Nebraska Public Power District
Nebraska's Energy Leader

NLS990056
June 8, 1999

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Response to Request for Additional Information
Proposed Change to Technical Specifications
APRM Neutron Flux - High (Flow Biased) Calibration Frequency
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Reference: 1) Letter (No. NLS980200) to USNRC Document Control Desk from J. H. Swailes (NPPD) dated March 1, 1999, "Proposed Change to CNS Technical Specifications; Reactor Protection System Instrumentation"

2) Letter (No. NLS990030) to USNRC Document Control Desk from L. Newman (NPPD) dated March 10, 1999, "Submittal of Calculation Referenced in Significant Hazard Determination"

3) Letter to G. R. Horn (NPPD) from L. J. Burkhart (USNRC) dated May 17, 1999, "Cooper Nuclear Station - Request for Additional Information"

In Reference 1, and as supplemented by Reference 2, the Nebraska Public Power District (District) submitted to the Nuclear Regulatory Commission (NRC) a proposed change to the Cooper Nuclear Station (CNS) Technical Specifications (TS) concerning the calibration frequency of reactor recirculation flow transmitters associated with the Average Power Range Monitors (APRM). In Reference 3, the NRC forwarded to the District a request for additional information (RAI) concerning the proposed TS change. Please find attached the District's response to the RAI.

Should you have any questions regarding this matter, please contact me.

Sincerely,

A001 1/1

J. H. Swailes
Vice President of Nuclear Energy

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/dnm
Attachment

cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
USNRC

Environmental Health Division - Program Manager
Nebraska Department of Health

NPG Distribution

**Response to Nuclear Regulatory Commission
Request for Additional Information
Concerning the Cooper Nuclear Station
Proposed Change to CNS Technical Specifications
Reactor Protection System Instrumentation
Average Power Range Monitor Neutron Flux - High (Flow Biased)
Calibration Frequency**

The following is the Nebraska Public Power District's (District's) response to each of the individual questions contained in the Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI), dated May 17, 1999 (Reference 3 of Coverletter), concerning the proposed change to the Cooper Nuclear Station (CNS) Technical Specifications (T , addressing the calibration frequency of reactor recirculation flow transmitters associated with the Average Power Range Monitors (APRM). The individual NRC questions (identified in italic) are presented below along with the District's response.

NRC Question 1.

In your submittal dated March 1, 1999, you state that "site-specific drift datapoints for these transmitters are limited, due to the past test frequency and the limited collection of past datapoints, the datapoints that are available are consistent with the calculated drift value."

Despite the fact that the drift data may be limited, it will be useful in evaluating the proposed change. Please provide the site-specific drift data that is available.

District's Response

Attachment 2 to this letter contains CNS site-specific drift datapoints collected from April 1989 through November 1998 (most recent datapoint collection during Refueling Outage 18) for each of the Reactor Recirculation (RR) loop flow transmitters (FT).

NRC Question 2.

On sheet 18 of 65 of your attachment to your March 10, 1999, letter, at the bottom of the page you state that "since the flow units are checked every month, it is assumed that the above drift is applicable for calculation." Please describe the "check" that is performed monthly. Is this check a technical specification requirement? What equipment is part of this check?

District's Response

The Reactor Recirculation loop flow units (equipment identification numbers: NMF-FM-81A and B) are checked (tested) monthly per CNS surveillance procedures in order to perform a CHANNEL FUNCTIONAL TEST as defined by CNS TS. The monthly test satisfies TS Surveillance Requirement 3.3.1.1.7 for Table 3.3.1.1-1, Function 2b, along with satisfying CNS Technical Requirements Manual (TRM) Surveillance Requirement (TSR) 3.3.1.3 for Table T3.3.1-1, Functions 4 and 5, TSR 3.3.1.4 for Table T3.3.1-1, Function 3a, TSR 3.3.1.5 for Table T3.3.1-1, Function 5, and part of TSR 3.3.1.7 for Table T3.3.1-1, Function 4. The monthly testing satisfies both a TS requirement and a TRM requirement for control rod block instrumentation and data is taken during this testing.

RR-FT-110A

Cal Input (" water)	-5.7"			96.5"			198.7"			301.0"			403.2"		
Year	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift
	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv
11/4/98	9.92	9.92	-0.13	19.95	19.95	0.01	29.97	29.97	0.00	39.98	39.98	-0.01	49.97	49.97	-0.01
5/4/97	10.02	10.05	0.02	19.58	19.94	-0.45	29.25	29.97	-0.82	38.84	39.99	-1.22	48.50	49.98	-1.57
11/9/95	10.00	10.00	0.05	20.27	20.03	0.12	30.59	30.07	0.41	40.92	40.06	0.73	51.23	50.07	1.10
1/1/95	9.95	9.95	-0.09	20.15	20.15	0.12	30.18	30.18	0.04	40.19	40.19	0.04	50.13	50.13	0.03
10/14/94	10.04	10.04	0.03	20.03	20.03	-0.02	30.14	30.14	0.06	40.15	40.15	0.07	50.10	50.10	0.04
8/18/94	9.86	10.01	-0.05	19.92	20.05	-0.01	29.9	30.08	-0.07	40.00	40.08	-0.01	49.88	50.06	-0.08
4/22/93	9.91	9.91	0.05	19.93	19.93	-0.11	29.97	29.97	-0.07	40.01	40.01	-0.13	49.96	49.96	-0.18
10/29/91	9.84	9.86	-0.07	20.08	20.04	0.13	30.06	30.04	0.11	40.13	40.14	0.10	50.13	50.14	0.12
3/27/90	9.91	9.91	-0.06	19.95	19.95	-0.09	29.95	29.95	-0.07	40.03	40.03	0.03	50.01	50.01	0.11
4/28/89	9.97	9.97		18.88	20.04		28.73	30.02		38.74	40.00		48.70	49.90	

