



**Consumers  
Power  
Company**

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December 22, 1977

Mr James G Keppler  
Office of Inspection and Enforcement  
Region III  
US Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137



DOCKET 50-255 - LICENSE DPR-20 -  
PALISADES PLANT - IE BULLETIN 77-04

IE Bulletin 77-04 identified a potential problem of post-LOCA pH control of containment sump water. The specific information requested was as follows:

"If your facility utilizes or plans to utilize a system for pH control of containment sump post-LOCA solution, describe what action you have taken or plan to take to assure that the system design specifications will be met for all operating conditions permitted by the Technical Specifications, as applicable to the containment sump water sources."

#### Response

The Palisades Plant currently utilizes NaOH injection for post-LOCA pH control of containment sump water. As a result of Amendment 31 to our operating license we are reevaluating the predicted performance of the plant's iodine removal system.

To specifically address IE Bulletin 77-04, Consumers Power has evaluated predicted pH variation associated with the addition of 23 weight percent NaOH (from T-103) to the containment sump water following a postulated LOCA. Five sources of boric acid solution (Table 1) with maximum and minimum concentrations were considered.

TABLE 1  
Boric Acid Solution Sources

Source	Volume	Boric Acid (Ppm B)	
		Max	Min
Primary Coolant System	7,800	1,070	0
Two Half Full Clean Waste Receiver Tanks	8,130	2,000	0
Concentrated Boric Acid Tank	1,740	17,500	11,000
Four Safety Injection Bottles	4,000	2,000	1,720
SIRW Tank	34,000	2,000	1,720

2  
The results of the evaluation are that the pH of the containment sump water can be easily maintained between 7 and 8 with the existing system. As indicated in our December 1, 1977 letter to the Director of Nuclear Reactor Regulation, we will continue to evaluate the performance of the iodine removal system for possible improvements. This evaluation will be completed during the upcoming re-fueling outage.

In summary, the present system for pH control of the containment sump water will perform, as required (maintain pH between 7 and 8). If the NaOH system is replaced with TSP, the new system will be adequately sized for the same type pH control.

David P Hoffman (Signed)

David P Hoffman  
Assistant Nuclear Licensing Administrator

CC: ASchwencer, USNRC