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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Appeal Board

In the Matter of	)	
	)	
LOUISIANA POWER & LIGHT COMPANY	)	Docket No. 50-382
	)	
(Waterford Steam Electric Station,	)	
Unit 3)	)	

APPLICANT'S ANSWER TO JOINT INTERVENORS'  
MOTION TO REOPEN CONTENTION

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TABLE OF CONTENTS

	<u>Page</u>
TABLE OF CONTENTS.....	i
TABLE OF AUTHORITIES.....	ii
I. INTRODUCTION.....	1
II. PROCEDURAL HISTORY.....	3
III. JOINT INTERVENORS MUST BEAR A HEAVY BURDEN IN SEEKING TO REOPEN THE RECORD.....	4
IV. JOINT INTERVENORS' MOTION PROVIDES NO NEW INFORMATION WHICH RAISES A SIGNIFICANT SAFETY ISSUE.....	7
V. JOINT INTERVENORS' MOTION RELIES ON UNTIMELY, UNSUPPORTED AND INACCURATE INFORMATION.....	15
VI. THE EVIDENCE REQUIREMENT.....	23
VII. JOINT INTERVENORS HAVE ALSO FAILED TO CARRY ANY OTHER PART OF THEIR BURDEN.....	25
VIII. CONCLUSION.....	28

# TABLE OF AUTHORITIES

Page

## NRC DECISIONS

<u>Duke Power Company</u> (Catawba Nuclear Station, Units 1 and 2), ALAB-359, 4 N.R.C. 619 (1976).....	5
<u>Duke Power Company</u> (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460 (1982).....	18,27
<u>Georgia Power Company</u> (Alvin W. Vogtle Nuclear Plant, Units 1 and 2), ALAB-291, 2 N.R.C. 404 (1975).....	14
<u>Kansas Gas and Electric Company</u> (Wolf Creek Generating Station, Unit No. 1), ALAB-279, 1 N.R.C. 559 (1975).....	27
<u>Kansas Gas and Electric Company</u> (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 N.R.C. 320 (1978).....	5,7,14
<u>Metropolitan Edison Company</u> , (Three Mile Island Nuclear Station, Unit No. 1), LBP-82-34 A, 15 N.R.C. 914 (1982).....	4
<u>Pacific Gas and Electric Company</u> (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-5, 13 N.R.C. 361 (1981).....	6,23
<u>Pacific Gas and Electric Company</u> (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-82-39, 16 N.R.C. 1712 (1982).....	5,6,14,23
<u>Pacific Gas and Electric Company</u> (Diablo Canyon Nuclear Power Plant, Units 1 and 2), Slip Opinion (August 16, 1983).....	27
<u>Public Service Electric and Gas Company</u> (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 N.R.C. 43 (1981).....	8
<u>Vermont Yankee Nuclear Power Corporation</u> (Vermont Yankee Nuclear Power Station), ALAB-138, 6 A.E.C. 520 (1973).....	9,14
<u>Vermont Yankee Nuclear Power Corporation</u> (Vermont Yankee Nuclear Power Station), ALAB-167, 6 A.E.C. 1151 (1973).....	8,15

REGULATIONS

10 C.F.R. § 2.714(a) .....	5,6,25,26,28
10 C.F.R. § 2.714(b) .....	7,26,27,28

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I. INTRODUCTION

Joint Intervenors, by their Motion to Reopen Contention ("Motion") and Memorandum in Support of Motion to Reopen Contention ("Memorandum"), dated July 22, 1983 (filed July 25, 1983), have requested the Appeal Board to reopen the record in this proceeding for further hearings. In their Motion, Joint Intervenors have asked that the record be reopened for further consideration of their Contention 22 dealing with safety-related concrete, a contention which had been summarily dismissed by the Licensing Board nearly two years ago in 1981.

Joint Intervenors' Motion is premised on the appearance of what have been characterized as "hairline cracks" in the concrete floor of the auxiliary building, which is a part of the common foundation mat for the Waterford 3 plant. Their Memorandum consists of little more than an almost word-for-word paraphrasing of a local newspaper article. It is accompanied by no supporting evidence. The Motion fails to meet the Commission's rigorous, well-defined standards for reopening a closed hearing record. Of particular significance is Joint Intervenors' failure to explain, much less establish a showing, why the hairline cracks constitute an issue of any safety significance. For these reasons, as set forth below and in the attached documents,<sup>1/</sup> Louisiana Power and Light Company ("Applicant") respectfully submits that Joint Intervenors' Motion must be denied.

