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March 17, 1983

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Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Re: RII:JPO
Catawba Nuclear Station
Docket Nos. 50-413 and 50-414

Dear Mr. O'Reilly:

In response to Mr. Edward L. Jordan's December 10, 1982 letter which requested additional information regarding IE Bulletin 81-03, flow blockage of cooling water to safety components by Corbicula sp. (Asiatic clam) and Mytilus sp. (Mussel), please find attached the requested information.

Very truly yours,



Hal B. Tucker

RWO/php
Attachment

cc: Mr. P. K. Van Doorn
NRC Resident Inspector
Catawba Nuclear Station

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Duke Power Company
Catawba Nuclear Station

Item 1:

- (4a.) Clams are a potential problem in the Nuclear Service Water System (RN), the Fire Protection Systems (RF and RY) and the Conventional Low Pressure Service Water (RL). Of these systems only the Nuclear Service Water (RN) and the Fire Protection (RF and RY) have any safety related implications or functions.

The potential for intrusion of clams into the nuclear service water and main fire pumps during low water level in Lake Wylie is no worse than during normal water level. Full pond is approximately 21 feet above the pump suctions and even at maximum lake drawdown a minimum of 11 feet of water remains above the pump suctions. In addition, a 2½ foot clearance exists between the floor of the intake structure and the pump suction. Therefore, a sufficient volume of water is provided during low lake level to preclude a significant increase in the velocity of inlet water to the pump suctions.

- (4b.) The Nuclear Service Water (RN) System is currently in the process of construction turnover to the Nuclear Production Department. Following this transfer of responsibilities, the RN system will be functionally tested to verify the capability to supply required cooling flows in accordance with the plant safety analysis. Subsequently, two heat exchangers in the RN system will be monitored on a quarterly basis by setting a reproducible flow through the heat exchanger and recording the inlet and outlet pressures. The differential pressure will be checked to determine if significant fouling has occurred. The heat exchangers to be monitored are a Containment Spray Heat Exchanger (18" piping) and an Auxiliary Shutdown Panel Area Air Conditioning Unit heat exchanger (2" piping). If significant fouling is noted, other RN supplied components will be checked as necessary.

Item 2:

Since the previous response to this Bulletin was provided in July of 1981, the following systems have been inspected and/or tested:

1. 8/82 - 2/83: Inspections of chiller package condenser raw water sides have revealed one case of slight Corbicula infestation. Build-up was limited to water box cover and was discovered during normally scheduled preventative maintenance.
2. Random inspection of strainer baskets in the Fire Protection System was conducted in September of 1982. No evidence of Corbicula was found.
3. In October of 1982 during a test of the "1A" Electrical Side Transformers Mulsifyre, two nozzles on the 1A Main Transformer did not spray properly. Investigation revealed that one of the nozzles was clogged up with dirt and the other with a clam shell approximately the size of a dime.

The source of water for all of these systems is Lake Wylie.

Item 3.a:

The Standby Nuclear Service Water pond was sampled in 1982 and Corbicula infestation was confirmed in a preliminary report. A final report will be made available in June 1983.

Item 3.d:

See response to Item 2.

Item 3.e:

The corrective action taken in each case where Corbicula were discovered was to mechanically clean the affected component. Future corrective action will remain the same unless additional steps are required to maintain system effectiveness. Such actions could include piping modifications to remove or access blockage points, or more comprehensive maintenance procedures to disassemble and clean components.

Preventative actions now being taken consist of Preventative Maintenance inspection of system components and back flushing of Raw Water System Piping. The frequency of these inspections and back flushes is now determined by what is discovered when components are examined. System performance monitoring will also be used to determine frequency of preventative maintenance once the plant is operational. An additional preventative measure to be considered if Corbicula infestation proves to be a problem is possible application of a biocide to the raw water systems.