Intervenors' Reply dated January 25, 1985, set forth on page 8 of the Reply. The following constitutes the results of this review.

4. The Joint Intervenors (at 8, lines 8-10) state that "the staff does not indicate whether such a certificate was provided or whether NCR W3-6514 was properly dispositioned."

As previously stated in SSER 7 (at 278), a list was made of the Mercury Co. installed Bergen Patterson supports. Any structural steel installed by Mercury on any of the listed supports was acceptable without heat number traceability, because all the structural steel used with the supports in fact was found to have a Certificate of Compliance verifying that it met ASTM A36 specifications. The staff had previously responded to these concerns in SSER 7 (at 279 as follows: "The NRC staff determined that NCR W3-6514 was properly closed and that the structural steel used on instrument piping supports was properly certified. Accordingly, this issue has neither safety significance nor generic implications" (emphasis added).

5. The second issue discussed in the Joint Intervenors' Reply at 8, lines 11-24, is directly related to the first issue. The statement that traceability was lost on some hanger material related to the fact that Mercury Co. chose to use heat number traceability in addition to the Ebasco certificate of compliance (C of C) requirement. The only 10 CFR 50, Appendix B, and SSER requirement was that the structural steel used on the hangers involved have a C of C furnished by the material supplier. Accordingly, NCR W3-6514 was properly dispositioned upon finding that the structural steel used was "properly certified."

6. I hereby certify that the statements contained herein are true and correct to the best of my knowledge and belief.

Lawrence C. Shao

Subscribed and sworn to before
me this ____ day of _____, 1985

Notary Public

My Commission expires _____

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
Louisiana Power and Light Company)

Docket No. 50-382
(OL)

(Waterford Steam Electric Station
Unit 3))

AFFIDAVIT OF JOHN J. HARRISON, JR., IN RESPONSE
TO JOINT INTERVENORS' REPLY OF JANUARY 25, 1985

I, John J. Harrison, Jr., depose and say:

1. I am the Chief, Engineering Branch, within the Division of Reactor Safety, United States Nuclear Regulatory Commission, Region III. My Professional Qualifications have been previously submitted in this proceeding. This affidavit is submitted in response to Joint Interveners' Reply, dated January 25, 1985.
2. I have been the QA team leader assigned to the Waterford Task Force from March 1984 to the present. From January 30, 1985, to the present, part of my responsibilities have been to review or supervise the review of portions of the Joint Interveners' Reply. My review pertains to issues within the QA Team scope of review responsibilities. My review results are denoted in Enclosure 1 to this Affidavit.
3. I hereby certify that the statements contained herein and in Enclosure 1 hereto are true and correct to the best of my knowledge and belief.

John J. Harrison, Jr.

John J. Harrison, Jr.

Subscribed and sworn before me
this 28th day of February, 1985

Melinda S. McDonald
Notary Public

My Commission Expires: 7/1/86

Enclosure 1

NRC Staff Quality Assurance Team

Evaluation of Joint Intervenors'

Reply Dated January 25, 1985

Introduction

The Joint Intervenors' Reply generally asserts that the Staff's review of Waterford-related allegations, as documented in SSER 7, either failed to evaluate each individual allegation or failed to evaluate the collective significance of the allegations (Reply, at 7, 9, 11). Neither assertion is true.

The Staff has previously stated, "After assessing each allegation on its own merits and for its generic implications, the team grouped the allegations into 37 subject categories." The purpose of the grouping of similar allegations was to provide a basis for a collective review for overall safety significance and generic implications. The allegations were therefore analyzed both individually and collectively, with emphasis on their safety significance and generic implications.

The following NRC Quality Assurance Team comments are provided in response to specific assertions in the Joint Intervenors' (JI) Reply dated January 25, 1985:

JI Page 9, Allegation A-308

The staff reviewed a total of 23 allegations (A-35, 183 a & b, 184, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 213, 216, 217, 218, 219, 223, 230,

308, and 306 j) individually and collectively as they related to QA documentation. All of these allegations pertain to Mercury; some of these allegations also pertain to EBASCO and Tompkins-Beckwith. Each allegation was reviewed individually as the specifics of the allegation varied to differing degrees (contractors, individuals, procedures, and specific identified problems by various allegeders). These allegations were also review collectively as they pertained to QA documentation and overall impact on the quality of Waterford Construction.

The staff did in fact review the procedures of LP&L and various contractors that were utilized at different time frames during the project to ensure the controls they were utilizing were adequate. There is no basis for the intervenors' assertion that the staff's sample size was "clearly too small to support the conclusions" -- nor is it likely that the intervenors are aware of the sample sizes which were taken in reviewing each of the various allegations. The staff sampled the various plant systems that were the subject of the allegations as well as additional systems designated by the team leader. There was no predetermined sample size. The sampling process continued until a sufficient level of confidence was obtained. The sampling approach that was utilized was basically the same as is required by the NRC routine program, except that a much larger sample was taken. The total sample of documentation reviewed included approximately 200 packages pertaining to 2,000 installations and several thousand welds. The review encompassed the documentation of Mercury, Tompkins-Beckwith, EBASCO, and NISCO. Additionally, during the follow-up action on those issues identified

in Mr. Eisenhut's letter which relate to these allegations, several hundred additional packages were reviewed, pertaining to over 1,000 installations and several thousand welds. I and the other staff members who are familiar with these matters are more than satisfied that the sample size was adequate.

The NPC staff was able to conclude that the procedures met the requirements of the codes, standards and regulatory requirements and were found to be acceptable. The results of the staff's review concluded "this allegation has neither safety significance nor adverse generic implications". This conclusion remains valid at this time.