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<sup>1/</sup> Attached in support of Applicant's Answer are the Affidavit of Joseph L. Ehasz, Chief Civil Engineer of Ebasco Services, Inc. ("Ehasz Affidavit") (Attachment 1); the Affidavit of William F. Gundaker, Ebasco's Director of Corrosion Engineering ("Gundaker Affidavit") (Attachment 2); a report by Harstead Engineering Associates, Inc., "Analysis of Cracks and Water Seepage in Foundation Mat," Report No. 8304-1, September 19, 1983 ("Harstead Report") (Attachment 3); NRC Inspection Report No. 50-382/83-18, June 30, 1983 (Attachment 4); Letter from D.L. Aswell, Vice-President LP&L to E. Morris Howard, Director, Region IV, NRC Office of Inspection and Enforcement, August 30, 1977 (Attachment 5); NRC Inspection Report No. 50-382/77-08, September 21, 1977 (Attachment 6); and an article from Gambit, May 28-June 3, 1983 (Attachment 7).



## II. PROCEDURAL HISTORY

Joint Intervenors have been a party to this operating license proceeding since its inception in 1979. Their Contention 22, as admitted by the Licensing Board, read as follows:

22. Applicant has failed to discover, acknowledge, report or remedy defects in safety related concrete construction.

Licensing Board Order, September 12, 1979 at 8. Applicant filed, and the NRC Staff supported, a motion for summary disposition of Contention 22.<sup>2/</sup> Joint Intervenors failed to respond to the motion, and the Licensing Board, by Order of October 20, 1981, granted the motion for summary disposition and dismissed Contention 22.

The evidentiary record before the Licensing Board below was closed after the completion of hearings held on the remaining issues in March, April and May of 1982 and February, 1983. The Licensing Board issued partial initial decisions on November 3, 1982 <sup>3/</sup> and May 26, 1983.<sup>4/</sup> Exceptions to the two

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<sup>2/</sup> Applicant's Motion for Summary Disposition of Joint Intervenors' Contention 22 (Safety-Related Concrete), August 21, 1983; NRC Staff's Answer in Support of Applicant's Motion for Summary Disposition of Joint Intervenors' Contention 22 (Safety-Related Concrete), September 15, 1981.

<sup>3/</sup> Partial Initial Decision (Operating License), LBP-82-100, 16 N.R.C. 1550 (1982), as modified by Memorandum and Order, LBP-82-112, 16 N.R.C. 1901 (1982).

<sup>4/</sup> Partial Initial Decision (Operating License), LBP-83-27, 17 N.R.C. \_\_\_\_\_ (May 26, 1983).

decisions were filed by Joint Intervenors on December 29, 1982, and June 10, 1983, respectively. The Appeal Board affirmed the first partial initial decision on June 29, 1983,<sup>5/</sup> and, by Order of August 17, 1983, dismissed Joint Intervenors' exceptions to the second partial initial decision for failure to brief the exceptions and after Joint Intervenors' failure to respond to a show cause order issued by the Appeal Board on July 27, 1983.

Joint Intervenors' Motion to Reopen Contention, undated, was rejected without prejudice by the Appeal Board on July 18, 1983 for failure to conform to the requirements of the Commission's Rules of Practice. On July 25, 1983, Joint Intervenors refiled their Motion to Reopen Contention, accompanied by a Memorandum in Support of Motion to Reopen Contention, both of which were dated July 22, 1983.

III. JOINT INTERVENORS MUST BEAR A HEAVY  
BURDEN IN SEEKING TO REOPEN THE RECORD

A motion to reopen the record is "an extraordinary action." Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), LBP-82-34 A, 15 N.R.C. 914, 915 (1982). The Appeal Board has held that a party seeking to

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<sup>5/</sup> ALAB-732, 17 N.R.C. \_\_\_\_ (June 29, 1983).



reopen a record has a "difficult burden to bear." Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-359, 4 N.R.C. 619, 620 (1976). If a party could demand a rehearing as a matter of law "because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." Id. at 620-21, (quoting ICC v. Jersey City, 322 U.S. 503, 514 (1944)).

The Commission's demanding requirements for reopening a record are well established. Where a motion to reopen relates to a previously uncontested issue, the moving party must satisfy both the criteria established by case law for reopening, as well as the standards set out in 10 C.F.R. §§ 2.714(a)(1) and (b) for admitting late-filed contentions. Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-82-39, 16 N.R.C. 1712, 1714-15, (1982).

The case law criteria require that the moving party must satisfy each point of a three-part test: the motion must be timely, it must address a significant safety or environmental issue, and it must establish that the Licensing Board would have reached a different result if the material submitted in support of the motion had been considered. Kansas Gas and Electric Company (Wolf Creek Generating Station, Unit No. 1),

ALAB-462, 7 N.R.C. 320, 338 (1978); Pacific Gas and Electric Company, CLI-82-39, 16 N.R.C. at 1715; Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-5, 13 N.R.C. 361, 364 (1981).

