

Docket No. 50-346

License No. NPF-3

Serial No. 1-202

May 22, 1981



RICHARD P. CROUSE
Vice President
Nuclear
(419) 259-5621

Mr. James G. Keppler, Regional Director
Region III
United States Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

IE Bulletin No. 81-03, dated April 10, 1981, (Log No. 1-493), requested that we investigate the possibility that the Asiatic Clam, Corbicula, might be found in the source or receiving waters of the Davis-Besse Nuclear Power Station, Unit I, and, if found, what measures would be taken to minimize flow blockage to nuclear safety related equipment.

Attached is Toledo Edison's response to IE Bulletin No. 81-03. The response items are numbered consistently with those in the Bulletin.

Very truly yours,

R. P. Crouse / JWC

RPC:JSW:nlf

encl.

cc: DB-I, NRC Resident Inspector

Director, Office of Inspection
and Enforcement, United States
Nuclear Regulatory Commission
Washington, D. C. 20555



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ATTACHMENT

Item 1

"Determine whether Corbicula or Mytilis is present in the vicinity of the station in either the source or receiving water body".

Response

Mytilis is a salt water clam, and Lake Erie does not provide a suitable habitat for its existence. Therefore, this clam is not an actual nor a potential problem at Davis-Besse.

However, Corbicula is a fresh water clam that has recently been found in Lake Erie - the source and receiving water for Davis-Besse. Late last fall and again this spring, on May 14, 1981, field investigators from Detroit Edison discovered substantial numbers of Corbicula at the mouth of the overflow canal at the coal-fired Monroe Power Plant, located on the western shore of Lake Erie. The density of clams was about 15 individuals per square foot.

Item 2

"...Determine whether fire protection or safety related systems that directly circulate water from the station source or receiving water body are fouled by clams or...debris consisting of their shells. An acceptable method of confirming the absence of organisms or shell debris consists of opening and visually examining a representative sample of components in potentially affected safety systems and a sample of locations in potentially affected fire protection systems. The sample shall have included a distribution of components with supply and return piping of various diameters which exist in potentially affected systems. This inspection shall have been conducted since the last clam...spawning season or within the nine month period preceding the date of this bulletin."

Response

Within the past six months, routine maintenance was performed on all raw water systems and no clams or shell debris were found in the piping. In addition, the condenser and circulating water canal were inspected last summer and no evidence of clams was seen in either location. On May 13, 1981, a diver went down into Intake Bay No. 1 at Davis-Besse to check for clam shells. No shells of any kind were found in either the bottom of the bay or on the concrete sides.

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Response to Item 2 - continued

Furthermore, inspections at Toledo Edison's coal-fired Bay Shore Generating Station indicate that no shell debris was found in the water box or tubes of a condenser that was cleaned in March, 1981 during a unit outage. If Toledo Edison were to develop a problem with Corbicula, Bay Shore would probably be affected first because its much larger thermal plume could support a substantial colony of Corbicula.

At the present time, the absence of clams and shell debris at the Davis-Besse Station has been confirmed by these inspections.

Item 3

"If clams...were found in potentially affected systems or their absence was not confirmed by action in Item 2 above, measure the flow rates through individual components in potentially affected systems to confirm adequate flow rates..."

Response

No clams were found, therefore, Item 3 is not applicable to the Davis-Besse Nuclear Power Station, Unit I.

Item 4

"Describe methods whether in use or planned (including implementation date) for preventing and detecting future flow blockage or degradation due to clams...or shell debris. Include the following information in this description:

- a. Evaluation of the potential for intrusion of the organisms into these systems due to low water level and high velocities in the intake structure expected during worst case conditions.
- b. Evaluation of effectiveness of prevention and detection methods used in the past or present or planned for future use."

Response

An annual piping inspection program will be conducted beginning in the fall. These inspections of the service water system, fire protection system, and the component cooling water system piping will be conducted in accordance with a Preventive Maintenance Work Order.

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Response to Item 4 - continued

However, Davis-Besse withdraws water from a lake, not a river, and due to subsequent absence of low water levels and high velocities in the intake structure, we anticipate minimal potential for intrusion of clams into these systems.

The prevention and detection methods will be determined to be effective if, during the annual inspections, there is no indication of significant flow blockage due to clams or shell debris to any plant system.

Item 5

"Describe the actions taken in Items 1 through 3 above and include the following information:

- a. Applicable portion of the environmental monitoring program, including last sample date and results.
- b. Components and systems affected.
- c. Extent of fouling, if any existed.
- d. How and when fouling was discovered.
- e. Corrective and preventive actions."

Response

- a. A review of the pre-operational and operational benthos monitoring reports indicates that no Corbicula were found in any of the samples taken from 1973 to November 20, 1980. These bottom sediment samples were taken from Lake Erie in the vicinity of Locust Point, near Davis-Besse.
- b. No components or systems have been affected.
- c. No fouling has been detected.
- d. No fouling has been detected.
- e. Preventive and corrective actions will consist of preparing Preventive Maintenance Work Orders in which piping in the fire protection system, service water system, and component cooling water system will be inspected for clams and shell debris on an annual basis during the fall of the year after the peak breeding period for Corbicula has passed.

ATOMIC ENERGY ACT OF 1954
SECTION 182
SUBMITTAL IN RESPONSE
FOR THE
DAVIS-BESSEZ NUCLEAR POWER STATION
UNIT 1
FACILITY OPERATING LICENSE NPF-3

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This response is submitted in conformance with Atomic Energy Act of 1954, Section 182, relating to IE Bulletin No. 81-03, Flow Blockage of Cooling Water to Safety System Components by Corbicula Sp. (Asiatic Clam) and Mytilus Sp. (Mussel).

By: W Crouse
Nuclear Services Director

For: R. P. Crouse
Vice President, Nuclear

Sworn to and subscribed before me this 21st day of May, 1981,

By: Linda L. Costell
Notary Public

LINDA L. COSTELL
Notary Public — State of Ohio
My Commission Expires Feb. 9, 1982