JI Page 9, Allegation A-183

The statement "failed to maintain accurate documentation in its Operational Control Record (OCR) packages" appears to be a partial paraphrasing of the staff's initial characterization of the allegation. After concluding its review, however, the staff subsequently found "neither safety significance nor generic implication"; this conclusion is totally ignored by the Joint Intervenors. The staff's conclusion with respect to this issue remains valid at this time.

JI Page 9, Allegation A-223

The statement "QC packages do not accurately reflect field construction" is also a paraphrasing of the allegation characterization, not the NRC staff conclusion. The staff was able to conclude that although the system was less

than desirable, the records were found to be available, complete, and acceptable. The staff's bottom line conclusion that "This allegation had neither safety significance nor generic implications" was ignored by the intervenors. This conclusion remains valid at this time.

JI Page 9, Allegation A-230

The statement "documents are incomplete and do not match the as-built plant configuration" is a paraphrasing of the allegation characterizations, not the facts. The staff conclusion found "this allegation has neither safety significance nor generic implications." Also, the reference made in allegation A-230 to allegation A-187, for review of as-built drawings (red-lined), concluded that the allegation was accurate. However, "the final as-built drawings reflected the actual condition of installed hardware ... had neither safety significance nor generic implications." These conclusions remain valid at this time.

JI Page 9, Allegation A-97

The statement "corrective action for welds was not documented" does not relate to this allegation. SSER 7 at 117. The allegation pertained to EBASCO reviewers not having access to heat number records, and had nothing to do with welding. The staff was unable to substantiate this allegation, but was able to conclude that it "had neither safety significance nor generic implications." Id. at 118.

Allegation A-197

The staff did identify a problem that did not pertain directly to this allegation. SSER 7 at 188. This issue was resolved on the basis of an engineering evaluation, downgrading 24 installations from N-1 to N-2. The remaining 18 installations were replaced by LP&L. The staff performed reviews and inspections of these actions and found the actions to be acceptable. See SSER 9, at pages 19 through 21.

JI Page 10

The statement that "the staff resolved all these allegations about Mercury merely by reviewing ten Mercury work packages" mischaracterizes the Staff's review of Mercury-related problems. The staff reviewed over one hundred Mercury work packages relating to several thousand welds and over ten start-up systems, in the course of reviewing more than 20 related allegations concerning the Mercury Company. For allegation A-183, in particular, the staff did review only ten work packages. In order to understand the staff's "favorable conclusions", one should look at all the allegations, collectively, pertaining to Mercury Company, and the safety significance of these allegations. The staff's review of Mercury work packages was sufficient for the staff to reach proper conclusions as to allegation A-183, and was not a "limited review" as stated in the intervenors' reply. It should be noted that while allegation A-183 was resolved in SSER 7, some of the 23 issues identified in Mr. Eisenhut's letter of June 13, 1984 as requiring action by LP&L, pertained to Mercury. As to those items, further action was required by LP&L before the issues could be resolved.

With regard to charges related to Tompkins-Beckwith, (T-B), the staff reviewed an extensive number of documentation packages (70 plus) for more than ten start-up systems. This was a large enough sample to provide the Staff with an adequate level of confidence in appraising the actual status of these documents. Collectively, the staff's conclusions pertain to the overall data reviewed, not just allegation A-308, and the comments stated above (at page 5), concerning the importance of the Staff's collective review of Mercury allegations, also apply here. The staff's sample of T-B documents was randomly selected from the Records Vault. The staff's overall conclusion was that the T-B records were well organized, complete, accurate, and well-indexed. The T-B records were among the best organized, best filed, and most easily retrievable records at a number of sites which the staff has reviewed. The SER statement that the "T-B documentation was adequate" is quite correct.

The intervenors' comments concerning documentation reflecting the as-built condition of the plant, and the staff's purported failure to consider this key program element, are misleading and incorrect. The collective review of all allegations pertaining to T-B allowed the staff to reach a proper bottom line conclusion. The as-built drawings were found to be correct, as was the supporting documentation. The Staff considered this element to be a very important part of our review process. We did not find any problems in this area. (See the discussion above and SSER 7, concerning (a) allegation A-308 and 22 other allegations concerning the Staff's documentation review identified in response to A-308, and (b) allegation A-32 related to as-built drawings.) Additionally, other groups within the Task Force, the NRC Construction Assessment Team (CAT), and Region IV staff have walked down numerous

systems at the Waterford plant and were able to conclude that the plant's final as-built condition has met the design.

JI Page 10, Allegation A-35

The statement cited by the Intervenors, "adequate documentation may not be available", was the staff's assessment of the potential implied significance of this allegation, prior to any review of the allegation's merits having been conducted. The quoted phrase does not represent the staff's conclusion.

The intervenors do not consider collectively all of the allegations relating to quality documentation, its accuracy, and related procedures which were reviewed (55 total allegations, 23 of which related to documentation). The following facts pertain to this review. The Staff reviewed all of the allegations which pertained to documentation, as well as all of the other related allegations. These included reviews of procedures, reviews of numerous records for multiple systems, reviews of as-built drawings (including walkdowns), staff inspections, and interviews of key personnel. This review process consisted of much more than "reviewing no more than the document control procedures," as was stated by the intervenors.

Intervenors' quotation at the bottom of page 10, in which the phrase "reviewing objective indications" appears, is a reference to the staff's review of documents for adequacy, detail, completeness, results, traceability, and retrievability. See SSER 7 at 92.