Moreover, a motion to reopen must be accompanied by "significant new evidence," and "bare allegations or simple submission of new contentions is not sufficient." Pacific Gas and Electric Company, CLI-81-5, 13 N.R.C. at 362-63.

In addition, the standards in 10 C.F.R. § 2.714(a)(1) for admitting late-filed contentions require consideration of the following factors:<sup>6/</sup>

- (i) Good cause, if any, for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.
- (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.

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<sup>6/</sup> In Pacific Gas and Electric Company, CLI-82-39, 16 N.R.C. at 1714-15, the Commission held that both the case law criteria for reopening the record and the standards in 10 C.F.R. § 2.714 for late filed contentions must be met "[w]here a motion to reopen relates to a previously uncontested issue...." This suggests that the section 2.714 standards for a late filed contention need not be considered if the motion seeks relitigation of a previously litigated contention. Joint Intervenor's have framed their motions as a request to "re-open" Contention 22. However, as will be discussed in Section V, *infra*, Joint Intervenor's' abandonment of and failure to particularize Contention 22 during the proceedings below estops them from claiming immunity from the section 2.714 standards.

(iv) The extent to which the petitioner's interest will be represented by existing parties.

(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

As will be discussed below, Joint Intervenors have failed to meet a single one of the several requirements necessary for them to carry their "difficult burden" in meeting either the case law criteria for reopening the record or the standards in the Commission's regulations for the admission of late-filed contentions. Moreover, Joint Intervenors have failed to meet even the less stringent requirement in 10 C.F.R. § 2.714(b) to set forth a basis for their contentions with reasonable specificity.

IV. JOINT INTERVENORS' MOTION PROVIDES NO NEW INFORMATION WHICH RAISES A SIGNIFICANT SAFETY ISSUE

Joint Intervenors' Motion fails fundamentally in that it does not raise a "significant safety or environmental issue." Kansas Gas and Electric Company, ALAB-462, 7 N.R.C. at 338. The only new information provided is the discovery on May 11, 1983 of what is referred to as "hairline cracks" in the floor of the auxiliary building. Joint Intervenors suggest that these cracks "raise fundamental questions about the integrity of the plant's design and the effect it will have on future

safe operation...." Memorandum at 2. In fact, the hairline cracks have no safety significance, and Joint Intervenors' Motion provides no explanation whatsoever of why the presence of the cracks would raise any safety issue, significant or otherwise.<sup>7/</sup>

Joint Intervenors cannot meet their burden with a bare allegation that a safety issue is involved. This Board requires that a party "advocating the extraordinary step of reopening a hearing must assign some substantial basis for its request that at least must establish that it is raising a significant safety related issue." Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-167, 6 A.E.C. 1151, 1152 (1973) (emphasis supplied). Even when such matters are successfully raised by the party advocating reopening, such reopening need not be granted unless the subject matter at

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<sup>7/</sup> The failure of Joint Intervenors to explain why the existence of hairline cracks constitutes a safety issue makes it difficult to determine, much less address, the allegations and rationale behind Joint Intervenors' Motion. In this respect, Joint Intervenors' Motion violates a standard firmly imposed by the Appeal Board in order to intelligently dispose of issues presented. That standard requires that "intervenors who wish to participate (in NRC proceedings) structure their participation so that it is meaningful, so that it alerts the agency to the intervenors' position and contentions." Public Service Electric and Gas Company (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 N.R.C. 43, 50 (1981) (quoting Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Counsel, Inc., 435 U.S. 519, 553 (1978)).

issue is of such proportion as to constitute "major significance to plant safety." Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-138, 6 A.E.C. 520, 523 (1973)).

Contrary to Joint Intervenors' unsupported allegation of an unspecified safety concern, the attached affidavits of Joseph L. Ehasz and William F. Gundaker establish affirmatively that the cracking on the surface of the Waterford 3 common foundation mat have no safety significance whatsoever. This conclusion is substantiated by the independent analysis of the foundation mat cracking contained in the attached Harstead Report.

At Waterford 3, the reactor building, reactor auxiliary building, fuel handling building, and essential cooling system structures rest on a common foundation mat. FSAR § 3.4.1; Ehasz Affidavit at ¶¶3, 7; Harstead Report at 3, 16. The common foundation mat is a safety-related reinforced concrete slab 270 feet wide, 380 feet long and 12 feet thick. FSAR § 3.8.2.1; Ehasz Affidavit at ¶3; Harstead Report at 3. The foundation mat is reinforced with steel reinforcing bars, FSAR Figure 3.8-46; Ehasz Affidavit at ¶3; Harstead Report at 24-25, and rests directly upon the underlying soils. FSAR § 3.8.5.1 and Figure 2.5-80.



