



**GPU Nuclear Corporation**  
One Upper Pond Road  
Parsippany, New Jersey 07054  
201-316-7000  
TELEX 136-482  
Writer's Direct Dial Number:

December 31, 1990  
5300-90-343  
C320-90-333

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Gentlemen:

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION (OCNGS)  
DOCKET NO. 50-219, LICENSE NO. DPR-16  
OYSTER CREEK FUEL CHANNEL BOWING

- References: (1) NRC Letter, October 17, 1990, "Oyster Creek Nuclear Generating Station - Request for Withholding Information from Public Disclosure (TAC No. 76342)."  
(2) NRC Letter, November 15, 1990, "Summary of November 7, 1990 Meeting with GPU Nuclear to discuss matters related to Oyster Creek Fuel Channel Bowing."  
(3) GPU Nuclear Letter, July 20, 1990, "Response to Request for Additional Information."

Reference (2) documents the November 15, 1990 meeting held with the NRC relating to fuel channel bowing and reuse of fuel channels at Oyster Creek. As a result of this meeting, GPU Nuclear committed to submit a cycle 13 specific analysis of fuel channel bowing to the NRC.

9101090248 901231  
PDR ADOCK 050002  
P PDR

A001  
11

U. S. Nuclear Regulatory Commission  
December 26, 1990

Page 2

Attachment I presents the reference (2) required cycle 13 specific analysis and covers three main items.

Item 1 - Cycle 13 Reused Channels Data

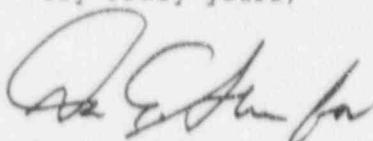
Item 2 - Oyster Creek EOC 12, 1991, Fuel Channel Measurement Program

Item 3 - Channel Bow effects on Fuel Thermal and Safety Limits

As part of the Reference (3) letter to the NRC an affidavit by General Electric Company identified information supplied as containing proprietary information and requested that it be withheld from disclosure. Reference (2) determined this to be a valid request. The information contained in Item 3 of this submittal represents additional information on the same topic provided by the General Electric Company as part of the aforementioned proprietary affidavit and being such should be withheld from public disclosure.

If you have any questions on this submittal, please contact Mr. Michael Laggart, Manager, Corporate Nuclear Licensing at (201) 316-7968.

Very Truly yours,



J. C. DeVine, Jr.  
Vice President, Technical Functions

JCD/RZ/mev

Attachments

cc: Administrator, Region I  
NRC Resident Inspector  
Mr. Alex Dromerick, Jr.

Attachment I  
Technical Response

This attachment contains Proprietary Information as defined in 10 CFR 2.790(a)(4). An affidavit as required by 10 CFR 2.790(b)(1) was submitted as part of an attachment to GPU Nuclear letter dated July 20, 1990. The Proprietary Information contained in Item 3 of this submittal represents additional information on the same topic as covered by aforementioned affidavit.

ALL PROPRIETARY  
INFORMATION HAS  
BEEN REMOVED FROM  
THIS COPY

Attachment 1

Table of Contents

Item

- 1 Cycle 13 Reused Channel Data
- 2 Oyster Creek EOC 12, 1991, Fuel Channel Measurement Project
- 3 Channel Bow Effects on Fuel Thermal and Safety Limits

Tables

- 1 EOC 13 Reused Channels Core Location and Exposure Data
- 2 EOC 13 Reused Channels Predicted and Measured Bow Data
- 3 EOC 12 Reused Channel Measurement Program Listed in Priority Measurement Sequence
- 4 EOC 12 Discharged Reused Channels Not Measured During EOC 12 Outage

Figures

- 1 Location of Cycle 13 Reused Channels
- 2 Cycle 13 Limiting Fuel Assemblies and Reused Channel Locations

Item 1 - Cycle 13 Reused Channels Data

Detailed information pertaining to the reused channels expected to be in service in cycle 13 is contained in Tables 1 and 2 and Figures 1 and 2.

