

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Provides info to support review of proposed Amend 58 to License DPR-43. Attached table provides comparison of calculated voltages. Agreement shown between calculated measured voltages & currents.

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WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, Wisconsin 54305

March 8, 1984

Dr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Second Level Undervoltage Technical Specifications

Reference: Proposed Amendment 58 to the KNPP Technical Specifications
Submitted February 22, 1984 by letter from C. W. Giesler to
Dr. H. R. Denton

This letter provides information to support your review of Proposed Amendment 58 to the KNPP technical specifications. It is provided in response to a request made by your staff during a telephone conference on March 1, 1984.

The attached table provides a comparison of calculated voltages and currents determined by the load flow program mentioned in the above reference against measured voltages and currents at various points in the engineered safeguards electrical distribution system at KNPP during plant operation.

These results show excellent agreement between calculated and measured voltages and currents; the maximum error on the former is less than 1% in all cases. Based on these results, we have concluded that the ability of our load-flow program to accurately calculate voltages at various locations in the ESF electrical system has been confirmed, and this program is appropriate for use in determining the undervoltage setpoints on the ESF buses.

Very truly yours,

C. W. Giesler
Vice President - Nuclear Power

CAS/js
Attach.

cc - Mr. S. A. Varga, US NRC
Mr. Robert Nelson, US NRC

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CALCULATED VERSUS MEASURED SAFEGUARD BUS VOLTAGES AND CURRENTS

Bus Name	Calculated Voltage	Measured Voltage	Ratio (Calculated) Measured	Calculated Current	Measured Current	Ratio (Calculated) Measured
Bus 1-5	4243	4244	1.000	127.9	133.5	.958
Bus 1-51	486	486	1.000	56.5	60	.942
Bus 1-52	478	481	.994			
MCC1-52A	477	478.7	.996	39.0	41.5	.939
MCC1-52B	477	477.2	1.000	35.4	36.5	.970
MCC1-52C	476	479.1	.994	73.4	71.8	1.022
MCC1-52D	476	478.1	.996	21.6	21.4	1.009
MCC1-52E	475	476.5	.997	121.6	119.0	1.022
MCC1-52F	474	475.7	.996	96.0	94.9	1.012
BRA-105	204	205.8	.991	76.2	73.8	1.033
Bus 1-6	4284	4277	1.002	140.5	132	1.064
Bus 1-61	488	484	1.008	69.9	65	1.075
Bus 1-62	486	489	.994			
MCC1-62A	485	486.1	.998	28.1	28.6	.983
MCC1-62B	486	NA	NA	0.0	NA	NA
MCC1-62C	485	486.2	.998	62.7	63.6	.986
MCC1-62D	484	483.5	1.001	22.9	23.1	.991
MCC1-62E	485	484.4	1.001	67.1	64.9	1.034
MCC1-62J	485	484.8	1.000	23.6	23.4	1.009
MCC1-62G	474	473.1	1.002	208.4	209.6	.994
MCC1-62H	485	484.8	1.000	0.0	0.0	1.000
MCC1-5262	486	486.1	1.000	12.6	13.5	.933
BRB-105	208	209.0	.995	31.7	32.1	.998