The hairline cracks on the surface of the common foundation mat beneath the auxiliary building are extremely small. NRC Inspection Report 50-382/83-18, dated June 30, 1983 (Attachment 4) notes that "damp spots" were found in the concrete that formed an irregular line. Attachment 4 at 5-6. The report suggested that "one might speculate from the wet spots that a crack existed; however, on close examination, no crack is visible." Id. at 5. The NRC inspector further noted that "[a]lthough moisture seepage was present, no crack was visible" even after Applicant personnel had chipped away part of the concrete surface in an attempt to expose an area of the mat for better visual inspection.<sup>8/</sup> Id. The NRC report stated that Applicant had issued a Nonconformance Report, that the situation had been evaluated, and that the condition was found not to be significant. Id. at 6. No Notice of Violation was issued by the NRC for the occurrence.

A fundamental and elementary principle of structural concrete engineering is that cracking of a load-bearing reinforced concrete structure is not only anticipated, it is necessary for the structure to carry out its design purpose.

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<sup>8/</sup> The cracks are not subject to measurement, even with powerful magnifying instruments. Ehasz Affidavit at ¶4; Harstead Report at 10. The cracks are inferred by the presence of the moisture. Id.



Ehasz Affidavit at ¶3; Harstead Report at 24-28. As load is placed on the foundation mat during construction, the concrete must crack in order for the stress loads on the concrete to be transmitted to the steel reinforcing bars contained within it. Ehasz Affidavit at ¶3; Harstead Report at 24-26. The surface cracking on the foundation mat is well within expectations for a structure of this type and is well within the allowable Code recommended size range for reinforced concrete cracking. Ehasz Affidavit at ¶4; Harstead Report at 38. Thus, even visible cracking, much less the observed dampness, is not indicative of a reduction in the structural integrity of the foundation mat. Ehasz Affidavit at ¶3; Harstead Report at 26-27. In fact, the present cracking pattern at Waterford 3 indicates the conservative nature of the mat design and very low stresses in the mat, Id. at 26-28, and has no adverse impact on the safety of the plant, including the structural integrity of the foundation mat. Ehasz Affidavit at ¶11; Harstead Report at 38, 40.

Similarly, the presence of water at the top of the foundation mat poses no safety concern, and Joint Intervenors have provided no explanation of why it would. Water tightness of the mat is desired to minimize seepage, mainly for the purpose of not overloading the waste water treatment system in the reactor auxiliary building. The amount of seepage water through the microscopic cracks is very small, only enough to moisten

localized mat surfaces, and not sufficient to run over the mat and reach any of the floor drainage systems. Ehasz Affidavit at ¶6. As noted in the NRC Inspection Report "[t]he amount of seepage is very small, usually evaporating immediately, resulting in a damp spot on the concrete." Attachment 1 at 5-6. Therefore, there is no possibility of overloading the water treatment system which will treat water collecting through floor drainage systems, and the design criteria of watertightness of the mat has been met. Ehasz Affidavit at ¶6; Harstead Report at 12.

Applicant has analyzed the potential for corrosion of the steel reinforcing bars ("rebars") embedded within the foundation mat, as well as the steel containment liner, as a result of the possible intrusion of groundwater into the cracks. Metal in contact with concrete is protected from corrosion by a gamma ferric oxide "passivating film" which is formed by cement hydration and is maintained in the alkaline environment of the concrete. Intrusion of the stagnant groundwater into the foundation mat cracks will result in no deleterious corrosive effects because the concentrations of chlorides, free oxygen, or corrosive chemical agents within the mat are far less than that needed to break down the passivation barrier and initiate corrosion, either on the embedded steel or on the steel containment liner. Moreover, the absence of rust stains at the

cracks and the absence of increased ferrous and ferric oxide concentrations in the moisture at the surface cracks indicates that corrosion, if any, is negligible. Gundaker Affidavit at ¶¶3-13.

