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Director, Office of Nuclear Reactor Regulation
Attention: Document Control Desk
U S Nuclear Regulatory Commission
Washington, DC 20555

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

Summary Technical Report of Analysis of Capsule
from Unit No. 1 Reactor Vessel Radiation Surveillance Program

Submitted for your review is one copy of the report, "Analysis of Capsule P from Northern States Power Company Prairie Island Unit 1 Reactor Vessel Radiation Surveillance Program", WCAP-10102, dated May, 1982. This report is submitted in accordance with 10CFR50, Appendix H, Section IV.

The report notes the following:

- a) The measured fast neutron fluence of $1.25E19$ n/cm² closely matches the predicted value for the capsule of $1.2E19$ n/cm².
- b) The limiting material in the core region exhibited a 65°F increase in the 50 ft. lb. transition temperature at the measured fluence of $1.25E19$ n/cm². This shift is well within the design curve prediction of Regulatory Guide 1.99.
- c) The reactor pressure vessel beltline material is not very sensitive to radiation.
- d) The projected end of life fluence at $\frac{1}{2}$ thickness is $2.78E19$ n/cm².

Please contact us if you have any questions related to this report.

David Musolf
Manager of Nuclear Support Services

DMM/bd

cc: Regional Administrator-III, NRC
NRR Project Manager, NRC
NRC Resident Inspector
G Charnoff

Adol

Attachment

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