Table 1 identifies the complete core location history for cycles 12 and 13; specific core locations, total channel exposure at EOC 12 and 13, BOC 13 fuel bundle exposure and the anticipated discharge cycle. The core locations are defined as: 'P', peripheral, a minimum of one channel face towards the core shroud; 'A', adjacent a location have either a channel face or a corner adjacent to a 'P' channel, and may have a corner facing towards the shroud and 'C', central, the remaining interior core locations.

Table 2 identifies the predicted maximum bow at EOC 12 and 13; the maximum measured bow and corresponding exposure of previously measured cycle 13 reused channels. Table 2 also indicates which cycle 13 reused channels are scheduled for measurement during the EOC 12 refueling outage. The scheduled priority measurement sequence is also provided in Table 2. Details of the EOC 12 Oyster Creek channel measurement project are described in Item 2.

The EOC 12 and cycle 13 predicted bows and exposures are preliminary because they are based on the estimated operation for the remainder of cycle 12.

Figure 1 shows the core location of the 119 cycle 13 reused channels.

Preliminary analysis of cycle 13 operations indicate that the bundles closest to limits during the cycle will not have reused channels with bows greater than 0.140 inches. Figure 2, a quarter core map, identifies the locations of the anticipated limiting fuel bundles, reused channels, and the reused channels having a bow greater than 0.140 inches. The quadrant shown contains the largest number of reused channels. With respect to the bundles closest to limits, this quadrant is typical of the remaining quadrants.

Item 2 - Oyster Creek EOC 12, 1991, Fuel Channel Measurement Program

The Oyster Creek EOC 12 channel measurement program is described in Table 3.

The EOC 12 channel measurement program is scheduled for March 1991. The emphasis of the measurement program is to obtain additional data on channel bow for reused channels having exposures greater than 50 GWD/MTU and predicted bows greater than 0.150 inches at EOC 12. The first sixteen (16) channels listed on Table 3 are high EOC 12 exposure and large EOC 13 predicted bow and are the top priority for measurement. The remaining twenty nine (29) channels will be measured as time permits for the following reasons: the initial cycle was either an 'A' or 'P' core location; the predicted EOC 12 bow for discharged channels was greater than 0.150 inches; the channel was previously measured during the EOC 9 or 11 refueling outages. Sufficient time has been scheduled to measure all the channels listed in Table 3, baring unforeseen delays.

Table 4 identifies the EOC 12 discharged reused channels which will not be measured during the EOC 12 outage. Only one discharge channel, 258C, had been previously measured at EOC 6 and EOC 7.

In our August 8, 1990 submittal, Figure 5 and 6 contained maximum, minimum and typical bows for eight channels. Of these eight channels, the following are scheduled for measurement during the EOC 12 refueling outage: 248C, 521C, 571C, and 266C.

Item 3 - Channel Bow Effects on Fuel Thermal and Safety Limits

THESE PARAGRAPHS  
CONTAIN PROPRIETARY  
INFORMATION AND ARE  
NOT FOR PUBLIC  
DISCLOSURE. THEY  
ARE INTENTIONALLY  
LEFT BLANK.

THESE PARAGRAPHS  
CONTAIN PROPRIETARY  
INFORMATION AND ARE  
NOT FOR PUBLIC  
DISCLOSURE. THEY  
ARE INTENTIONALLY  
LEFT BLANK.