Harstead Engineering Associates, Inc. was commissioned by Applicant to conduct a comprehensive engineering analysis of the cracking noticed in the common foundation mat, including the earlier cracking discovered in 1977. The Harstead Report concluded that the observed cracks are not cause for concern of the structural integrity of the mat, and that, indeed, the cracking is less than might be expected, Harstead Report at 26, gives indication of a very low stress in the reinforcing steel, Id. at 28, and gives no indication at all of structural distress. Id. at 24. Further, the seepage through the cracks is minor and poses no difficulties. Id. at 27. The cracks are so small that there is no chance of introducing corrosive materials into the mat, and, in any event, corrosive materials are not in the environment within or without the plant. Id. at 19, 27. Examination of the cracks and the seepage water give no indication that corrosion is taking place. Id. at 34, 39.9/

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9/ See generally Harstead Report, Sections 7.0, 8.0, and 10.0 for discussions of the effects of cracking on the structural integrity of the mat and the potential for corrosion. Section 9.0 discusses an analysis of containment stability, and confirms the stability of the containment vessel under postulated earthquake and buoyancy forces.

Joint Intervenors also imply, without support, that the weeping cracks occurring in the common foundation mat will pose a threat to the drinking water of the city of New Orleans. Joint Intervenors ask, "...will not high-level radioactive material be leaking through the cracks as long as Waterford 3 is in operation, and finding its way into the Mississippi River, from which New Orleans derives its drinking water?" Memorandum at 6. Joint Intervenors' musing, unsupported by any evidence, cannot constitute proper grounds for reopening the record. Vermont Yankee Nuclear Power Corporation, ALAB-138, 6 A.E.C. at 523; Pacific Gas and Electric Company, CLI-82-39, 16 N.R.C. at 1714-15. In fact, the question ignores the physical realities of the Waterford 3 site. The common foundation mat is below the natural water table at the site. FSAR §§ 2.4.13.3 and 2.5.4.11; Ehasz Affidavit at ¶6. This results in the water exerting an upward pressure on the bottom of the foundation mat which precludes the possibility of any contaminated water filtering downward to the water table through the mat. See FSAR § 2.5.4.11; Harstead Report at 25.

Joint Intervenors' Motion has thus failed to show how either the presence of hairline cracks or the presence of the moisture constitutes a safety concern, let alone the required showing of a "significant" safety concern. Kansas Gas and Electric Company, ALAB-462, 7 N.R.C. at 338; Georgia Power

Company (Alvin W. Vogtle Nuclear Plant, Units 1 and 2), ALAB-291, 2 N.R.C. 404, 409, 414 (1975); Vermont Yankee Nuclear Power Corp., ALAB-167, 6 A.E.C. 1151, 1152 (1973). Thus, Joint Intervenors have demonstrably failed to meet the most fundamental aspect of their "difficult burden" in seeking to reopen the record and, for this reason alone, the Motion should be denied.

V. JOINT INTERVENORS' MOTION RELIES ON UNTIMELY,  
UNSUPPORTED AND INACCURATE INFORMATION

Joint Intervenors' Motion, on its face, seeks to reopen the record "in the light of newly discovered evidence," which is the discovery of the dampness on the auxiliary building floor last May. Memorandum at 1. Yet the Memorandum relies on the discovery of cracks in 1977 on a different part of the foundation mat, well before the start of this proceeding in 1979, stating that those cracks had been dealt with in the original Contention 22. Memorandum at 1. A discussion of that occurrence and the procedural history of this proceeding will show that this information can provide no support for Joint Intervenors' Motion from either a legal or a technical perspective.

Joint Intervenors have fashioned their Motion as a request to "reopen Contention 22." See also Memorandum at 7. In so



doing, they assert that their "original Contention 22 dealt with the cracks in the slab underlying the reactor that first appeared in 1977." Memorandum at 1. That contention, as we noted earlier, alleged that:

22. Applicant has failed to discover, acknowledge, report, or remedy defects in safety related concreted construction.

When the contention was proffered by Joint Intervenor, their counsel admitted that they had no specific basis for the contention other than a newspaper report quoting anonymous sources, which was subsequently revealed to be without substance and which made no mention of the foundation mat.

Special Prehearing Conference, April 26, 1979, Tr. 102-3; see also Licensing Board Order, October 20, 1981 at 2, 7-8. In initially admitting the contention, the Licensing Board acknowledged the vagueness of the allegations, and suggested that a motion for summary disposition could be filed upon completion of discovery. Licensing Board Order at 8 (September 12, 1979).

