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August 24, 1984

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Martin G. Malsch, Esquire Deputy General Counsel U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Dear Mr. Malsch:

This is to provide you with the information you requested of Louisiana Power & Light in your letter to me of August 9, 1984 regarding the work done for LP&L by Gunnar Harstead, a principal of Harstead Engineering Associates, Inc. (HEA).

As more fully stated in the attached Affidavit of Kenneth W. Cook, LP&L engaged HEA on July 11, 1983 to perform independent studies and evaluations with regard to the design and construction adequacy of the Waterford 3 basemat. This was done in the context of the cracking and water seepage which had been discovered in the basemat. Mr. Harstead's work has been to provide LP&L with technical information; he was not engaged as LP&L's agent or attorney to represent LP&L before the NRC.

Also attached is an affidavit of Mr. Harstead which discusses the very limited nature of his work as a consultant to the NRC in connection with a one-week structural audit of Waterford 3 in early 1981. That work was performed under contract to NRC more than two years prior to his work with LP&L.

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SHAW, FITTMAN, POTTS & TROWBRIDGE

Martin G. Malsch, Esquire Page Two August 24, 1984

I have no doubt that this situation in no way violates the Commission's conflict of interest regulations in 10 C.F.R. Part 0, particularly in view of the limited nature and scope of Mr. Harstead's work under contract to NRC in 1981. Moreover, section 0.735-26(e) clearly sets out a special provision allowing the "furnishing [of] scientific or technical information."

I am concerned, however, that the mere raising of the question might somehow be taken to imply a lessening of the impartiality which is attributed to HEA's work or a lessening of the degree to which the NRC staff and t e Appeal Board should be able to rely on HEA's conclusions. Such implications clearly are not warranted. Mr. Harstead was selected by LP&L on the basis of his reputation for integrity and technical competence and the high esteem in which he is held by both industry and government. He and HEA conducted themselves in all respects in accordance with Commission requirements and accepted industry practice, and at no time did they exhibit any but the highest of professional standards in the conduct of their work.

Very truly yours, Bruce W.

Enclosures cc: Service List attached KENNETH W. COOK, being duly sworn according to law, deposes and states as follows:

My name is Kenneth W. Cook. I am Louisiana Power & Light's Nuclear Support and Licensing Manager for the Waterford 3 facility. 1. Harstead Engineering Associates (HEA) has been performing work for LP&L on matters involving Waterford 3 since it was hired on or about July 11, 1983.

2. HEA was hired by LP&L to perform independent studies and evaluations concerning cracking and leakage in the Waterford 3 basemat and to provide LP&L with assessments and conclusions concerning the design adequacy and structural integrity of the basemat. Generally the areas that HEA evaluated were:

- A. The engineering criteria employed in the preparation of the site and in the design and construction of the Waterford 3 basemat.
- B. Laboratory tests performed on water and leachate samples extracted from the surface of the basemat.
- C. Stability calculations performed for the steel containment vessel.
- D. The structural adequacy of the Waterford 3 basemat by comparison of an HEA finite element model to the finite element model of the A/E.

HEA surveyed and mapped the basemat cracks at the -35 foot level of the Fuel Handling Building, Reactor Auxiliary Building, East and West Cooling Tower area and the Containment Annulus area. HEA reviewed documentation generated during the construction of the basemat. HEA reviewed and validated mapping of cracks in vertical walls performed by the A/E and assessed the structural relationship between cracks on surfaces of walls and the basemat. HEA also reviewed various information provided to LP&L by the A/E and provided comments to LP&L. HEA also attended technical meetings on the basemat held with the NRC staff and its contractors, LP&L and the A/E.

3. LP&L used the conclusions reached by HEA on the adequacy of the basemat as part of the technical support for its arguments before the Atomic Safety and Licensing Appeal Board on two motions to reopen the Waterford 3 operating license proceedings. In particular, HEA Reports 8304-1, September 19, 1983, and 8304-2, October 12, 1983, were submitted in support of LP&L's September 30, 1983 response to a July 25, 1983 motion to reopen. HEA Report 8304-3, January 9, 1984, was submitted in support of an LP&L's January 13, 1984 response to a December 12, 1983 motion to reopen.

4. Neither Mr. Harstead nor HEA has performed any work for LP&L other than that described in paragraph 2 above for the Waterford 3 facility.