The assertion that "the staff examined only one start-up system" is also incorrect. The staff in fact reviewed quality documentation of the following start-up systems:

<u>SUS</u>	<u>System</u>
36	Component Cooling Water
52a	Reactor Coolant
52b	Pressurizer and Quench Tank
53b	Boric Acid Make up and Chemical Feed
53c	Charging and Letdown
58	Refueling Water
60a	High Pressure Safety Injection
60b	Low Pressure Safety Injection
60c	Safety Injection Tanks
72a	Feedwater
72b	Feedwater Pump and Turbine
73	Emergency Feedwater
76	Main Steam

The staff's efforts were directed at a random selection of a large number of documentation packages from numerous start-up systems, most of which are safety-related. Within those systems the staff's review included packages for ASME Code Class 1, 2 and 3. The staff's efforts were in-depth and comprehensive, and provided a sound basis for the staff's final conclusion. The staff has not "obscured a major documentation control breakdown at

Waterford 3", as is asserted by the intervenors. In fact, except for the documentation issues identified in Mr. Eisenhut's letter, the staff found the quality documentation to be more than adequate. These facts, together with the final corrective actions taken, as documented in SSER 9, resolved all outstanding issues pertaining to Tompkins-Beckwith.

The staff's approach was in no way "restrictive" in evaluating any allegation; in every case each allegation was fully reviewed for safety significance and generic implications, and the staff's conclusions were based on all the facts developed in its review.

The intervenors' comments on allegation A-341 are partially incorrect. It is true that the staff did not contact the allexer. However, the staff did attempt to contact the allexer, and was told by another allexer that this individual did not want to be involved or to talk to the NRC. No specific details pertaining to the allegation could be obtained such as which system or what location was alleged to be involved. At that point, the staff could have simply dismissed the allegation as being "too general"; instead, the staff pursued this allegation by generally examining cable trays throughout the plant for damage and deformation, and by selecting various random cable trays for evidence of damage and deformation. The staff's general observations and specific examination revealed no damage or deformed cable trays. (It is also worthwhile to note that the allegation was very vague, and it is possible that the cable trays in question may not have been safety related or even located within a safety related building.) Without a sound basis to require inspection of additional trays, the "relative percentage" has absolutely no meaning. This allegation was therefore determined by the staff as having "neither safety significance nor generic implications."

The intervenors state that "the Staff's refusal to focus on the heart of the allegations is demonstrated by its treatment of allegation A-306". Allegation A-306u and A-306z (See SSER 7 at 266) related to measuring and test equipment. This allegation was specifically reviewed as a result of interviews with the alleged and exhibits which were provided by the alleged to the staff. The staff's review concentrated on "paperwork," since the contractor had demobilized and was no longer on site. Due to these circumstances, the staff adopted a logical approach, and reviewed the applicable procedures, work packages, and calibration records. A physical review of the temporary pressure test gages would not have provided any meaningful information as to whether the gages were properly calibrated at earlier points in time. The staff concluded that this allegation "had neither safety significance nor generic implication". Id at 266. Other calibration problems of this type were identified by the staff as part of allegation A-33 (SSER 7 at 85-91), and these issues were all satisfactorily resolved as part of Issue 6, SSER 9 at 29-35. Again, this issue was properly reviewed by the staff and a sound conclusion was reached.

¶ Pages 12 and 13

In regard to the statements related to Allegations A-283, A-49, and A-123, the staff reviewed the NCR system and found it to be complex in the initiation and processing of nonconformances and discrepancies. The staff did not discredit the charges made by the alleged, but was unable to substantiate them. Numerous examples of NCRs and NCR numbers were provided to the staff, which supposedly had not been entered into the EBASCO and Mercury NCR systems. In addressing this matter, LP&L reviewed the EBASCO and Mercury files for missing, voided, and administratively closed NCRs.

All NCRs were located, accounted for, entered into the system, properly dispositioned, and closed. See SSER 9, at 59 and 60. The NCR system, together with the staff's evaluation of the allegations, the NRC inspection results, and the as-built configuration of the plant, provided an adequate basis for the staff to conclude that these allegations "had neither safety significance nor generic implications". Any allegations of wrongdoing in this regard, such as harassment and intimidation, would be pursued by the NRC Office of Investigations.

In reviewing allegation A-123, the Staff determined that record reviewers were not prohibited procedurally from "looking in field". However, it is important to note that at the Waterford 3 site, the job responsibility assigned to record reviewers was to "review records". A separate group, the QA Surveillance Group, was designated to perform inspection and verification activities "in the field". For example, if a quality document reviewer identified a missing or questionable heat number, a missing inspection, or some other type of record deficiency which required field verification, the responsibility for field verification was assigned to the EBASCO QA Surveillance Group. If record reviewers "looked in the field", they would have been outside the scope of their job responsibility, for which they may not have been trained, qualified or certified. The staff was unable to establish that the quality of construction was compromised because of this situation. On this basis, the staff concluded it was not necessary for "QA record reviewers to go into the field." SSER 7 at 102. The staff did not ignore the significance of this allegation, but determined that an adequate system was in place and that field inspections by record reviewers were not required.

Intervenors' statement, "It is clear that SSER 7 was intended to disguise the significance of the QA and 'character' breakdown at Waterford 3 rather than provide an honest and searching review of over the 350 allegations" is without merit. The Task Force was comprised of a highly qualified and experienced technical staff; this, together with a sound plan, effective execution of the plan, and knowledge of facts gained in the review process, provided the staff with a sound basis for reaching its conclusions.

