



Northern States Power Company

March 22, 1983

Mr. James G. Keppler  
Regional Administrator - III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
Docket No. 50-282 License No. DPR-42  
Docket No. 50-306 License No. DPR-60

In response to your letter of January 21, 1983 the following is offered:

In April 1981, IE Bulletin 81-03, "Flow Blockage of Cooling Water to Safety Systems Components by Corbicula sp. (Asiatic clams) and Mytilus sp.", was issued. Following a review, the response letter was written on May 22, 1981. At that time surveys had identified 21 species of clams in the plant intake/discharge canals and Mississippi River adjacent to and downstream from the plant, but the species Corbicula or Mytilus were not found, although other published studies had shown the species in question to exist in small numbers elsewhere in the upper Mississippi and St. Croix River systems.

On January 3, 1983, personnel from the Environmental Group stationed at Prairie Island noted several small clams of a different species than normally seen in plant waters. These clams were mixed in with other debris collected in the screenhouse inlet trash baskets. Further examination showed the species to be the Corbicula as identified in Bulletin IE 81-03.

Over the years a variety of clams or shells have been found in the condenser inlet water boxes, but never in quantities that restricted flow through the condenser. On several occasions shells of 1/4" diameter have been caught in the condenser cleaning system screens, so that normal operation of this system has been affected. When this problem has occurred, we have scheduled the unit to drop load (on weekends) and isolate one water pass at a time to enter water boxes to clean debris and blow out the condenser tubes. This activity has not been necessary more than once between refueling outages.

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During the last Unit 1 refueling outage (11/18 to 12/18-82) the debris found in the condenser inlet water boxes was greater than usual. We attributed this increase to the fact that we didn't clean the water boxes at a mid-run period, and the new inlet/discharge project presently under construction allowed a greater volume of debris to be brought up during several months of dredging. Routine outage inspections of the many heat exchangers showed the normal small accumulations of mud, but no clams. Also, during the outage, one half of the screenhouse inlet bay was isolated and dewatered for inspection of the circulating water pump impeller and lower sections of traveling screens. We normally have a small area of mud buildup just downstream of the screen foot section. No clams of any species were found.

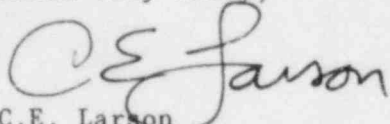
The strainers (1/16" openings) for the cooling water system and fire system are inspected annually for fouling and mechanical wear. We have found an occasional shell in these strainers, but nothing that could affect flow. Clam shells found are usually of the Giant Floater, Threeridge, or Ohio River Pigtoes species which are the most common clams found in this area.

As stated in our response of 5/22/81, the suction inlets for the horizontal cooling water and fire pumps are approximately two feet off the screen house floor and just off to the side of the main flow stream into the circulating water pumps (150,000 gpm). Clams and other debris that manage to be carried over the traveling screens are swept off the back side of the screen panel, past the cooling and fire pump suction inlets into the circulating water pumps and into the condenser water boxes, accounting for the normal accumulations found in the water boxes.

The screenhouse safeguards bay has not been dewatered for inspection, but there is apparently no abnormal buildup of clams because normal operation of the pumps (two diesel and one motor driven) would deposit shells in great quantities in the strainers. In addition, the cooling water system is chlorinated. Published studies have shown that chlorine will effectively control veligers (larval clams).

With the installed flow monitoring instrumentation, we feel we have an adequate system to detect flow degradation, and the in-place annual inspections of strainers and heat exchangers would verify fouling if it was suspected.

Yours very truly,



C.E. Larson  
Director, Nuclear Generation

cc: Mr. C. Charnoff  
Mr. C. Feierabend