5. To the best of my knowledge, HIA has made no direct written communication to the NRC staff or its contractors, the Licensing Board or the Appeal Board, nor has HEA had any direct oral communication with the Licensing Board or Appeal Board concerning the Waterford facility on behalf of LP&L. The NRC staff and its contractors have directed questions to HEA via telecon. These questions were a result of the NRC staff or its contractors' review of HEA reports prepared by HEA and provided to the NRC staff by LP&L. The telecon's may have been directly with Mr. Harstead, but are generally believed to have been with engineers on his staff who prepared the reports. There have been several technical meetings on the Waterford 3 basemat with the NRC staff. To the best of my knowledge, Mr. Harstead was present at the following meetings:

- A. Oct. 26, 1983 with the NRC staff in Bethesda to discuss basemat technical issues, including HEA reports 8304-1 and 8304-2.
- B. March 26, 1984 with the NRC staff in Bethesda, at which LP&L made a presentation to NRC management on the current status of the basemat.
- C. March 27, 1984 at the Waterford site, a follow-up to the March 26, 1984 meeting for staff reviewers and some management to observe the basemat cracks.
- D. April 2, 1984 at the Waterford site, which was a plant tour, including the basemat cracks, by NRC staff and management.
- E. July 2, 1984 at the A/E's office with the NRC staff contractors and the A/E to discuss technical information provided to the staff.

In addition, a meeting was held on April 4, 1984 at the A/E offices in New York with the NRC staff and its consultants at which HEA individuals were present but Mr. Harstead was not. This meeting was held to bring the staff consultants up-to-date with the status of work done on the basemat.

Kenneth W. Cook

Subscribed and sworn to before me this day of August, 1984.

My Commission Expires:

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AFFIDAVIT OF GUNNAR HARSTEAD

GUNNAR HARSTEAD, being duly sworn according to law, deposes and states as follows:

My name is Gunnar Harstead. I am President of Harstead Engineering Associates, Inc. (HEA). HEA was founded in 1979 and performs engineering work under contract in both the private and government sectors relating to, among other things, nuclear power plants.

Over the years, I have performed work for the NRC related to various nuclear projects, either under a personal contract to NRR (Contract No. AT-(49-24)=1353) or under contracts between HEA and contractors to NRC involved in the NRC's Integrated Design Inspection Program

My only involvement with Waterford 3 for the NRC was to provide assistance to Mr. Frank Rinaldi of THE NRC/NRR staff for a oneweek structural audit at the offices of Ebasco, the Waterford 3 AE in April 1981. No site visit was made. The work was under my personal contract AT-(49-24)-1353 with NRR, and consisted of 88 hours in March-May, 1981.

The assistance I provided to Mr. Rinaldi, as one of three consultants on the audit, was fairly minor. It consisted, primarily, of gathering information from Ebasco, including asking clarifying questions of Ebasco about its oral presentation during the audit. Ine only written material was the attached set of notes which I provided to Mr. Rinaldi within a week or so of the April 1981 audit. The notes consist almost entirely of a description of the design concepts and methodologies for the Waterford 3 structures, including the basemat, as presented by Ebasco and described in the SAR. While the audit included review of some manual and computer calculations, I myself reviewed no calculations and performed no separate analyses of the basemat.

In July 1983 HEA was retained by LP&L to perform an independent review of the design of the Waterford 3 basemat to assess the significance of cracks and water seepage which had been discovered in the reinforced concrete. HEA performed a detailed, independent review. utilizing voluminous materials (calculation books, computer outputs, drawings, technical papers, etc.) supplied by or at the direction of LP&L. The work included independent analyses, including use of HEA's own finite element model of the basemat.

In contrast, the notes I had prepared more than two years previously were very general. I had no knowledge of basemat cracking at the time and my notes contained no information upon which to make judgments concerning the significance of basemat cracking. The time I spent on the basemat was probably less than ten hours during the audit in 1981, compared to about 2,000 hours by HEA personnel in the recent efforts for LP&L. The information in the notes was not used in the HEA studies for LP&L.

At no time did it occur to me that a conflict of interest might somehow be involved. Since the matter has been raised, I have given it a great deal of reflective thought, and can see no basis for a conflict of interest. I can attest that my work with HEA on the Waterford 3 basemat for LP&L has been totally objective and impartial, and totally unaffected by my previous relationship with NRR in the 1981 audit.

Junnar Harstead

Subscribed and sworn to before me this 23rd day of August, 1984.

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SARGARA A. BECKER, NOTARY PUBLIC READING. BERKS COUNTY COMMISSION EXPIRES JUNE 16, 1986 Nember, Penneylvania Association of Netaries

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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)

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LP&L Service List-ASLAB Page Two

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