TABLE 1

## EOC 13 REUSED CHANNELS

## CORE LOCATION AND EXPOSURE DATA

CHANNEL S/N	CORE HISTORY	CYCLE 12 LOCATION	EOC 12 TOTAL EXPOSURE	CYCLE 13 LOCATION	BOC 13 FUEL BUNDLE EXPOSURE	EOC 13 TOTAL CHANNEL EXPOSURE	ANTICIPATED CHANNEL DISCHARGE CYCLE
	1111	XX-YY	XX-YY				
116C	PPAP AACP	09-36	38.9332	01-30	22.0	43.1767	13
121C	ACCC CCC	41-32	47.2578	45-32	21.5	56.8973	13
1232C	CCC C	N/A	26.89	37-12	0.0	38.5554	16
125C	CCC CCNP	09-48	39.5498	21-52	23.0	43.5281	13
130C	CCCC ACC	21-16	48.9679	27-26	22.0	57.4129	13
132C	CCC AAC	15-48	35.4735	25-38	17.4	45.0353	14
138C	ACCC ACC	37-44	46.0315	35-38	19.5	55.3026	14
139C	PACC CAC	31-50	42.7282	43-28	20.1	52.0745	14
1400C	CC AA	37-08	32.1523	31-04	10.3	39.9997	15
140C	CC CCP	51-28	33.6212	35-52	24.2	36.4083	13
159C	CCCC ACC	31-38	56.4073	27-28	22.0	64.8809	13
1637C	CCC AA	15-46	37.0982	21-50	10.3	45.044	15
1638C	CCP CA	13-44	35.4312	11-46	11.1	42.6223	15
163C	CCC AAC	33-50	37.5457	25-30	17.4	46.9212	14
164C	ACCC CCC	27-08	47.6297	41-26	21.9	57.0381	13
166C	ACCC CCC	21-42	47.247	21-46	21.5	56.949	13
1670C	CC AA	37-46	30.3961	31-50	10.3	38.3352	15
1674C	CCC CC	13-40	40.1378	23-30	12.1	50.2308	15
167C	ACCC AAC	37-48	42.8125	27-38	17.5	52.3517	14
1711C	CCC AC	03-24	38.8174	17-24	10.2	49.8883	15
1727C	CCC CC	21-32	41.4072	15-30	12.8	52.3375	15
172C	ACCC AAC	47-36	42.9563	37-32	17.3	53.0724	14
173C	CCC CCP	27-02	41.9628	51-22	24.3	45.8869	13
175C	CAC CCP	25-52	40.8002	01-32	24.3	44.7617	13
176C	CCC AACP	43-18	40.4164	51-24	22.0	44.6161	13
186C	CCC CAC	43-46	35.6766	31-34	17.1	45.3139	14
192C	CCCC CCC	25-46	47.958	41-28	21.9	57.3843	14
196C	CCC AAC	19-50	36.2085	27-30	17.4	45.5771	14
208C	CCCC AAC	49-34	43.7551	29-28	17.6	53.0574	14
211C	CCC AAC	19-04	37.5935	27-24	17.4	46.9377	14
215C	CCCC CCC	31-42	47.923	31-46	21.5	57.6166	13
220C	CCC AAC	15-06	37.3408	25-16	17.5	46.8568	14
221C	AC CCP	43-06	32.57	31-02	23.0	36.5132	13
223C	CCCC ACA	15-22	49.0222	09-10	22.1	54.9531	13
224C	CCCC ACA	37-32	49.0188	43-44	22.1	54.9499	13
2317C	CC CA	19-46	32.7061	13-46	10.9	40.952	15
234C	CCCC AAC	35-06	51.5712	31-16	17.5	61.6408	14
266C	CCCC CCP	15-40	50.6248	13-48	22.7	55.7642	13
272C	CCC CACP	33-34	42.774	47-42	24.0	46.5071	13
280C	CCC AAC	17-48	35.9029	21-38	17.5	46.0056	14
2871C	CC CA	19-08	32.8251	13-08	10.9	40.9888	15
2905C	CC CA	17-40	33.7991	23-50	12.1	42.333	15
2957C	CC AA	15-08	32.1586	21-04	10.3	40.0061	15
297C	ACC CC	15-24	30.9136	21-30	13.1	42.0802	15
3032C	CC CA	27-22	33.5626	49-30	12.3	41.9657	15
3033C	CCC CC	29-24	40.0906	29-16	12.9	50.9175	15
3051C	CAC CA	09-14	33.8003	09-12	22.0	40.9895	13
3076C	CC AA	07-38	31.2187	03-32	10.1	39.1758	15

TABLE 1 (continued)

