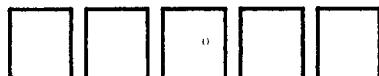


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**H O L T E C**  
INTERNATIONAL

March 11, 1999

The Honorable Dr. Shirley A. Jackson  
Chairman, U.S. Nuclear Regulatory Commission  
White Flint Building  
11555 Rockville Pike  
Rockville, MD20852

Subject: January 22, 1999 Letter from David A. Lochbaum, Union of Concerned Scientists, to Chairman Shirley A. Jackson et al.

Dear Chairman:

I read Mr. Lochbaum's letter dated January 22, 1999 addressed to you and other Commissioners on the matter of his opposition to the proposed wet storage capacity expansion by the Carolina Power & Light Company (CP&L) at its Shearon Harris Plant. Mr. Lochbaum's letter, written on the Union of Concerned Scientists' stationary, misconstrues a fundamental notion of science – probability – to deliver an acerbic attack on the USNRC and CP&L.

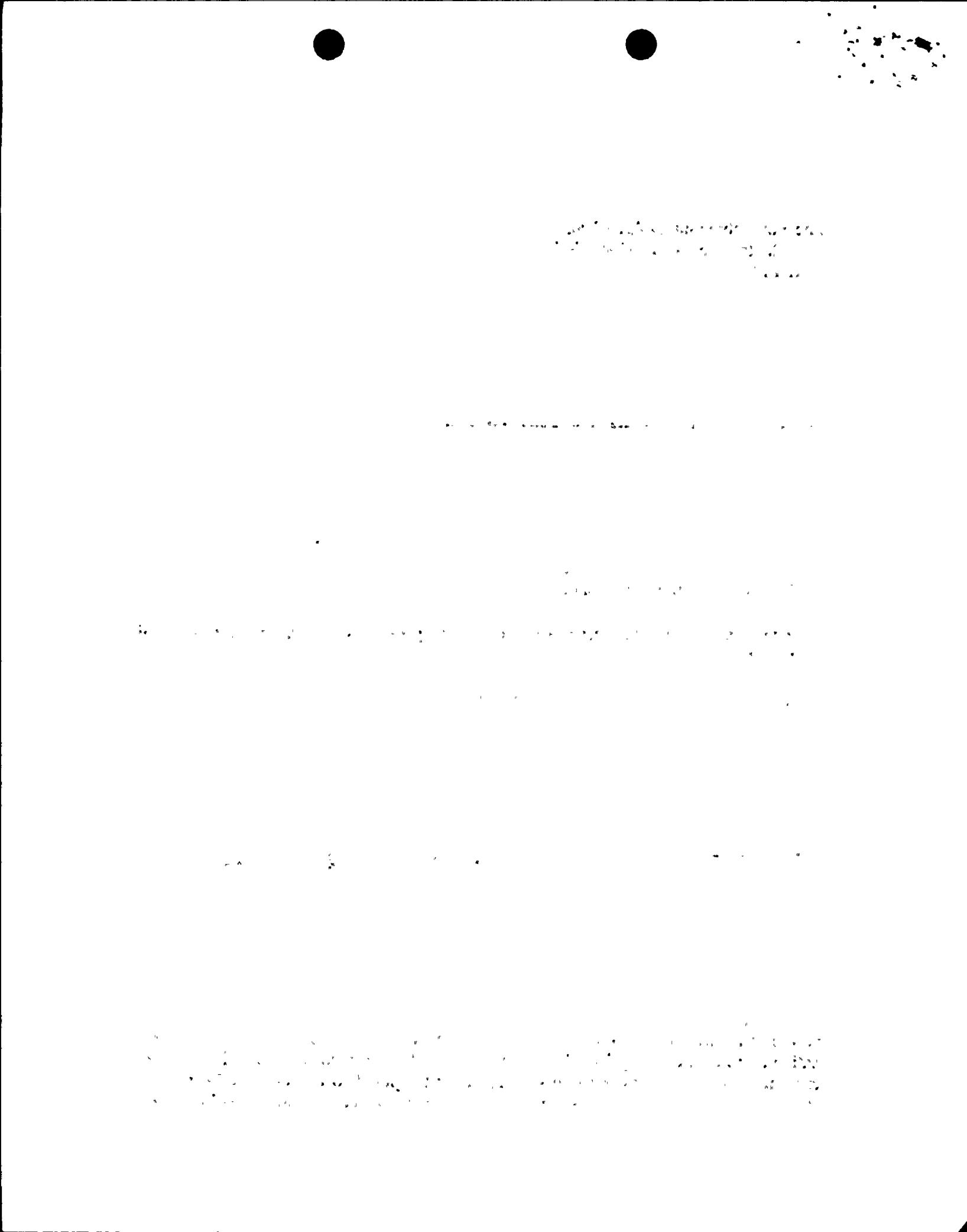
CP&L posited and the USNRC agreed that the *probability* of a fuel handling accident would not be significantly increased upon expansion of the in-pool spent fuel storage capacity if all parameters (equipment, operator experience, procedures, quality assurance, etc.) remained unaltered. CP&L's proposition is founded on the very fundamentals of the notion of statistics. Probability, as defined in the theory of random phenomena, is a dimensionless quantity: The probability function does not change unless the variables attendant to it are altered.

