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Power  
Company

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Operating Reactors Branch No 5  
Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Washington, DC 20555

DOCKET 50-155 - LICENSE DPR-6 -  
BIG ROCK POINT PLANT - SEP TOPIC V-10.A  
"RESIDUAL HEAT REMOVAL SYSTEM HEAT EXCHANGER  
TUBE FAILURE" - RESPONSE TO NRC REVISED SAFETY ASSESSMENT

By letter dated October 9, 1979, the NRC issued its revised safety assessment for SEP Topic V-10.A "Residual Heat Removal System Heat Exchanger Tube Failure". As stated in the safety assessment and as reiterated by the NRC during the integrated assessment meetings conducted during the week of November 15 to 19, 1982, the NRC is concerned that the possibility exists for inleakage of contaminants from Lake Michigan into the primary coolant system. In the safety assessment, the NRC indicates that inleakage of contaminants could occur given tube failures in a combination of Shutdown Cooling System (SCS) and Reactor Cooling Water System (RCWS) heat exchangers. The purpose of this letter is to provide justification, which is based on negotiations conducted during the integrated assessment meetings, that an adequate defense already exists at Big Rock Point to protect the primary coolant system from such inleakage.

In its revised safety assessment, the NRC provided its recommendations as to what it perceived to constitute an adequate defense against the inleakage of contaminants and the subsequent contamination of the primary coolant system. In the paragraphs that follow, each recommendation is restated. Immediately following each recommendation is the Consumers Power Company response which provides justification that existing designs, surveillance practices and administrative controls already provide an adequate defense for such purposes and that the NRC recommendations are not warranted.

NRC Recommendation #1

"Big Rock Point procedures require the twice weekly analysis of the RCW system, testing for chromates (a compound of which is used in the RCW system as a corrosion inhibitor), chloride, and conductivity. These tests will

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adequately detect any inleakage from the SW system, but added defense and early warning could be obtained by the incorporation of a high level alarm in the RCW system water tank. Presently only the low level alarm exists as protection in addition to the twice weekly sampling."

#### Consumers Power Company Response to Recommendation #1

It should be noted that the aforementioned NRC concern regarding inleakage of Lake Michigan water contaminants into the primary coolant system is not valid during power operation when system pressure is greater than 300 psig. Standard Operating Procedure SOP 5 "Reactor Shutdown System" states: "the Isolation Valves MO-7056, MO-7057, MO-7058 and MO-7059 must be closed and their breakers opened whenever primary system pressure  $\geq$  300 psig".

Although the SCS motor-operated isolation valves are open when the plant is shutdown and the SCS is in operation removing reactor residual heat, it is the opinion of Consumers Power Company that an adequate defense against inleakage currently exists during shutdown conditions at Big Rock Point. In addition to sampling the RCWS in accordance with plant procedures for hardness (which is an indirect measurement of chlorides), chromates and conductivity twice per week during shutdown and the existence of a low level alarm in the RCWS tank, additional defense and early warning is provided by routine surveillance of RCWS tank level. Presently, the operator's surveillance checksheet requires that the RCWS tank level be monitored and logged once per shift. To monitor tank level, the operator utilizes a permanently installed, locally mounted level indicator. It is the opinion of Consumers Power Company that such monitoring serves as an acceptable alternative to the NRC recommendation for a high level alarm in the RCWS tank.

Finally, it should be noted that the NRC's revised safety assessment is somewhat incorrect as it states that plant procedures require RCWS sampling for chlorides. In reality, the RCWS sampling during both shutdown and power operation is for chromates, conductivity and hardness (an indirect measure of chlorides).

#### NRC Recommendation #2

"As defense against primary system contamination during power operation, Big Rock Point Technical Specification 4.1.2(b) requires daily primary coolant sampling, which includes chlorides and conductivity. This should be expanded to include sampling during shutdown when the SCS is in operation and thus when leakage into the primary system is most likely."

#### Consumers Power Company Response To Recommendation #2

Although plant procedures currently require that primary coolant system chloride and conductivity samples be taken daily during plant operation and samples are normally taken twice per week during plant shutdown conditions, it is the opinion of Consumers Power Company that expanding the Technical Specifications as recommended is unnecessary. An expansion of Technical

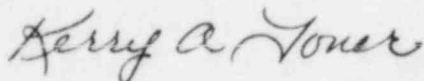
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Specifications to include sampling during shutdown is considered unwarranted since Technical Specification 4.1.2.(b) presently states: "The primary coolant shall be sampled and analyzed daily during periods of power operation. The following are absolute limits which, if exceeded, shall necessitate reactor shutdown." It is obvious that if primary coolant system chemistry significantly changes during shutdown conditions such that Technical Specification conductivity and chloride limits are exceeded, the longest that the plant could possibly be allowed to operate would be until such time that the first daily sample is taken.

In addition, during periods of refueling operations with the vessel head removed, plant operators and/or maintenance personnel work above the reactor vessel nearly every day. Intrusions of chromated water into the reactor vessel would be noted by visual observation.

In conclusion, it is the opinion of Consumers Power Company that an adequate defense exists to protect the primary coolant system from Lake Michigan water contaminants which could conceivably be introduced into the system as a result of a combination of RCWS and SCS heat exchanger tube failures. Consumers Power Company, therefore, concludes that the above NRC recommendations are unwarranted and SEP Topic V-10.A is resolved.



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