RR-FT-110B

Cal Input (" water)	-5.7"			96.5"			198.7"			301.0"			403.2"		
Year	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift
	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv
11/4/98	10.09	10.09	0.09	19.95	19.95	-0.03	29.98	29.98	-0.08	39.95	39.95	-0.15	49.95	49.95	0.02
4/22/97	9.97	10.00	-0.03	19.56	19.98	-0.47	29.05	30.06	-1.01	38.51	40.10	-1.59	48.00	49.93	-2.05
11/10/95	9.89	10.00	0.04	20.35	20.03	0.40	30.88	30.06	0.85	41.48	40.10	1.42	51.93	50.05	1.87
1/1/95	9.85	9.85	-0.04	19.95	19.95	0.00	30.03	30.03	0.02	40.06	40.06	0.02	50.06	50.06	0.04
7/22/94	10.09	9.89	0.07	20.04	19.95	0.03	30.05	30.01	0.02	40.01	40.04	0.01	49.92	50.02	-0.04
4/22/93	10.02	10.02	0.00	20.01	20.01	-0.16	30.03	30.03	-0.09	40.00	40.00	-0.13	49.96	49.96	-0.14
10/29/91	10.02	10.02	0.01	20.17	20.17	0.12	30.12	30.12	0.13	40.13	40.13	0.15	50.10	50.10	0.12
3/27/90	10.04	10.01	0.02	20.10	20.05	0.10	30.19	29.99	0.19	40.32	39.98	0.34	50.45	49.98	0.40
4/28/89	8.88	10.02		18.94	20.00		28.96	30.00		38.93	39.98		48.88	50.05	

RR-FT-110C

Cal Input (" water)	-5.7"			96.5"			198.7"			301.0"			403.2"		
Year	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift
	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv
11/4/98	9.90	9.90	-0.01	19.94	19.94	0.05	30.03	30.03	0.03	40.13	40.13	0.05	50.19	50.19	0.04
5/4/97	10.01	9.91	-0.03	19.47	19.89	-0.48	28.91	30.00	-1.05	38.40	40.08	-1.62	47.83	50.15	-2.12
11/9/95	9.99	10.04	-0.02	20.47	19.95	0.40	30.96	29.96	0.93	41.44	40.02	1.43	51.93	49.95	2.03
1/1/95	9.96	10.01	-0.11	20.03	20.07	0.04	30.00	30.03	0.09	39.98	40.01	0.05	49.92	49.90	0.06
4/22/93	10.07	10.07	0.08	19.99	19.99	-0.16	29.91	29.91	-0.18	39.93	39.93	-0.20	49.86	49.86	-0.26
2/13/92	9.99	9.99	-0.03	20.15	20.15	0.03	30.09	30.09	0.03	40.13	40.13	0.08	50.12	50.12	0.11
2/12/92	10.00	10.02	-0.03	20.20	20.12	0.00	30.14	30.06	0.02	40.20	40.05	0.04	50.20	50.01	0.02
10/29/91	10.00	10.03	-0.05	20.20	20.20	0.15	30.15	30.12	0.13	40.17	40.16	0.13	50.18	50.18	0.13
3/27/90	10.05	10.05	0.07	20.05	20.05	0.05	30.02	30.02	0.06	40.04	40.04	0.15	50.05	50.05	0.16
4/28/89	8.89	9.98		18.88	20.00		28.85	29.96		38.78	39.89		48.72	49.89	

RR-FT-110D

Cal Input (" water)	-5.7"			96.5"			198.7"			301.0"			403.2"		
Year	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift	As Found	As left	Drift
	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv	mv
11/4/98	10.16	9.99	0.11	20.02	19.93	-0.04	30.07	30.06	-0.05	40.04	39.99	-0.11	50.01	50.07	0.01
4/22/97	10.12	10.05	0.06	19.47	20.06	-0.58	28.78	30.12	-1.26	38.08	40.15	-1.96	47.42	50.00	-2.58
11/10/95	9.98	10.06	-0.02	20.61	20.05	0.55	31.27	30.04	1.16	41.91	40.04	1.81	52.64	50.00	2.55
1/1/95	10.00	10.00	-0.02	20.06	20.06	0.07	30.11	30.11	0.09	40.10	40.10	0.07	50.09	50.09	0.09
4/22/93	10.02	10.02	0.09	19.99	19.99	-0.12	30.02	30.02	-0.05	40.03	40.03	-0.10	50.00	50.00	-0.15
2/13/92	9.93	9.93	0.06	20.11	20.11	0.08	30.07	30.07	0.04	40.13	40.13	0.04	50.15	50.15	0.06
2/12/92	9.87	9.87	0.00	20.03	20.03	-0.06	30.03	30.03	-0.03	40.09	40.09	-0.03	50.09	50.09	-0.03
10/29/91	9.87	9.87	-0.08	20.09	20.09	0.08	30.06	30.06	0.08	40.12	40.12	0.06	50.12	50.12	0.06
3/27/90	9.95	9.95	-0.07	20.01	20.01	0.04	29.98	29.98	0.03	40.06	40.06	0.13	50.06	50.06	0.13
4/28/89	8.87	10.02		18.91	19.97		28.90	29.95		38.86	39.93		48.86	49.93	

Correspondence No: NLS990056

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	N/A