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PARRISH,J.V. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards response to NRC Bulletin 90-002, "Loss of Thermal Margin Caused by Channel Box Bow," correction to cycle 10 & list of reused channels,assemblies & projected EOC 10 exposures.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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June 20, 1994
G02-94-142

Docket No. 50-397

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: **WNP-2, OPERATING LICENSE NPF-21**
RESPONSE TO NRC BULLETIN 90-02: "LOSS OF THERMAL MARGIN CAUSED BY CHANNEL BOX BOW," CORRECTION TO CYCLE 10 OPERATIONS

References:
1. NRC Bulletin 90-02, dated March 20, 1990, "Loss of Thermal Margin Caused by Channel Box Bow"
2. Letter G02-94-074, dated March 29, 1994, JV Parrish (SS) to USNRC, "Response to NRC Bulletin 90-02: 'Loss of Thermal Margin Caused by Channel Box Bow,' Effect on Cycle 10 Operation"
3. Letter G02-94-123, dated May 20, 1994, JV Parrish (SS) to USNRC, "Response to NRC Bulletin 90-02: 'Loss of Thermal Margin Caused by Channel Box Bow,' Response to Questions on Cycle 10 Operation"

INTRODUCTION

NRC Bulletin (NRCB) 90-02 (Reference 1) requested that licensees reusing channel boxes verify that current Minimum Critical Power Ratio (MCPR) Technical Specification operating and safety limits are met. The most recent correspondence (References 2 and 3) updated the Supply System response to NRCB 90-02 for WNP-2 Cycle 10. A correction to the Cycle 10 update (Reference 2) is given below. This correction is required because of a channel identification problem that was detected during the current outage.

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CYCLE 10 CORRECTION

The Supply System visually inspected the assemblies being rechanneled, checking the serial numbers of both the channel being removed and the one being installed. During this inspection, it was determined that channel 71806 was installed on assembly UD5034 during the refueling outage performed in the spring of 1990 rather than stored in the Spent Fuel Pool as planned. The inspection also detected that during the spring 1990 refueling outage two other reused channels being discharged, 71908 and 70158, were swapped. Evaluation shows that the exposures of channels 71806, 71908 and 70158 at discharge at the End of Cycle 9 were below 50 GWd/MTU. Because of the above discovery, an additional visual inspection of all reused channels that are in the Cycle 10 loading was performed to ensure that there were no other occurrences of this problem in the Cycle 10 loading. This inspection confirmed that all reused channels are installed on the correct fuel bundles as listed in Table 1 (Attachment 1).

Reference 2 reported channel 71806 would be reused on assembly UD5064. Channel 71771 rather than channel 71806 will be reused on assembly UD5064 which is located at row,column position 6,10 of the core. The projected exposure for the End of Cycle 10 on channel 71771 is 28,482 MWd/MTU. Table 1 has been revised to show the correct channel ID and estimated End of Cycle 10 exposure for channel 71771.

CONCLUSION

In summary, there is no significant impact associated with the correction of channel identifiers as described above. Table 1 updates Attachment 2 of Reference 2, otherwise there is no change in the request and evaluation in Reference 2. Also this change does not alter the Supply System's response to questions on Cycle 10 operations given in Reference 3. As stated in Reference 2, the Supply System will continue to use its channel bow methodology to assure that reused channels will not interfere with control blades or in-core instrumentation. NRC approved methods for accounting for channel bow effects in the MCPR Safety Limit will also continue to be used.

Should you have any questions or desire additional information regarding this matter, please contact me or P. R. Bemis at (509) 377-4027.

Sincerely,

J. V. Parrish (1023)
Assistant Managing Director for Operations

JDT/slc
Attachments: Attachment 1 - Reused Channels, Assemblies, and Projected EOC 10 Exposures

cc: LJ Callan - NRC RIV
JW Clifford - NRC
KE Perkins, Jr. - NRC RIV, Walnut Creek Field Office
NRC Sr. Resident Inspector - 927N
NS Reynolds - Winston & Strawn
DL Williams - BPA/399

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Response to NRC Bulletin 90-02, "Loss of Thermal Margin Caused by Channel Box Bow

I, J. H. SWAILES, being duly sworn, subscribe to and say that I am the WNP-2 Plant Manager for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have the full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief the statements made in it are true.

DATE June 20, 1994

J. H. Swailes
WNP-2 Plant Manager

On this date personally appeared before me J. H. SWAILES, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 20 day of June 1994.