Applicant filed a Motion for Summary Disposition of Contention 22 on August 21, 1981, with an accompanying affidavit of the Quality Assurance Manager for the Waterford 3 Project. The affidavit described in detail the stringent quality assurance and quality control procedures, and the construction procedures, that were followed for all safety related concrete at



every stage of the project from the procurement of materials through the placement of the concrete at the plant site. The affidavit clearly established that there were no significant uncorrected defects in any of the safety related concrete at Waterford 3. The NRC Staff supported Applicant's Motion for Summary Disposition by its Answer of September 15, 1981. The Staff's Answer included an affidavit of Joseph Isaac Tapia, an official of the NRC's Office of Inspection and Enforcement, who stated his belief that "there are no outstanding defects of any significance in the Applicant's safety-related concrete construction," and his conclusion that "the Applicant's safety-related concrete construction is satisfactory and provides reasonable assurance that the health and safety of the public will be protected following commencement of operation of the Waterford Unit 3 facility." Affidavit of Joseph Isaac Tapia at ¶7.

Joint Intervenors abandoned Contention 22 by failing to respond either to Applicant's Motion for Summary Disposition or to the NRC Staff's Answer. The Licensing Board granted Applicant's Motion for Summary Disposition and dismissed Contention 22 on October 20, 1981.

No matter how one views it, Joint Intervenors have done themselves a severe disservice by maintaining in their Motion that Contention 22 dealt with the cracks that appeared in 1977.

On the one hand, an examination of Joint Intervenors' statements and filings of record between April 11, 1979, when they submitted their Contention 22, and October 20, 1981, when the contention was dismissed, reveals no mention of the cracks. This unexplained mischaracterization of the record casts serious doubts on the credibility of their Motion, or at the very least raises questions about the substance of the various statements made in support of their Motion. On the other hand, only the Joint Intervenors could know for certain whether Contention 22 was intended to deal with the 1977 cracks. Certainly information regarding the existence -- and the means of repair -- of those cracks was available in the public record at that time.<sup>10/</sup> Since Joint Intervenors were evasive in their responses to interrogatories designed to elicit their bases for Contention 22,<sup>11/</sup> and since they chose not to respond to Applicant's Motion for Summary Disposition, the Appeal Board has little choice but to accept at face value Joint Intervenors'

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<sup>10/</sup> See, e.g., Attachments 4 and 6. Joint Intervenors had an "ironclad obligation to examine publicly available documentary material pertaining to the facility in question with sufficient care to enable (them) to uncover any information that could serve as the foundation for a specific contention." Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460, 468 (1982).

<sup>11/</sup> Joint Intervenors' Answers to NRC Staff Interrogatories at 14, 25 (January 18, 1979) (Interrogatories on Contention 22 are "unanswerable").

admission that their Contention 22 dealt with the 1977 cracks. That issue having been duly and properly resolved on a factual basis by uncontested affidavit, Joint Intervenors' attempt to resurrect an issue which they earlier raised and abandoned would require the existence of extremely important new safety information. It would also require an explanation of why they earlier abandoned the issue and a showing of why they should be allowed to raise it again in light of that abandonment. Joint Intervenors have provided no showing of cause as to why this untimely information should now form the basis for reopening the record; they have not even attempted to explain their previous inaction on Contention 22. Clearly, Joint Intervenors are estopped by their own inactivity from attempting to use the stale information in support of their Motion.

In addition to being untimely, Joint Intervenors' discussion of the 1977 cracks is both incomplete and inaccurate. As discussed below and in Section IV, supra, the Ehasz and Gundaker Affidavits and the Harstead Report demonstrate that the cracking did not then, and does not now, pose an issue of any safety significance.

On July 26, 1977, Applicant discovered moisture seeping from hairline cracks in a section of the foundation mat over which the containment vessel was to be installed. On August 1, Applicant reported the observation to the NRC by telephone as a

potentially significant construction deficiency. Following evaluation, however, Applicant notified the NRC by letter dated August 30, 1977 that the occurrence was not a significant construction deficiency and was therefore not reportable under the provisions of 10 C.F.R. § 50.55(e). Attachment 5. Joint Interveners' allegation that Applicant reported the observation to NRC as a "significant construction deficiency" is incorrect.

In evaluating the occurrence of moisture on the foundation mat in 1977, Applicant's engineers analyzed the potential for ground-water induced corrosion of the rebar and the lower spherical section of the containment liner and the effects on continued construction. As a result of the analyses, the observed cracking was determined not to be a "significant deficiency in construction" as defined in 10 C.F.R. § 50.55(e). Attachment 5. The only corrective action required was to seal the cracks by chipping and filling with epoxy so as to present a dry surface for the subsequent placement of fill concrete over that area of the foundation mat. Attachment 6 at 9. Ehasz Affidavit at ¶5; Harstead Report at 8. The occurrence did not result in a Notice of Violation being issued by NRC.

The Ehasz and Gundaker Affidavits and the Harstead Report address the cracking discovered in both 1977 and 1983. As discussed in Section IV, supra, the cracking is well within anticipated and acceptable limits, and neither the cracking nor

the resultant moisture constitute an issue of any safety significance.