## EOC 13 REUSED CHANNELS

## CORE LOCATION AND EXPOSURE DATA

CHANNEL S/N	CORE HISTORY 1111 234567B90123	CYCLE 12 LOCATION XX-YY	EOC 12 CHANNEL TOTAL EXPOSURE	CYCLE 13 LOCATION XX-YY	EOC 13 FUEL EXPOSURE	EOC 13 CHANNEL EXPOSURE	ANTICIPATED CHANNEL DISCHARGE CYCLE	
							CHANNEL	BUNDLE
3090C	CC CA	45-34	32.3544	45-40	10.7	40.5451	15	
3095C	CCC C	N/A	26.3352	39-42	0.0	38.0682	16	
3112C	CCC C	N/A	26.3316	15-42	0.0	38.0977	16	
3270C	CC CA	35-08	32.3233	37-06	10.8	40.5284	15	
3278C	CC CA	35-14	34.1952	29-04	12.1	42.6547	15	
3292C	CC CC	39-40	32.937	29-30	12.1	42.9953	15	
3294C	CC AA	45-38	30.7462	49-32	10.1	38.6025	15	
3310C	CCC CCC	27-46	45.682	11-28	21.9	55.1322	13	
3326C	CC CA	45-20	33.3143	45-14	10.7	41.4694	15	
3348C	CCC C	N/A	26.8779	11-38	0.0	38.6582	16	
3367C	CC C	N/A	20.3529	15-12	0.0	32.0672	16	
3368C	CC CA	33-08	32.8368	39-08	10.9	40.9676	15	
3373C	CC CC	29-16	35.6122	29-22	13.2	46.7667	15	
3374C	CC CA	47-22	33.4569	49-18	11.9	40.5633	15	
3410C	CC AA	45-08	31.2378	49-22	10.1	39.0909	15	
3420C	CC CC	31-22	34.8648	37-24	12.8	45.7091	15	
3430C	CC CA	37-12	33.0084	27-04	11.8	41.6877	15	
3448C	CC C	N/A	19.4338	41-16	0.0	31.1025	16	
408C	CCC ACC	15-44	47.2139	17-36	21.7	56.5065	13	
4099C	CC CC	29-08	34.4026	37-10	13.0	44.774	15	
4200C	CC CC	31-44	33.2711	39-42	12.2	43.7073	15	
4261C	CC CA	07-20	32.7847	07-14	10.7	41.051	15	
50001	CCC AAC	35-48	35.9255	31-38	17.5	46.0362	14	
50005	CCCC AAC	17-06	45.3998	21-16	17.5	55.4894	14	
50006	CCCC CCP	29-50	49.6884	05-28	0.0	52.4366	16	
50007	CCAPP AC	31-16	33.4391	29-36	10.4	44.495	15	
50009	CCCC ACC	21-04	49.5808	25-26	22.0	58.0573	13	
50012	CCCC CAD	49-20	46.8504	43-26	20.1	56.186	13	
50014	CCCC AAC	19-34	44.6251	29-26	17.6	53.9221	14	
50015	CCA CACP	43-08	40.0191	05-42	24.0	43.8384	13	
50018	CCCC CAC	05-38	42.7946	31-20	17.1	52.4301	14	
50021	CCCC AAC	25-08	44.9389	15-28	17.4	54.5082	14	
50024	CCCC CCC	31-08	48.9586	11-42	21.7	58.4351	13	
50028	CCCC CCP	41-22	49.7777	43-06	22.2	52.4658	13	
50030	CCCC CCC	43-22	49.5238	45-22	21.5	59.1473	13	
50031	PPAP CC	31-46	28.8354	41-14	12.0	39.241	15	
50033	CCCC CCP	03-20	49.4578	43-48	22.2	52.1797	13	
50042	CCCC AAC	05-18	44.2025	23-26	17.6	53.5269	14	
50044	CCCC AAC	05-36	44.8268	15-22	17.3	54.9631	14	
50048	CCCC AAC	21-08	44.5794	15-32	17.3	54.7091	14	
50050	CCCC CCP	21-38	49.7239	09-06	22.2	52.4053	13	
50053	CCC ACC	01-26	40.8822	25-28	22.4	49.3818	13	
50054	CCP CCPP	33-04	36.4553	17-02	24.2	39.2464	13	
50056	CCC AAC	37-10	35.7	25-24	17.4	45.0536	14	
50059	CCCC ACC	37-10	45.8169	35-16	19.5	56.0803	14	
50060	C CCC C	N/A	28.6995	41-38	0.0	40.4283	16	
50062	CCCC CCC	11-22	49.046	07-22	21.5	58.7386	13	
50066	CCCC ACA	09-32	50.4527	09-44	22.1	56.4476	13	

