AUTOMATED ENGINEERING SERVICES CORP.

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December 4, 2006

Mr. Scott McCall
Nuclear Management Company, LLC
Prairie Island Nuclear Generating Plant
1717 Wakonade Drive East
Welch, MN 55089

Dear Mr. McCall:

Subject: Review of 2R24 Observed Leakage through Concrete Adjacent to the Containment Shell in Sump B

Automated Engineering Services Corp. (AES) was requested to review the observed leakage in Sump B area on both sides of the RHR suction lines relative to an evaluation of a similar leakage performed by AES dated December 16, 1998 titled Report on the Effect of Borated Water Leaks on Containment Concrete, Reinforcing Steel and Containment Steel Plate (Ref. 1).

AES has reviewed the following documents emailed by you on December 2, 2006.

1. Summary of Refuel Cavity Leakage in 2R24 dated 12/2/06, (Ref. 2)
2. Unit 1 – Sump B In-Leakage History, undated, (Ref. 3)
3. Unit 2 – Sump B In-Leakage History, undated, (Ref. 4)
4. Support/Refute Matrix describing the source and path (Ref. 5)
5. Picture of leakage into Sump B (Ref. 6)
6. Picture of the most likely flow path traveling from the Refueling Pool to Sump B (Ref. 7)

The following observations are made relative to the Reference 1 report:

1. The current observed leakage in the Sump B area is very similar to that observed and reviewed in the Reference 1 report. In that report it was stated that the source of the borated water leaking into the Sump B area was most likely from the flooded Refueling Pool. The current observations with regards to the water chemistry also strongly points to the same source and the leakage path (Ref. 7). It is evident that the Refueling Pool stainless steel liner is not completely watertight. This issue should be attended to at the earliest and I recommend that a formal procedure to inspect and caulk suspected areas be implemented at the end of and before each Refueling Pool flooding.

   The basis and conclusions developed in the Reference 1 report are still valid and in my opinion the integrity of the structural components (concrete, rebar and containment shell) are not compromised.

2. From Reference 2, leakage into other most likely areas based on past experience, such as the Regen HX room, seem to be arrested. This is a positive development. This points to requiring a closer review of the flow paths to understand the reasons why Sump B is still experiencing leakage whereas the other area leakage seem to have been stopped.

3. The Refuel Cavity should be inspected and vulnerable or potentially vulnerable leakage paths should be made watertight prior to the pool flooding.

4. I have reviewed the Support / Refute matrix (Reference 4), which confirms that the leakage source is from the Refueling Pool. I support this matrix evaluation.

   The notations in this matrix and those in References 2 and 3 (Leakage Histories) need to be more descriptive for proper understanding.

My review of the 2R24 leakage is that the conclusions regarding the safety and capability of the vulnerable structural components are not compromised and that more effort should be given to detect and correct the leakage source in the Refueling Pool.

If you have any questions or comments concerning the information contained herein, please contact the undersigned at Ext.11.

Sincerely,

A.V. Setlur, MN PE #21678
President