Similarly, the cause alleged by the Joint Intervenors for the old cracks -- unanticipated mat flex resulting from groundwater recharging in 1977, Memorandum at 3-4 -- is information which is both untimely and incorrect, and which is not supported by evidence. Prior to placing the concrete for the foundation mat, the upward heave of the soils at the bottom of the foundation mat excavation was greater than expected, due in part to the manner in which the dewatering system was operated. Harstead Report at 21-22. The soils were resettled during construction in a uniform and controlled fashion according to plan. The degree of mat flexure experienced was neither unexpected nor outside of anticipated and acceptable limits. Settlement of the foundation mat was uniform and, as planned, had stabilized by the end of the major construction period. Since the time equilibrium was reached in early 1979, no further settlement has occurred. Ehasz Affidavit at ¶¶7-10; Harstead Report at 4-5, 22-23.

The cracking was caused by mat flexure, as anticipated, during the construction loadings on the mat, and other expected mechanisms such as drying shrinkage of concrete and thermal gradients. Ehasz Affidavit at ¶¶3, 10; Harstead Report at 24-25. Mat flexure was well within ACI Code recommended



maximum deflection, Ehasz Affidavit at ¶10, and was not caused by "severe differential movements" due to loadings. Harstead Report at 25. Thus, there is no basis for Joint Intervenors' allegation that the 1977 groundwater recharging caused cracking in the foundation mat or for any implication that the recharging had any adverse effect on the structural integrity of the foundation mat.

Nor is there any basis for Joint Intervenors' allegations that "the cracks in the plant's foundation raise fundamental questions about the integrity of the plant's design..." Memorandum at 2. The "floating foundation principal" is not a new concept. Historically, the concept has been applied in the construction of many large structures. Harstead Report at 15. The Harstead Report analyzes in detail both the adequacy of the design concept and the carefully controlled construction procedures used in its implementation at Waterford 3, noting that:

The most significant factor in assessing the adequacy of the design is that the final soil pressure after construction is actually less than the soil pressure which existed prior to the start of construction. The stability and safety that this implies has been demonstrated, in that, the settlement has not changed for the past several years except for changes that would be expected by changes in the water table.

Harstead Report at 11.<sup>12/</sup> The facts that recompression of the

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<sup>12/</sup> See generally Harstead Report, Sections 3.0 - 6.0.



soil heave was accomplished as planned, that the mat settled evenly and uniformly until it stabilized with no further settlement upon completion of construction, and that mat flexure during construction was controlled and within anticipated and acceptable limits bear witness to the success and acceptability of both the design concept and its implementation at Waterford 3.

## VI. THE EVIDENCE REQUIREMENT

The Commission has been specific about its requirement that a motion to reopen a record must be based upon significant new evidence:

We emphasize that bare allegation or simple submission of new contentions is not sufficient. Only significant new evidence requires reopening. Of course, in moving to reopen, a party need not supply written testimony of independent experts, but is free to rely on admissions and statements from applicant and official NRC documents or other documentary evidence.

Pacific Gas and Electric Co., CLI-81-5, 13 N.R.C. at 363.<sup>13/</sup>

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<sup>13/</sup> CLI-81-5 involves guidance on the litigation of "TMI-related issues," which are not the subject of Joint Intervenor's motions. However, CLI-81-5 at 361 states that the above-quoted passage applies to reopening evidentiary records generally. Also, CLI-81-5 is later cited by the Commission in Pacific Gas and Electric Co., CLI-82-39, 16 N.R.C. at 1751, as authority for reopening generally.

Joint Intervenors supported their Motion with no evidence whatsoever, not even a citation to a document of record. No supporting documents accompanied the Motion and Memorandum. All that is provided by Joint Intervenors are vague references to unidentified documents, unsubstantiated hearsay reports of conversations at which Joint Intervenors apparently were not present, and an article from a local weekly newspaper.

An examination of the cited newspaper article (Attachment 7), which appeared in the May 28-June 3, 1983 edition of Gambit, shows that the substance of Joint Intervenors' Memorandum is taken almost word-for-word from that article. It is hardly surprising that the motion was not accompanied by evidentiary support, since Joint Intervenors, in their efforts to reopen the proceeding, have apparently done little more than submit a newspaper article disguised as a supporting memorandum.<sup>14/</sup>

Joint Intervenors have provided nothing that even remotely approaches the Commission's requirement of evidentiary support for a motion to reopen, and for this reason alone, the Motion should be denied. In any event, as discussed in Sections IV and V, infra, and as supported by the Ehasz and Gundaker

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<sup>14/</sup> It is also hardly surprising that a newspaper article does not meet the Commission's well defined requirements for reopening a closed record.