TABLE 1 (continued)

## EOC 13 REUSED CHANNELS

## CORE LOCATION AND EXPOSURE DATA

CHANNEL S/N	CORE HISTORY 1111 234567890123	CYCLE 12 LOCATION XX-YY	EOC 12 TOTAL EXPOSURE	CYCLE 13 LOCATION XX-YY	EOC 13 FUEL BUNDLE EXPOSURE	EOC 13 TOTAL CHANNEL EXPOSURE	ANTICIPATED CHANNEL DISCHARGE CYCLE
50069	CCCC AAC	03-34	44.6447	25-28	17.6	53.9786	14
50074	C CCC CA	15-12	43.0631	25-04	11.8	51.7381	15
50075	CCC CAC	31-04	38.3006	09-26	20.1	47.6873	13
50080	CC AAC	37-06	33.418	27-16	17.4	42.9606	14
50083	CCCC CAC	09-46	42.6249	21-34	17.1	52.258	14
50084	CCCC CCC	25-38	48.9146	19-36	21.7	57.9831	13
50086	CCCC CCC	11-32	48.7391	07-32	21.5	58.4421	13
50087	CCCC CAC	09-08	42.9249	21-20	17.1	52.5512	14
50090	CCCC CCC	21-12	49.5312	21-08	21.5	59.1724	13
50099	CCCCC ACA	37-22	58.5406	43-10	22.1	64.4032	13
50100	CCCC ACC	15-10	47.0336	17-16	19.5	56.293	14
50104	CCCC CAC	21-50	47.226	09-28	20.1	56.635	13
5230	CCC CC	29-12	40.4702	29-06	12.3	50.9822	15
5420	CCC CC	21-40	41.7126	19-40	13.1	52.9411	15
55970	CC CA	07-34	32.6944	07-40	10.7	40.9684	15
56020	CC CA	33-46	32.4016	39-46	11.0	40.6421	15
56070	CC AA	07-16	30.7447	03-22	10.1	38.6922	15
56120	CCC C	N/A	26.8528	11-12	0.0	38.5981	16
56160	CC CC	31-26	33.8135	47-34	12.3	43.8854	15
56480	CC CC	39-20	33.9336	29-11	12.3	45.3298	15
56490	CC CC	13-14	33.5393	23-24	12.1	43.6038	15
5750	ACC CCC	31-12	48.216	31-08	21.5	57.8426	13
58030	CC CC	39-14	33.2867	29-24	12.1	43.3389	15