Further, the staff did identify 23 issues which required licensee corrective action and proper resolution, indicating that the QA Program was not totally implemented -- that is, the staff identified elements of a partial QA program breakdown, but not a total breakdown. Based on information gained in its review, the staff was able to conclude that the area of breakdown was limited primarily to the EBASCO, Mercury and LP&L organizations. The 23 issues identified in Mr. Eisenhut's letter were reviewed by LP&L sufficiently to determine the depth and extent of the issues, and appropriate corrective actions were identified and implemented to resolve all issues. Numerous levels of review assured adequate identification and resolution, including third party (NUS) review and NRC staff follow-up. See SSER 9 at 85.

JI Pages 14 and 15

Contrary to the intervenors' assertions, LP&L's efforts were not "minimal", but were extensive, comprehensive and provided an acceptable resolution to the concerns. The staff monitored the entire plan, process, procedures, and implementation, including concurrence, approvals and final acceptance. The staff did allow the use of some sampling, where appropriate, in lieu of 100

percent review/reinspection, requiring that a high level of confidence be provided.

The intervenors attempt to compare the problems at Waterford to those at the Midland and Zimmer plants. This is not a valid comparison, in that the problems at those plants encompassed broader areas and extended across the entire project. The NRC staff at those projects concluded, based on the facts, that (a) the extent of the problems and (b) the lack of proper licensee responses to those problems, resulted in the need for a detailed and in-depth 100 percent reinspection program to verify the plant quality. I (J. Harrison) was personally involved in the staff's review of all three of these plants, and based on my knowledge and experience, I can categorically state that there is no comparison in the quality of construction or the extent of the QA program breakdown at Waterford on the one hand, and at Midland or Zimmer on the other. The standards applied by the staff to each of the plants, as to the types and extent of corrective action programs, were based on plant-specific facts and the extent and types of their problems.

The staff required much more from LP&L than "approaches." The Staff required a plan, implementing procedures, and extensive corrective actions including some reinspection, as necessary. Nor did the staff "negotiate" solutions; in some cases, the staff or LP&L identified problems in the implementation of LP&L's plan, and LP&L then revised its plan, making some program changes and taking other corrective actions as necessary. That this would occur was not unexpected by any of the parties. There is no merit in the intervenors' comparison of Zimmer, Midland, Diablo Canyon, and Byron (where program plans were preapproved) with Waterford (where the plan was approved as part

of the staff's overall follow-up action). The important point is that a sound basis existed for approving the plan, and the fact that the plan was not approved in advance had no effect on its quality. The basis for the staff's decision and plan approval was based upon the depth of the problems and the complexity of the issues.

The course of action taken by the Waterford Task Force was to (1) review the allegations, (2) determine what problems existed, (3) evaluate the extent and depth of the problems, (4) determine safety significance and generic implications, (5) assess the adequacy of management controls, (6) identify the unresolved issues to LP&L and, (7) assure that the subsequent corrective action was adequate, complete and comprehensive. The staff also reviewed and concurred in LP&L's plans and procedures, and closely monitored implementation, including corrective actions and any reinspections that were conducted. The quality of the end product was the same as it would have been if the plan had been approved in advance. Revisions to LP&L's "approach" was not undertaken at LP&L's "will", but as necessary to satisfy the NRC staff. The plan was therefore better able to change to suit the staff's needs. It should be noted that the plans at Midland, Zimmer, and Byron also required some revisions, and were not "cast in concrete". LP&L's plan and resolutions, with some revisions, provided a viable methodology to evaluate the extent and depth of the issues, identified the existing problems, identified proper corrective actions, provided for implementation of that action, and provided an adequate basis for acceptance of the overall quality of design, construction and testing for Waterford 3.

Joint Intervenors' assertion that "at this time, the status of QA personnel is unknown," apparently refers to a statement appearing in SSER 9, which indicated that the staff's review "did not complete all the QA personnel" (SSER 9 at 18). When SSER 9 was issued in December 1984, the Staff had, in fact, completed its review of all QC inspectors, whose responsibilities required them to meet applicable ANSI standards. At that time, however, the staff had not completed its review of those QA personnel whose responsibilities did not require them to meet ANSI standards.

Joint Intervenors state that "The NRC Staff has permitted the utility to justify the quality of Waterford 3's construction not through requiring reinspection but through a sample review of documentation and tortured reasoning as to how the work inspected by QA inspectors not meeting ANSI N45.2.6-1973 requirements may be verified as safe." This statement is not accurate for the following reasons.

- a. The NRC staff and LP&L did not rely only on a sample review of documentation. Walk-downs by the NRC staff were performed on various systems, and resulted in the staff concluding that systems were properly installed (as-built) and met the design, and that the quality documentation was correct and adequate.
- b. Reinspection was not required where adequate confidence in the inspected hardware was obtained by alternative methods such as:
 1. The inspector performed no inspections of safety-related hardware.
 2. Hardware was "overinspected" (subjected to additional inspection)

and found acceptable by qualified inspectors in accordance with one or more of the following:

- (a) Independent inspection by LP&L or EBASCO.
 - (b) Independent inspection by the NDE subcontractor (GEO) with acceptable results (magnetic particle, penetrant, and radiographic testing).
 - (c) Independent inspection and acceptance by the Authorized Nuclear Inspector.
3. Hardware had been reinspected previously by qualified inspectors and found acceptable.
 4. Hardware was successfully hydrostatically tested.
 5. Hardware was successfully preoperationally tested.
- c. Reinspection was required by qualified inspectors when it was determined that an inspector was unqualified and information such as described in item (b) above was not available. See SSER 9 at 9 (EBASCO), 13 and 14 (Mercury), and 17 (Waldinger).
- d. The reasons for accepting work inspected by unqualified QC inspectors is further explained in SSER 9, at 2.

