

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242
JUL 13 AM 1:50WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

July 8, 1981

TELEPHONE: AREA 704
373-4083

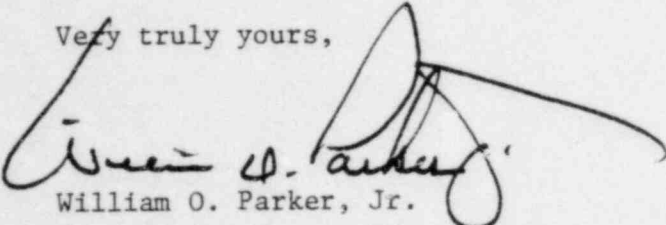
Mr. James P. O'Reilly, Director
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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

Dear Mr. O'Reilly:

Please find attached a response to IE Bulletin 81-03 for the Catawba Nuclear Station.

Very truly yours,


William O. Parker, Jr.RWO/php
Attachment

cc: Director
Office of Inspection and Enforcement
Washington, D. C. 20555

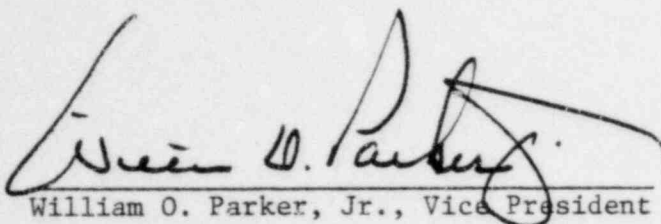
Mr. P. K. VanDoorn
NRC - Resident Inspector
Catawba Nuclear Station

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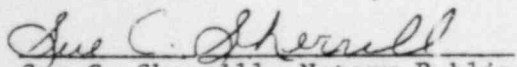
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Mr. James P. O'Reilly, Director
July 8, 1981
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WILLIAM O. PARKER, JR., being duly sworn, states that he is Vice President of Duke Power Company, that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this response to IE Bulletin 81-03 and that all statements and matters set forth therein are true and correct to the best of his knowledge.


William O. Parker, Jr., Vice President

Subscribed and sworn to before me this 8th day of July, 1981


Sue C. Sherrill, Notary Public
Notarial Seal

My Commission Expires:

September 20, 1984

Duke Power Company

Catawba Nuclear Station

Response to IE Bulletin 81-03

July 8, 1981

Introduction

Duke Power Company has more than 10 years experience dealing with fouling caused by Asiatic clams at its generating facilities. The Asiatic clam has been present in the Duke service area since the mid 1960s. It became a nuisance at one of the fossil fueled plants in 1970 and a program of remedial actions was initiated to minimize the effects of the clams. As the clams extended their range throughout the Duke system, an ad hoc committee was officially formed in 1978 to deal with clam related problems at all Duke generating facilities. This committee is reviewing each plant to determine, in general, how best to protect raw water systems from fouling by clams. If the clams become a nuisance at a plant, then specific changes involving piping modification, maintenance procedures, and/or biocide application are developed on a case by case basis. All of Duke's nuclear plants will be reviewed by the committee and the status of clam infestation will be carefully monitored at each plant. At Catawba, clams are a potential problem in the Nuclear Service Water System (RN), the Fire Protection Systems (RF & RY) and the Conventional Low Pressure Service Water System (RL). Of these three systems only the Nuclear Service Water System (RN) and the Fire Protection Systems (RF and RY) have safety related implications or functions.

Asiatic clam control methods

Of the methods available to control Asiatic clams, preventing mature clams from being pumped into the system, backflushing to remove clams that grow in the piping, and chlorinating closed systems appears to be effective.

The Catawba Nuclear Service Water System (RN) as described in FSAR Section 9.2.1.6 includes provisions to prevent the introduction of clams into the system from the lake via the RN intake structure by filtering the water discharged from each RN pump through a strainer with 1/32 inch openings. Provisions have also been made to allow backflushing the redundant heat exchanger trains and piping to remove any clams in the safety related RN components and piping. Sufficient flow elements have been provided in the RN System to allow verification of adequate RN flow to safety related heat exchangers during performance monitoring programs.

The Catawba Fire Protection Systems (RF and RY) are described in FSAR Section 9.5.1. Normal makeup to the fire protection systems are through two 25 GPM jockey pumps which pump chlorinated filter water (drinking water quality) to maintain pressure in the system. A larger 200 GPM jockey pump can also supply chlorinated filtered water or as an option, lake water from the Conventional Low Pressure Service Water System (RL) discharge header. The main fire pumps

on the RL intake structure are equipped with basket strainers on the pump suction which prevent mature clams from being pumped into the system. Periodic operational testing of the main fire pumps will detect any blockage of the pump suction screens and verify acceptable pump performance. The exterior fire hydrants, the main fire protection headers, and the transformer deluge systems will also be periodically flow tested. Fire protection strainers on deluge and sprinkler systems will be visually checked for clams during periodic maintenance.

Environmental monitoring programs and visual examinations of affected systems

The presence of Asiatic clams in Lake Wylie has been confirmed by previous sampling programs and the Catawba standby nuclear service water pond is scheduled to be sampled in the fall of 1981.

Recently the Nuclear Service Water (RN), the Fire Protection (RF & RY), and the Conventional Low Pressure Service Water (RL) Systems at Catawba were inspected for clams. No clams were found in the RN System, one small $\frac{1}{2}$ inch clam was found in the RL supply header, and three small $\frac{1}{4}$ inch clams were found in the RF System. Some small clam shells and shell fragments were previously found in some of the RF deluge nozzles during an inservice test. The Fire Protection Systems (RF and RY) at Catawba are still on temporary Construction lake water supplies which are not chlorinated.

Conclusion

As discussed, provisions have been designed into the station to minimize the introduction of clams into the raw water systems and to aid in removing them if they do get into the piping and components. Performance monitoring programs to verify adequate flow, and visual inspection of the intake piping and inlet heat exchanger heads during maintenance will provide early detection of any clam infestation of raw water systems. If these monitoring or inspection programs indicate any potential problems, appropriate corrective action will be taken.