TABLE 2

## EOC 13 REUSED CHANNELS

## PREDICTED AND MEASURED BOW DATA

CHANNEL S/N	CORE HISTORY	EOC 12 MAXIMUM BOW	EOC 13 MAXIMUM BOW	MEASUREMENT HISTORY						SCHEDULED MEASUREMENT PRIORITY
				EOC 6	EOC 7	EOC 8	EOC 9	EOC 10	EOC 11	
116C	PPAP AACP	0.0551	-0.0643							
121C	ACCC CCC	0.1515	0.1996							
1232C	CCC C	0.0375	0.0564							
125C	CCC CCP	0.0538	0.0513							
130C	CCCC ACC	0.1196	0.1629							
*32C	CCC AAC	0.0233	0.0566							
138C	ACCC AJC	0.1744	0.2189							
139C	PACC CAC	-0.0673	0.0821							
1400C	CC AA	0.0685	0.0775							
140C	CC CCP	0.0372	0.028							
159C	CCCC ACC	-0.1454	0.1977							
1637C	CCC AA	0.0727	0.0819							
1638C	CCP CA	0.0427	0.0556				0.021/19.3	-0.03/23.4		
163C	CCC AAC	0.0735	0.1084							
164C	ACCC CCC	0.1708	0.218							
166C	ACCC CCC	0.1515	0.1999							
1670C	CC AA	0.0677	0.0771							
1674C	CCC CC	0.0733	0.1145							
167C	ACCC AAC	0.0952	0.1371							
1711C	CCC AC	0.0806	0.1249				0.076/26.8			
1727C	CCC CC	0.0777	0.1248				0.033/26.4			
172C	ACCC AAC	0.0861	0.1311							
173C	CCC CCP	0.0577	0.0456							
175C	CAC CCP	0.1043	0.092							
176C	CCC AACP	0.096	0.0976							
186C	CCC CAC	0.0601	0.0939							
192C	CCCC CCC	0.1041	0.1518							
196C	CCC AAC	0.0735	0.1068							
208C	CCCC AAC	0.0773	0.1191							
211C	CCC AAC	0.0736	0.1084							
215C	CCCC CCC	0.1039	0.1532							
220C	CCC AAC	0.0247	0.0599							
221C	AC CCP	0.0972	0.0945							
223C	CCCC ACA	0.1198	0.1077							
224C	CCCC ACA	0.1198	0.1077							
2317C	CC CA	0.0508	0.0742							
234C	CCCC AAC	0.052	0.1084							
266C	CCCC CCP	0.1164	0.1087							
272C	CCC CACP	0.096	0.1027							
280C	CCC AAC	0.0278	0.0638							
2871C	CC CA	0.0511	0.0742							
2905C	CC CA	0.0537	0.0823							
2957C	CC AA	0.0685	0.0775							
297C	ACC CC	0.0041	0.038	-0.026/8.8						
3032C	CC CA	0.0531	0.0813							
3033C	CCC CC	0.0731	0.1178							
3051C	CAC CA	0.0975	0.1067							
3076C	CC AA	0.0678	0.0774							

TABLE 2 (continued)

## EOC 13 REUSED CHANNELS

## PREDICTED AND MEASURED BOW DATA

CHANNEL S/N	CORE HISTORY 1111 c34567890123	EOC 12 MAXIMUM CHANNEL BOW	EOC 13 MAXIMUM CHANNEL BOW	MEASUREMENT HISTORY MAXIMUM BOW (INCHES) / EXPOSURE (GWD/MTU)						SCHEDULED MEASUREMENT PRIORITY
				EOC 6	EOC 7	EOC 8	EOC 9	EOC 10	EOC 11	
3090C	CC CA	0.0499	0.0732							
3095C	CCC C	0.0364	0.0553							
3112C	CCC C	0.0364	0.0553							
3270C	CC CA	0.0498	0.0629							
3278C	CC CA	0.0568	0.083							
3292C	CC CC	0.0514	0.0836							
3294C	CC AA	0.0677	0.0769							
331C	CCC CCC	0.0943	0.1393							
3326C	CC CA	0.0524	0.0753							
3348C	CCC C	0.0375	0.0564							
3367C	CC C	0.0267	0.0456							
3368C	CC CA	0.0511	0.0741							
3373C	CC CC	0.0588	0.0989							
3374C	CC CA	0.0528	0.0754							
3410C	CC AA	0.0679	0.077							
3420C	CC CC	0.0567	0.0944							
3430C	CC CA	0.0516	0.0811							
3448C	CC C	0.0225	0.0444							
408C	CCC ACC	0.1139	0.1599							
4099C	CC CC	0.0554	0.0906							
4200C	CC CC	0.0523	0.0864							
4261C	CC CA	0.051	0.0744							
50001	CCC AAC	0.0278	0.0638	0.056/9.3						
50005	CCCC AAC	0.0392	0.0873							
50606	CCCC CCP	0.112	0.1069							
50007	CCAPP AC	0.0423	0.079		0.029/14.3	-0.075/17.1	-0.048/21.4			
50009	CCCC ACC	0.1214	0.1656							
50012	CCCC CAC	0.0944	0.1402							
50014	CCCC AAC	0.0782	0.1211							
50015	CCA CACP	0.1194	0.1095							
50018	CCCC CAC	0.0768	0.1192							
50021	CCCC AAC	0.0352	0.0799							
50024	CCCC CCC	0.1086	0.1579							
50028	CCCC CCP	0.1124	0.1075							
50030	CCCC CCC	0.1112	0.1621							
50031	PPAP CC	0.0885	0.1171	-0.36/5.4	0.051/11.7	-0.041/14.6				
50033	CCCC CCP	0.1109	0.1059							
50042	CCCC AAC	0.0777	0.1202							
50044	CCCC AAC	0.0384	0.086							
50048	CCCC AAC	0.0381	0.0853							
50050	CCCC CCP	0.1121	0.1072							
50053	CCC ACC	0.1007	0.1354							
50054	CCP CP	0.0377	0.0289							
50056	CCC AAC	0.0737	0.1064							
50059	CCCC ACC	0.0523	0.1583							
50060	C CCC C	0.0413	0.0602		0.054/11.5	0.068/18.9	-0.065/28.7			
50062	CCCC CCC	0.109	0.1597							1
50066	CCCC ACA	0.1242	0.1121							1