JI Page 16, Issue 1

Joint Intervenors state they "know of no separate qualifications required for QC personnel conducting surveillances rather than inspections."

Surveillances are different from inspections. A surveillance merely determines procedural compliance, that is, whether the procedures are being

followed; there are no definitive personnel qualifications/certifications required by Codes or Standards for surveillances. On the other hand, "inspectors" are required to meet ANSI standard N45.2.6. Similarly, ANSI N45.2.10-1973 states that "an inspection is a phase of QC which by means of examination, observation or measurement determines the conformance of materials, supplies, components, parts, appurtenances, systems, processes or structures to predetermined quality requirements." In contrast, a surveillance does not determine conformance (acceptance) of anything and there are no predetermined quality requirements (acceptance criteria). The staff is satisfied that the individuals who performed "surveillances" at the plant were qualified to perform them in accordance with the respective contractors' programs.

Joint Intervenors assert "The staff fails to indicate what percentage of the total population of EBASCO QC inspectors this comprises". The staff did not consider the total number of inspectors who failed to meet the ANSI N45.2.6 requirements as the most important consideration, but rather, focused upon the qualifications of these individuals and their impact on hardware. The key element was that these individuals were identified and corrective action was taken to the satisfaction of the staff. The staff required a 100% verification of professional credentials and the certification of all QA/QC personnel, and required reinspections for unqualified QC inspectors. See Mr. Eisenhut's letter of June 13, 1984, Issue 1. The review was adequately completed and all issues were resolved to the satisfaction of the staff. See SSER 9 at 7-18.

The intervenors further assert that:

"The Staff then states that six unqualified QC inspectors were Level III's but did not perform inspections. Since it is likely that they were in supervisory or administrative roles, their lack of qualification or training may have greater consequences than if they had been merely inspectors. As such, their lack of qualification cannot be ignored, as the Staff does."

The level III individuals in question did perform a supervisory role. However, as noted in SSEP 9, at 16, "they did not approve procedures or certify QC inspectors." The NRC staff did not ignore their lack of qualification. The staff believes that EBASCO misclassified these individuals as Level III (although they were only qualified to Level II and only performed Level II functions), based on an evaluation of their job descriptions. Accordingly, their lack of qualification for Level III had no impact upon the quality of the plant.

The intervenors state that "With respect to four unqualified individuals who worked in the concrete test station, their work was justified on the basis it was simplistic technician-type work." This statement is taken out of context. The cited sentence in the SEP continues, ". . . for which they were qualified", and the paragraph continues, "In addition, the concrete compression testing was acceptable, which is indicative of current performance of the concrete testing and acceptable concrete." No further amplification or explanation of this matter is necessary.

The intervenors state, "In some instances, the NRC Staff required no reinspection of the work of unqualified inspectors but merely looked at the inspection paperwork to sign off on the inspection." Reinspection was required by EBASCO, Waldinger, Mercury and LP&L. The staff reviewed the results of the reinspections and the qualifications of the personnel

performing the inspections, and determined that the reinspections and qualifications were acceptable.

"The paperwork for one unqualified individual's nondestructive examination tests on 15 welds was examined by LP&L and documented and then the NRC Staff merely reviewed LP&L's report." This statement is taken out of context. The following sentences in SSEP 9 state, "In addition, the remaining safety-related welds inspected by this person were reinspected and similarly were found acceptable. The NRC staff reviewed the documentation of this response and the results of the reinspections and found them acceptable." The basis for acceptance sampling of a QA inspector's work has been previously established at other nuclear plants, including the Byron Nuclear Plant. These reinspections were performed by QC inspectors previously determined to be qualified. Therefore, the staff had adequate confidence in the acceptability of the inspection results.

The intervenors assert, "The work of ten other unqualified inspectors was determined sound based on undefined and unexplained limited type of inspection performed and documented OJT and formal training (sic)." The NRC Staff based its acceptance of the inspectors in question on the following information contained in ANSI N45 2.6-1973, Section 3.1. "The education and experience requirements specified for the various levels should not be treated as absolute when other factors provide reasonable assurance that a person can competently perform a particular task. Other factors may be demonstrated capability in a given job through previous performance or satisfactory completion of proficiency testing". The limited type of inspection performed refers to Level I or "data taker" types of roles. In

addition, the staff reviewed the qualification packages for these personnel, which demonstrated that they had adequate training and demonstrated capability to perform these functions. The staff's review revealed that these individuals were in fact qualified to perform the inspections in question.

The intervenors assert, "Although it was determined that 27 Fishbach and Moore QC inspectors were qualified [sic], the NRC required no reinspection of their work. Their work was justified as complementary to the inspections by qualified personnel and by later LP&L startup walkdowns and testing." SSER 9 (at page 12) indicated that 26 of these inspectors were Level I's. Per ANSI N45.2.6-1973, Section 3.2.2, "Level I's cannot determine the validity of test results". Their work was accepted by qualified Level II QC inspectors. Further reinspections by qualified LP&L and EBASCO QC personnel found the hardware acceptable. The other remaining F&M inspector was not a Level II "Lead Inspector"; under the F&M program he was considered the same way as a Level I, so the above resolution applies to this individual as well.

JI Page 17, Issue 1

The intervenors state, "In the case of five inspectors LP&L and the NRC staff largely relied on testing to ensure the adequacy of their work". This statement does not represent all the facts. In addition to the testing, these individuals were found to be adequately trained, which is an acceptable alternative per ANSI N45.2.6. There were also hold point inspections by LP&L, acceptable NDE results, and acceptance by the ANI. The NRC staff concluded that LP&L's justification for accepting these inspectors' work was

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sound, and the staff has properly concluded that the equipment installed and inspected by Gulf will perform satisfactorily in service.