Affidavits, the Harstead Report, and the other attachments hereto, Applicant has made an affirmative showing that the cracks which were discovered both in 1977 and in 1983 do not constitute a safety concern for the Waterford 3 plant.

VII. JOINT INTERVENORS HAVE ALSO FAILED TO  
CARRY ANY OTHER PART OF THEIR BURDEN

Given that Joint Intervenors have failed to establish that their motion raises a "significant safety or environmental issue," timely or otherwise, they obviously cannot meet the third requirement of the three-part test, i.e., a showing that the Licensing Board would have reached a different result. Nor have they addressed such a showing. Since Joint Intervenors must meet all three parts of the test, a discussion of the third requirement at this time would be, at best, academic. Having failed to raise any significant safety issue, it can hardly be argued that the Licensing Board would be likely to reach a different result if the Joint Intervenors' Motion were granted.

Similarly, Joint Intervenors have made no attempt to address the five factors specified in 10 C.F.R. § 2.714(a)(1) which must be taken into consideration for the late filing of a contention. Again, since Joint Intervenors have failed to meet any other requirements for reopening the record, including a

failure to present a significant safety or environmental issue, the Appeal Board need not consider further this aspect of Joint Intervenors' burden. It is of interest to point out, however, that Joint Intervenors have made no showing of good cause for failure to file on time, 10 C.F.R. § 2.714(a)(1)(i), certainly with respect to the untimely 1977 information. Any reopening of the record will certainly delay the proceedings, 10 C.F.R. § 2.714(a)(1)(v), a consequence that would be particularly prejudicial to Applicant and singularly inappropriate in view of the absence of a significant safety issue. By doing no more than rely on an unsubstantiated newspaper article in attempting to reopen the record, there is certainly no indication that Joint Intervenors' participation in litigation of the issue could be reasonably expected to assist in developing a sound record, 10 C.F.R. § 2.714(a)(1)(iii), an expectation that is not enhanced by Joint Intervenors' failure to assist in developing a record for Contention 22 back in 1981. And, finally, there is no indication whatsoever that Joint Intervenors' legitimate interests in the safe operation of the facility will not be or have not been adequately protected and represented, 10 C.F.R. §§ 2.714(a)(1)(ii) and (iv).

In addition to failing to meet the requirements for reopening the record, Joint Intervenors have not even complied with the additional, less stringent requirement of 10 C.F.R.

§ 2.714(b) that they set forth the basis for their contention with reasonable specificity. Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460, 465-468 (1982); Kansas Gas and Electric Company (Wolf Creek Generating Station, Unit No. 1), ALAB-279, 1 N.R.C. 559, 576 (1975) (footnote omitted). Assuming that Joint Intervenors' Motion relates to Contention 22 which alleges, generally, defects in safety related concrete construction, Joint Intervenors have failed to provide any basis or explanation whatsoever to show that the moisture discovered on the floor of the auxiliary building, or the cracking that caused it, in any way constitutes a defect in concrete construction or constitutes a safety concern. In an August 16, 1983 Order in Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), the Appeal Board held that when the standards for reopening the record on a particular issue have been met, the "contentions" requirement of 10 C.F.R. § 2.714(b) would necessarily have been satisfied by the information presented in support of the motion to reopen. Slip op. at 3-4. Joint Intervenors' failure to meet even the less stringent requirement imposed on petitioners who do not seek to reopen a closed hearing, and starkly illustrates the magnitude by which Joint Intervenors have fallen short of carrying their heavy burden.

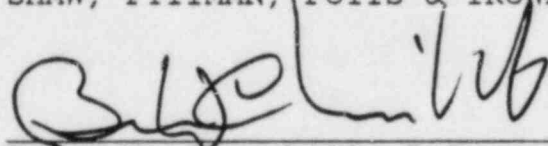


VIII. CONCLUSION

For all of the foregoing reasons, Joint Intervenors' Motion to reopen the record in this proceeding fails to meet the Commission's criteria for reopening, most notably the requirement to advance a "significant safety or environmental issue," fails to provide the requisite evidentiary support, fails to meet the Commission's requirements in 10 C.F.R. § 2.714(a)(1) for late-filed contentions, and even fails to meet the Commission's basis and specificity requirements of 10 C.F.R. § 2.714(b) for contentions which are not late-filed. In contrast, Applicant has provided affirmative evidence demonstrating that the allegations contained in the Motion are unfounded and without safety significance. Accordingly, Applicant submits that Joint Intervenors' Motion should be denied.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



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