TABLE 2 (continued)

## EOC 13 REUSED CHANNELS

## PREDICTED AND MEASURED BOW DATA

CHANNEL S/N	CORE HISTORY 1111 234567890123	EOC 12	EOC 13	MEASUREMENT HISTORY						SCHEDULED MEASUREMENT PRIORITY
		MAXIMUM CHANNEL BOW	MAXIMUM CHANNEL BOW	EOC 6	EOC 7	EOC 8	EOC 9	EOC 10	EOC 11	
50069	CCCC AAC	0.0782	0.1213							
50074	C CCC CA	0.0839	0.1101				0.093/19.6	0.098/29.5		2
50075	CCC CAC	0.0775	0.1133							
50080	CC AAC	0.0221	0.0529							
50083	CCCC CAC	0.0763	0.1185							
50084	CCCC CCC	0.1084	0.1553							2
50086	CCCC CCC	0.1076	0.1579							2
50087	CCCC CAC	0.0772	0.1197							
50090	CCCC CCC	0.1112	0.1623							
50099	CCCCCC ACA	0.1543	0.1433				0.097/33.9		118/44.0	1
50100	CCCC ACC	0.1135	0.1591							2
50104	CCCC CAC	0.0953	0.142							
523C	CCC CC	0.0744	0.118							2
542C	CCC CC	0.0789	0.1278				0.026/16.3	0.026/26.4		2
5597C	CC CA	0.0508	0.0742							
5602C	CC CA	0.05	0.0735					0.061/19.5		2
5607C	CC AA	0.0677	0.0772							
5612C	CCC C	0.0374	0.056							
5616C	CC CC	0.0537	0.0871							
5648C	CC CC	0.0541	0.0929							
5649C	CC CC	0.053	0.086							
575C	ACC CCC	0.215	0.2642							1
5803C	CC CC	0.0523	0.085							

NOTE : PRIORITY MEASUREMENT DEFINITION :

