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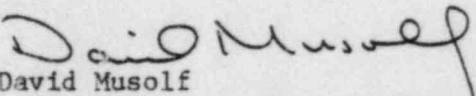
Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Rod Swap Results

We have completed physics testing of Unit 2, Cycle 9 using rod swap methodology approved by your October 24, 1984 letter. All acceptance criterion, including those stated in the October 24, 1984 letter, were met; the results are attached.

The results of the next Unit 1 use of the rod swap technique will be submitted per the October 24, 1984 letter.


David Musolf
Manager-Nuclear Support Services

DMM/TMP/dab

c: Regional Administrator-III, NRC
NRR Project Manager, NRC
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Prairie Island Unit 2 Cycle 9 Rod Swap Results

This report includes the data taken during the control rod reactivity measurements of Prairie Island Unit 2 Cycle 9 using the rod swap technique as presented in NSP topical report NSPNAD-8408 "Prairie Island Units 1 and 2 Rod Swap Methodology". The following page includes a table comparing the plant measured data for PI 2 Cycle 9 with the predictions presented in NSP report NSPNAD-8407P "Prairie Island Unit 2 Cycle 9 Startup & Operations Report".

All corrections presented in the rod swap topical report were taken into account in the rod swap measurements. The boron level did not deviate by more than the titration error during the test, therefore no boron corrections were needed. The data recorded for the reference bank (A bank) in, all other rods out condition at the beginning and the end of the test verified that no reactivity change attributable to a change in boron had occurred.

From the following table it can be seen that the error in the reference bank worth of -9.9% is very close to the $\pm 10\%$ criteria.

NSP originally planned to use a $\pm 15\%$ acceptance criteria. After discussion with the NRC we agreed to use $\pm 10\%$. We are currently reviewing the $\pm 10\%$ criteria and plan to discuss the use of a larger acceptance criteria with you.

Prairie Island Unit 2 Cycle 9

Rod Swap

Rod Swap Technique

Control Rod Bank	Worth (pcm)		$\Delta(\text{pcm})$	$\Delta(\%)$	Review Criteria (%)
	Measured	Predicted			
A (reference bank)	1283	1424	-141	-9.9	± 10
B	587	519	68	13.1	± 15
C	1020	977	43	4.4	± 15
D	711	671	40	6.0	± 15
SA	619	637	-18	-2.8	± 15
SB	624	637	-13	-2.0	± 15
Total	4844	4865	-21	-0.4	± 10

Mean = -1.5%

$\sigma = 8.0\%$