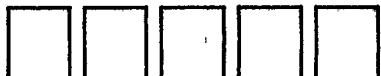
Mr. Lochbaum confuses *probability* with the numerical expectation of a fuel handling event. CP&L and the USNRC understand the axiomatic fact that the potential for a probabilistic event occurring will increase as the number of activities increases. However, two times an infinitesimal quantity is still infinitesimal. A survey of nuclear plants by our company in 1996 had concluded that the probability of a fuel handling accident occurring in a spent fuel pool is less than what we routinely consider as negligible. Our research showed that there have been only approximately thirty spent fuel handling events in commercial spent fuel pools after more than tens of thousands of assembly movements through 1984. There was no breaching of the fuel cladding or releases of radioactive gases or solids, with the exception of a momentary airborne release from an assembly that was struck. It should also be noted that the existing considerations for fuel handling accidents are based upon the 40-year plant license duration, not the number of spent fuel assemblies in the pool or how many times they are handled. Furthermore, if one were to

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postulate an accidental fuel misplacement or even a fuel drop event, the consequences have been demonstrated under the existing design bases of plants to pose no practical threat to the plant personnel or the general public.

As you know, the risk from damaged spent fuel has been shown to be only a small fraction of the risk from core-melt accidents.

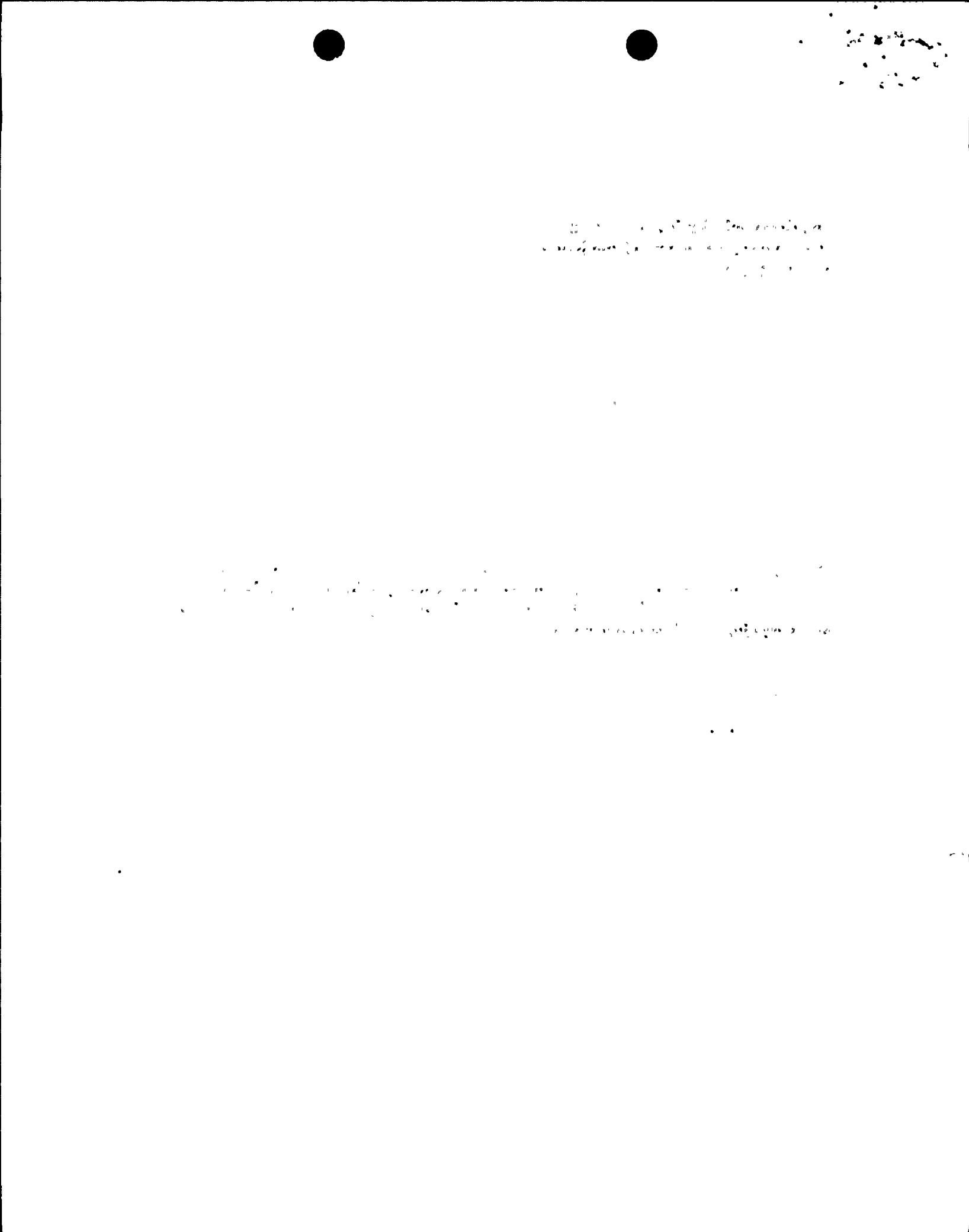
Mr. Lochbaum ought to know that commercial nuclear plants are engineered with multiple layers of safety. The spent fuel pool is one of the most robust and safe means to store radioactive materials devised by man. The historical facts attest to the performance of spent fuel pools. Consider the following facts based on over 9,000 plant-years of worldwide wet storage experience:

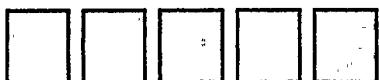
- There has *never* been a case of loss of shielding to the stored fuel in any fuel pool anywhere.
- There has *never* been a nuclear criticality accident in any pool anywhere.
- There has *never* been a significant release of radioactivity to the environment due to malfunction of a fuel pool.

Spent fuel pools, from a purely technical standpoint, are a fortress of safety with huge, some would say, unseemly, large margins against all potential dysfunction scenarios. CP&L's Shearon Harris pool is even more conservatively engineered than most other pools. From a purely technical standpoint, the Harris pool system is a particularly poor target for advancing an intervenor's dogma.

"Concerned scientists" with legitimate concern about matters of nuclear safety would preserve their scientific legitimacy only if they restrain their overzealous colleagues from using bogus science in the service of the anti-nuclear priesthood.

Flimsy arguments and exaggerations do succeed in convening ASLB hearings, but accomplish little of constructive value. Because of the status of my company as the nation's pre-eminent supplier of wet storage technology, I have had the tedious task of explaining, from the expert witness's chair over the past two decades, the bedrock of safety undergirding the in-pool storage technology to intervenors across the nation. I have





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found that the power of logic and rational suasion always triumphs over inflammatory rhetoric and sweeping allegations.

Despite Mr. Lochbaum's disclaimer, legal intervention in the CP&L's project is already reported to have ensued. This intervention is reminiscent of the National Sierra Club's all-out effort against Diablo Canyon in 1987, and a local group's claims against St. Lucie Unit 1 in 1990. The outcome in both cases was foreordained. Indeed, many of the allegations in the Harris intervention are a rehash of those previously debated and resolved in favor of the utilities. However, many of the same issues will be debated all over again for Shearon Harris. The people in the surrounding community, however, will have an opportunity to learn first-hand how exceedingly safe their plant's fuel storage system really is, which is the only salutary result from a protracted contest between the utility and its recalcitrant opposition.

Sincerely,

*K.P. Singh*  
K.P. Singh, Ph.D., PE  
President and CEO  
Holtec International

KPS:nlm

cc (via fax): Mr. Steven Edwards, Carolina Power & Light Company

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CHAIRMAN REC'D