The intervenors further state:

"The NRC staff acknowledged that these unqualified personnel conducted inspections of N2 instrumentation. Yet it found that 100% reinspection of N2 instrumentation was not necessary on the basis that 'the same program controls were utilized to install the N1 systems' and the N1 systems reinspection program found no significant problems."

The N1 installations include tubing, instrumentation and related hardware which perform a safety function required to mitigate the consequences of a design basis accident and allow the operator to safely shutdown the plant. The N2 installations also include tubing, instrumentation, and related hardware required to maintain pressure boundary integrity -- but they do not perform a direct plant safety function. Since the N2 instrumentation is safety-related only with respect to its pressure boundary integrity function, and significant pressure boundary concerns were not identified during the N1 instrumentation reinspection, 100 percent reinspection of the N2 instrumentation was not warranted. In fact, only 12 out of 4800 N1 welds were repaired, in order to meet code requirements and not because of degraded pressure boundary integrity conditions. Further, Significant Construction Deficiency (SCD) No. 57 involved the reinspection of all N1 and N2 instrumentation installed prior to July 1982. This reinspection was accomplished by EBASCO QC inspectors whose qualifications were reviewed and subsequently found acceptable. The N1 inspection results (which found that "no significant hardware problems were detected"), when considered along with the other factors relied upon by the staff, provides a sound basis for accepting the N2 instrumentation installations. See SSER 9 at 13.

The intervenors assert, "As in the case of Gulf Engineering, LP&L and the NRC Staff rely largely on preoperational testing to ensure the quality of N2 instrumentation." This statement is incorrect. SSER 9 (at 13) states, "SCD-57 required all N1 and N2 instrumentation....to be 100% reinspected." The NRC staff reviewed the results of this reinspection and the qualifications of the inspectors involved and found both acceptable. Further, SSER 9 (at 14) notes that "The ANI independently inspected installations and reviewed documentation," and "NUS independently also sampled the system installations and documentation." The NRC staff also reviewed a sample of this documentation, and walked down 19 instrumentation lines as part of the review of A-187, with no adverse findings. See SSER 7, at 183. The percentage of Mercury QC inspectors found unqualified is not important, due to the fact the N-1 instrumentation installations were reinspected 100 percent, and found to be acceptable.

The intervenors assert:

"Finally, the work of unqualified Mercury QC inspectors was justified on the basis that Mercury and EBASCO did a 100 percent review of the documentation for the inspections. But the documentation of Mercury work is notoriously deficient. Therefore, it is clear that a serious review of the documentation of these inspectors would lead to greater doubts about the quality of the work."

SSER 9 at 13, states that "LP&L in dispositioning this problem, utilized an extensive reinspection process....accomplished by qualified LP&L and contract personnel whose certifications were verified [by the NRC] and found to be acceptable." This demonstrates that although the work of these unqualified Mercury inspectors was questionable, the reinspections of their work and the hardware were found acceptable. Further, the documentation was not accepted only on the basis of the Mercury and EBASCO review. The reviews of LP&L, NUS, and the ANI were also considered. In addition, the NRC staff reviewed

the original documentation and that of the reinspection effort and found both acceptable.

The intervenors assert:

"LP&L stated that five NISCO QC inspectors were not qualified. They attempt to verify the quality of these inspectors' work in part by NDE by an independent subcontractor. Since neither the subcontractor nor the time during which this examination was conducted is identified, one cannot determine whether it was in fact completed by qualified individuals."

Reference to the independent NDE subcontractor at Waterford 3 means the GEO NDE for the construction phase. The scope of NISCO's work was the installation of the NSS system; NISCO performed its own inspections, and all inprocess and final welds made by NISCO were then examined by GEO using NDE methods. While two NISCO inspectors were unqualified per ANSI N45.2.6-1973 requirements, the hardware was found to be acceptable based on GEO's NDE inspections; GEO's NDE personnel qualifications were determined to be acceptable, as noted in SSER 9 at 12. The NRC staff sampled the NDE reports and found no problems.

JI Page 18, Issue 1

The intervenors state:

"LP&L found 20 Sline QC inspectors did not meet requirements but again was permitted to justify the quality of work they inspected by the evaluation that these inspections were 'relatively simple' or had previously reviewed by manufacturer representatives or through EBASCO surveillances."

This statement is taken out of context. SSER 9, page 15 states that "...coatings applied by Sline will perform satisfactorily in service

based on the following: Inspections associated with coatings are relatively simple and can be competently performed following minimal training and testing of specification requirements, procedures and use of tools. The Sline QA program was well documented and personnel had received documented OJT and classroom instruction."

The intervenors fail to note that the Sline coating work activities had been previously reviewed by manufacturer representatives or EBASCO. SSER 9, at 15, states that "manufacturer representatives performed visual surveillances of surface prep, application and testing" and "EBASCO performed surveillances of thickness readings." The EBASCO individuals were qualified to perform these surveillances. In addition, 1000 adhesion tests were performed with acceptable results. These successful tests and surveillances show that there is an adequate basis for confidence in the work performed by Sline. See SSER 9 at 15-16.

