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SUBJECT: Clarifies commitments re macroscopic biological fouling.

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CP&L

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United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
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SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
CLARIFICATION OF COMMITMENTS REGARDING
MACROSCOPIC BIOLOGICAL FOULING

Gentlemen:

Carolina Power & Light Company (CP&L) has made prior commitments regarding actions to be taken in response to macroscopic biological fouling, primarily Corbicula (asiatic clams), at the Harris Nuclear Plant (HNP). The initial commitments were made in CP&L responses to NRC IE Bulletin 81-03 (flow blockage of cooling water to safety components) submitted on July 10, 1981 and March 25, 1983 and were partially reflected in the HNP Environmental Report, Amendment No. 4 (October 1982), and Final Environmental Statement (October 1983). The commitments focused primarily on inspection, sampling, chlorination and flushing of the Service Water and Fire Protection Systems and the potential use of oxygen scavenging chemicals in the intake bays.

On January 26, 1990 CP&L submitted a response to Generic Letter 89-13 (service water system problems affecting safety-related equipment) which also contained commitments related to macroscopic biological fouling. These commitments focused primarily on inspection, sampling, chlorination (or equivalent treatment) and flushing of the Service Water System.

These commitments were made prior to discovering asiatic clams in the intake bays. The original Service Water System gaseous chlorine system has since been replaced by an intermittent chlorination system using sodium hypochlorite. The Fire Protection System is not chlorinated. Furthermore, there are presently no plans to use oxygen scavenging chemicals in the intake bays.

In April 1994 an asiatic clam was collected from the intake bays of both the main and auxiliary reservoir intake structures. In August 1994 approximately 50 asiatic clams were discovered in an Emergency Service Water (ESW) intake traveling screen backwash channel strainer basket. Although additional asiatic clams have been discovered during subsequent inspections in the intake structure bays (both upstream and downstream of the traveling screens), none have been discovered in downstream heat exchangers or piping of the Service Water System. The current practice for controlling macroscopic biological fouling is to perform routine intermittent chlorination of the Service Water System, combined with flushing and other non-chemical techniques (e.g., mechanical cleaning and removal of the clams in the intake bays). Likewise,



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there has been no evidence of asiatic clams in the Fire Protection System during flushing and inspection evolutions; therefore, chlorination of this system has not been necessary.

Therefore, CP&L desires to clarify/revise the previous commitments related to macrobiological fouling to reflect our current practices as discussed above:

> Plant Program document PLP-620, Service Water Program (Generic Letter 89-13), is the controlling document for Service Water macrobiological fouling. This program presently contains requirements for intake structure inspection, ESW component inspection, periodic flushing of infrequently used loops, and layup of ESW cooling loops. Aside from the present practice of routine intermittent chlorination of the Normal Service Water and Circulating Water Systems, there is no plan to separately chlorinate the intake bays or redundant/stagnant loops of the ESW System.
>
> With respect to the Fire Protection System, several of the above elements are already being accomplished even though they are not programmatically linked to a macrobiological fouling program. In order to enhance our efforts, a program will be established which consolidates intake bay inspection and/or cleaning (similar to the Service Water bays), as well as periodic flushing, sampling, and inspection as part of the maintenance of the Fire Protection System. As stated above, there is presently no plan to separately chlorinate the Fire Protection intake bays or system.

Based upon inspection results and future industry experience, additional actions will be initiated as necessary to minimize the adverse impact of macrobiological fouling on Service Water and Fire Protection Systems. These actions may include chemical and/or non-chemical (e.g., mechanical cleaning) methods consistent with treatment effectiveness, environmental impact, and other pertinent factors. The above commitments will allow CP&L to utilize the latest technological advances and industry developments while maintaining compliance with NRC requirements in the control and treatment of macrobiological fouling.

These commitments are intended to supersede any prior commitments related to the control of macroscopic biofouling species.

Questions regarding this matter may be referred to Mr. T. D. Walt at (919) 362-2711.

Sincerely,

RWP/rwp

c: Mr. J. B. Brady
Mr. S. D. Ebneter
Mr. N. B. Le