Notary Public in and for the
STATE OF WASHINGTON

Residing at Kennewick, WA

My Commission Expires 4/28/98

ATTACHMENT 1

Table 1

Reused Channels, Assemblies and Projected EOC 10 Exposures

Row	Column	Current Assembly	Channel ID	Proj EOC 10 Exposure
1	13	UD4032	62686	33603
1	14	AN3036	63602	47970
1	15	XN2087	71965	42174
1	16	XN2095	70104	42297
1	17	AN3008	71758	47894
2	15	UD5066	71780	49138
4	12	AN3133	71982	32252
4	19	AN3134	71827	32580
5	5	AN3031	71389	47043
5	7	UD4115	70190	36612
5	11	AN3064	72035	49039
5	20	AN3028	72474	48856
5	26	AN3029	72439	46495
6	10	UD5064	71771	28482
7	5	UD4024	73124	37075
7	13	UD5071	71938	46301
7	26	UD4022	73386	44105
8	3	UD5030	71848	49294
8	10	UD4025	71473	29800
8	28	UD5035	71983	48904
9	11	UD5063	71898	29041
9	29	UD5013	73228	29385
10	10	UD4034	73151	33700
10	23	UD4031	71754	29177
11	13	UD5070	71803	29334
11	26	AN3124	71376	48972
12	30	UD4029	73117	33262
13	13	UD5072	71902	28976
14	1	AN3080	5866D	39640
14	14	UD5069	73223	32571
14	30	AN3001	71790	48568
15	1	XN2084	71936	42199
15	14	UD5065	61550	49149
15	30	XN2067	73582	42779
16	1	XN2066	61972	35985
16	9	UD5036	71946	33123
16	17	UD5021	71459	32744
16	22	UD5022	71987	33118
16	30	XN2100	71959	36061
17	1	AN3002	62283	39724
17	4	UD5039	73362	32690

Table 1 (Cont.)

Row	Column	Current Assembly	Channel ID	Proj. EOC 10 Exposure
17	14	UD5028	73053	32696
17	17	UD5025	73378	30915
17	21	UD5033	73127	28456
17	27	UD5031	70202	32595
17	29	UD5026	61750	48451
17	30	AN3122	71928	45625
18	13	UD5011	73172	29164
18	24	UD5029	73138	33011
19	2	UD5010	73150	30791
19	10	UD5040	73149	33004
19	29	UD5024	73109	30824
20	5	AN3037	72037	48889
20	13	UD5017	71798	29357
20	26	AN3129	71442	48660
20	29	UD5023	73069	47613
21	1	UD4012	71950	35822
21	2	UD4042	71989	29894
21	14	UD5009	73439	16872
21	19	UD5038	71972	32701
21	29	UD4135	71975	47999
21	30	UD4134	70167	32930
22	1	UD4143	72042	34327
22	15	UD5016	71204	33064
22	16	UD5037	73170	33072
22	30	UD4140	71801	32218
23	2	UD4016	71904	36252
23	29	UD4139	73132	32660
24	3	UD4144	71434	33533
24	13	UD5020	71939	32992
24	28	UD4142	6028D	39523
25	4	UD4038	73403	34868
25	5	UD4021	73423	29727
25	26	UD4003	72030	30037
25	27	UD4083	71953	34929
26	5	AN3044	73422	47041
26	7	UD4011	71792	36921
26	11	AN3018	71431	48639
26	24	UD4132	63950	36620
26	25	UD4030	71854	29867
26	26	AN3047	73133	44402
27	6	UD4040	71786	37044
27	12	AN3102	71753	44114
27	14	UD5014	73369	32492
27	19	AN3065	71976	46869
28	7	UD4027	71393	33820

Table 1 (Cont.)

Row	Column	Current Assembly	Channel ID	Proj. EOC 10 Exposure
28	8	UD5018	73589	30428
28	24	UD4008	71907	33614
29	8	UD4028	73368	32736
29	9	UD5008	70209	29086
29	12	UD5004	70159	30662
29	16	UD5034	63510	30427
29	20	UD5032	70243	47597
30	10	UD4039	71835	34732
30	11	UD4116	71392	33546
30	12	UD4138	71334	32657
30	13	UD4006	71954	35439
30	14	AN3014	71985	48017
30	15	XN2065	71921	35791
30	16	XN2052	61526	35767
30	17	AN3015	72014	48117
30	19	UD4136	70103	32695
30	20	UD4004	73444	41246
30	21	UD4007	73426	34398