The intervenors state, "Thirty-eight Tompkins-Beckwith (T-B) QC inspectors were found to be unqualified. LP&L was permitted to justify their work in the piping area by a minimal and undefined (in percentage terms) of reinspection (2600 socket welds) and testing." SSER 9, at 26, states that, "additional assurance was provided by some reinspection; for example, 2600 socket welds were reinspected." The acceptability for the piping was based on ANI observation of work activities, test witnessing and document review; acceptable NDE results by the independent subcontractor, and a further review of T-B work by a separate qualified examiner; and successful hydrostatic and functional tests, and pre-service inspections (NDE). In addition, the documentation for the systems' installation, inspection, and testing were

100% reviewed by T-B and EBASCO with a sample taken by LP&L, including some field verification. All of these factors provided additional assurance as to the adequate quality of T-B installations. The NRC staff sampled the documentation and reinspection results, and performed as-built walkdowns of selected systems. The staff continues to have a high level of confidence that piping installed by T-B will perform satisfactorily in service. See SSEP 9 at 17.

The intervenors state, "In the area of seismic supports and restraints, EBASCO conducted only undefined 'field verification' activities and an undefined and apparently small relative amount of reinspection (4500 safety-related pipe supports and 200 highly-stressed hangers." The field verification, by EBASCO, of Category I supports included support/restraint location and functionality per the requirements of IE Bulletin 79-14. It also included an inspection for completeness of hardware installation. The NRC staff's confidence that the installed hardware will perform satisfactorily in service is based on knowledge and facts gained through a direct inspection effort and review of documentation.

The amount of reinspection may appear to be small but that is because reinspection was only required in cases where there was no other acceptable way to prove the quality of the construction. The reinspection of 4500 safety-related supports by T-B, the inspection of 3500 hangers (not "2500" as claimed by intervenors) by LP&L, and the as-built inspection of 200 highly stressed hangers by EBASCO, appears to have been sufficient. Further, 100% of the hanger documentation was reviewed by T-B and EBASCO and sampled by LP&L, including a field verification of 3% of all installed hardware; and the staff conducted as-built walkdowns of hangers and restraints with no adverse

findings. SSER 9 at 17. Additionally, the NRC CAT team inspected hangers, and the problems which it identified were subsequently corrected and reinspected, and found to be satisfactory.

The intervenors state, "LP&L QA reinspection of 2500 [sic] hangers does not appear to be QC reinspection such as have been required at such plants as Zimmer and Midland." 100% reinspection of the hangers at Waterford was not necessary, and therefore was not required by the staff. This was not the case at Zimmer and Midland, where far more extensive problems were found. The staff continues to have a high level of confidence that the pipe hangers installed by T-B will function satisfactorily in service.

The intervenors state, "In the case of nine unqualified Waldinger QC welding inspectors, LP&L did only a sample reinspection of their welds. No 100% reinspection of these safety-related welds was proposed or required." The reinspection of the unqualified inspectors' work product (inspections) was performed using a sampling approach to achieve an adequate confidence of those individuals' inspection activities. An acceptable confidence level was achieved, and these personnel inspection results were deemed acceptable by LP&L and reviewed and found acceptable by the NRC staff. The basis for this sampling approach and acceptance by the NRC staff was previously established at numerous other nuclear plants, including the Byron Nuclear Plant.

The intervenors state:

"The NRC staff has apparently approved LP&L's response even though the qualifications of QA personnel, at the time of issuance of SSER 9, have not been reviewed or resolved. The staff suggests March 1, 1985, as a target date for completion of this task. Inexplicably the staff states that unqualified QA personnel should have no impact on the quality of Waterford's construction and is a problem which does not need to be resolved prior to full power operation of the facility."

These assertions mischaracterize the staff's statements in SSER 9, page 18. The impact of these QA personnel on the plant is not "inexplicable." QA personnel in this category include managers, supervisors, auditors, records reviewers, clerks, and secretaries. These individuals were not assigned responsibilities, and did not perform any functions, that required them to be qualified under ANSI N45.2.6 -- i.e., certification for them is not required. The requirements for these individuals (other than the auditors) consisted of various amounts of formal training and/or on-the-job training, and some relevant experience commensurate with their job description and responsibilities; the requirements for auditor qualifications are delineated in ANSI N45.2.12, draft 3, revision 4 (LP&L's commitment), and require training, relevant experience, and independence from the area being audited. The staff reviewed the site standard practices (procedures) pertaining to all QA personnel and found them to be acceptable and to meet the LP&L commitments.

As of this date, the staff has completed its review and assessment of the remaining QA personnel qualifications. The staff has found no problems with the individuals' qualifications or LP&L's corrective actions. The staff's review and assessment of this matter will be documented in an Inspection Report and placed in the Public Document Room in the near future.

Subsequent to issuance of Mr. Eisenhut's letter of June 13, 1984, the staff agreed to accept less than a 100 percent detailed review of nonconformance and discrepancy reports, provided that an adequate level of confidence could be reached. The staff's basis for this approach was the use of a sampling plan that would provide a high level of confidence in the review process. Because some problems were encountered during the review process, LP&L then decided to review all NCRs, to identify those with potential problems, and to perform a more in-depth review of the NCRs which it identified as "deficient." Therefore, all NCRs received some type of a review; those identified to have potential problems received a more in-depth review; and those identified to have "more significant" problems received a complete reevaluation, redispotion, and reinspection, as necessary.

The number of EBASCO NCRs reviewed, and the basis for those numbers is described in SSER 9. Id. at 31. SSER 9 indicates the following. All EBASCO NCRs (approximately 7700) were reviewed, to varying degrees. The review process entailed three phases. In Phase I, all of the approximately 7100 NCRs that were closed prior to and during February 1984, were reviewed, and 437 of those were determined to be "potentially deficient." An additional review determined that those NCRs were, in fact, "deficient." Of the 437 deficient NCRs, 122 were initially determined to be "more significant" by LP&L, with additional review being required. Subsequently, an additional two NCRs were added to this review process, bringing the total of "more significant" NCRs to 124. For this latter group of NCRs, a further review was performed, including a total reevaluation, redispotion, and some

reinspection, as required. All 437 "deficient" NCRs, including the 124 "more significant" NCRs, were satisfactorily resolved by appropriate corrective action. During Phase 2, the 53 particular NCRs which had been identified by the staff in SSER 7 as being deficient also received an in-depth review, including reevaluation, redistribution, and some required reinspection. During Phase 3, an additional 532 NCRs, which were closed after February 1984, also received an in-depth review, including reevaluation, redistribution and reinspection as required. Thus, the total number of NCRs receiving an in-depth review was 709, for which all identified deficiencies were satisfactorily corrected. The staff continues to support its previous conclusion that "the procedures were adequate and LP&L had conducted its review sufficiently to give LP&L and the NRC confidence that NCRs were dispositioned correctly, corrective action had been completed and that hardware in the plant was not affected." SSER 9 at 31.

The following is pertinent to the DR issue. The DR system at Waterford was designed for the use of Records Reviewers, to document discrepancies during the quality document review process. The DR was a subtier NCR reporting mechanism; that is, for hardware-impacting issues, the DR was required to be upgraded to an NCR. The NRC staff did approve a sampling plan to review DRs. This plan was developed using a random sampling basis and required a high level of confidence.

The sample size of 460 "QAI 9.2 Form" selected by LP&L was a sufficient size to provide the required high level of confidence. This sample of 460 forms identified 2,029 DRs to be reviewed. The subsequent review identified a total of 33 problems, i.e., less than one percent. The results

of this review provided a more than adequate basis for acceptance of the remaining DRs. Also, all of the problems identified on the DRs were administrative in nature and were resolved with no hardware-impacting issues identified. The staff reviewed the LP&L procedures, implementation, results, findings and required actions. The staff found all of these to be complete and acceptable. The staff included in its review a sample of DRs reviewed by LP&L and also reviewed a sample of DRs not included in the LP&L sample. The staff continues to support its conclusions as to the adequate resolution of this issue, as stated in SSER 9 at 35.

The "audits" performed by LP&L were accomplished as an additional confidence factor to overview the entire process in resolving Issue 6. These audits did not influence the acceptability of the process, but were performed to assure program compliance. The NUS third party effort served the same purpose, thus providing added assurance. The completion and satisfactory resolution of Issue 21 by LP&L, as verified by the staff, also provides an additional level of assurance in resolving Issue 6. See SSER 9 at 77 and 78.

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The intervenors have mischaracterized the acceptable resolution of the welding electrode "rebake" issue. The endorsement or commitments to various codes and standards are an acceptable basis for designing, fabricating, constructing, testing, inspecting and accepting systems and structures at nuclear power plants. The purposes of two key QA program elements, nonconforming materials, parts, or components and corrective action, is to document nonconforming conditions and achieve appropriate corrective action.

These requirements are delineated in 10 CFR 50, Appendix B, Criterion XV and XVI and in the ASME Code, Section III, Subsection NCA 4000 (specifically NCA 4134.15 and 4134.16). Full compliance with all requirements is a program requirement. Variations are identified and resolved via this mechanism. Additionally, the various codes and standards permit modifications of their requirements based on engineering evaluations and testing programs.

The EBASCO welding engineer reported to the staff that EBASCO had evaluated its control system for welding electrodes, although documentation of this evaluation could not be found. Subsequently, this issue was resolved via a testing program and an engineering evaluation. Specifically, in order to assure the adequacy of the electrode controls that were utilized at Waterford, the electrode manufacturer was requested to duplicate the site conditions and practices at Waterford. The test electrodes were E-7018 (low hydrogen), the same as those in question. The site conditions for the average and maximum humidity (moisture is the major concern) and any problems encountered during construction (such as loss of electric power to electrode holding ovens over a long period of time) were recreated to form the basis for the testing program. The electrodes were then redried using the same procedures that were utilized at the site (redrying at a lower temperature for longer periods of time). The electrodes' coatings were then analyzed for moisture content. The test results revealed that the moisture content fell within the specified ranges which originally were required during the electrode manufacturing process. These requirements were established by the ASME and AWS Codes in specifications for electrode manufacturing. The results of these tests were then evaluated by an LP&L metallurgical engineer and were found to

be acceptable. Members of the NRC staff, including a Region III Metallurgical Engineer, reviewed the data and also determined that they were acceptable.

The staff's conclusion "that the redrying process utilized by the licensee provided satisfactory results to assure elimination of moisture absorbed under the conditions of the weld rod control procedures implemented at Waterford 3" was a sound conclusion, based on the evaluation of test results, and was not arrived at "largely on the basis of the electrode manufacturer's word". The staff further concluded, based on its final review, "that these conditions had no safety significance or impact on hardware." SSER 9, at 83. These conclusions remain fully supported by the staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

'85 MAR -4 A9:58

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
LOUISIANA POWER AND LIGHT COMPANY)
(Waterford Steam Electric Station,)
Unit 3))

Docket No. 50-382

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S FURTHER RESPONSE PURSUANT TO THE APPEAL BOARD'S ORDER OF FEBRUARY 13, 1985" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 28th day of February, 1985.

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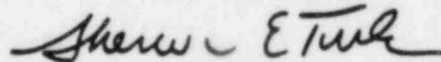
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