- (1) - MUST MEASURE
- (2) - MEASURE IF TIME IS AVAILABLE

TABLE 3  
EOC 12 REUSED CHANNEL MEASUREMENT PROGRAM  
LISTED IN PRIORITY MEASUREMENT SEQUENCE

CHANNEL	CORE HISTORY	INITIAL	DISCHARGE	FUEL	EXPOSURE	TOTAL		REASON FOR MEASUREMENT *
						REUSE	CYCLE	
24BC	ACCCCC	11	10	ASSY	62.8188	0.2842	1,3,4,5,6,7	
122C	CCCCCC	11	10	G732	62.4516	0.1826	1,4,5,6,7	
50099	CCCC AC	11	13	D624	58.5406	0.1543	1,4,5,6,7	
50039	CCCCCCC	10	12	J182	57.3904	0.1283	1,5,6,7	
521C	CCCCCC	10	12	G736	54.9141	0.1382	1,5,6,7	
159C	CCCC AC	11	13	D610	56.4073	0.1454	1,2,7	
123C	CCCC CCC	10	12	G727	53.9213	0.1329	1,5,7	
205C	CCCC CCC	10	12	G739	53.6448	0.1315	1,5,7	
234C	CCCC AA	11	13	D600	51.5712	0.052	1,5,7	
266C	CCCC CC	11	13	D661	50.6248	0.1164	1,7	
50066	CCCC AC	11	13	D621	50.4527	0.1242	1,7	
575C	ACC CC	11	13	D616	48.2116	0.215	2,3,4,7	
138C	ACCC AC	11	13	D594	46.0315	0.1744	2,3,7	
164C	ACCC CC	11	13	D648	47.6297	0.1708	2,3,7	
121C	ACCC CC	11	13	D618	47.2578	0.1515	2,3,7	
166C	ACCC CC	11	13	D613	47.247	0.1515	2,3,7	
50009	CCCC AC	11	13	D612	49.5808	0.1214	2	
130C	CCCC AC	11	13	D611	48.9679	0.1196	2	
408C	CCC AC	11	13	D593	47.2139	0.1139	2	
50100	CCCC AC	11	13	D595	47.0336	0.1135	2	
50059	CCCC AC	11	13	D596	46.8169	0.1129	2	
50030	CCCC CC	11	13	D620	49.5238	0.1112	2	
50090	CCCC CC	11	13	D615	49.5312	0.1112	2	
50062	CCCC CC	11	13	D619	49.046	0.109	2	
50024	CCCC CC	11	13	D647	48.9586	0.1086	2	
50084	CCCC CC	11	13	D653	48.9146	0.1084	2	
50086	CCCC CC	11	13	D617	48.7391	0.1076	2	
192C	CCCC CC	11	13	D645	47.958	0.1041	2	
215C	CCCC CC	11	13	D614	47.923	0.1039	2	
50031	PPAP C	12	14	L697	28.8354	0.0885	3,5	
50011	ACC CCC	10	12	G743	44.2345	0.0462	3,5	
255C	CAC ACC	10	12	J133	42.1759	0.1518	4	
1638C	CCP C	12	14	L700	35.4312	0.0427	5,6	
1727C	CCC C	12	14	L595	41.4072	0.0777	5	
1674C	CCC C	12	14	D791	40.1378	0.0733	5	
50065	CCC CCP	10	12	J150	40.0688	0.0558	5	
1711C	CCC A	12	14	L580	38.8174	0.0808	5	
50007	CCAPP A	12	14	L676	33.4391	0.0423	5	
4200C	CC C	12	14	L534	33.2711	0.0523	5	
5602C	CC C	12	14	D794	32.4016	0.05	5	
3294C	CC A	12	14	D792	30.7462	0.0677	5	
50074	C CCC C	12	14	L699	43.0631	0.0839	6	
542C	CCC C	12	14	L708	41.7126	0.0789	6	
523C	CCC C	12	14	L698	40.4702	0.0744	6	
144C	CAPP CCP	10	12	J173	38.7213	0.1037	6	
-----								
45 TOTAL								* REASON FOR MEASUREMENT CODES:

- (1) : EOC 12 CHANNEL EXPOSURE > 50 GWD/MTU.
- (2) : PREDICTED EOC 13 BOW > 0.1500 INCHES.
- (3) : INITIAL CYCLE 'A' OR 'P'.
- (4) : PREDICTED EOC 12 BOW > 0.1500 INCHES  
FOR DISCHARGE CHANNELS.
- (5) : CHANNEL PREVIOUSLY MEASURED AT EOC 11.
- (6) : CHANNEL PREVIOUSLY MEASURED AT EOC 9.
- (7) : MUST BE MEASURED.

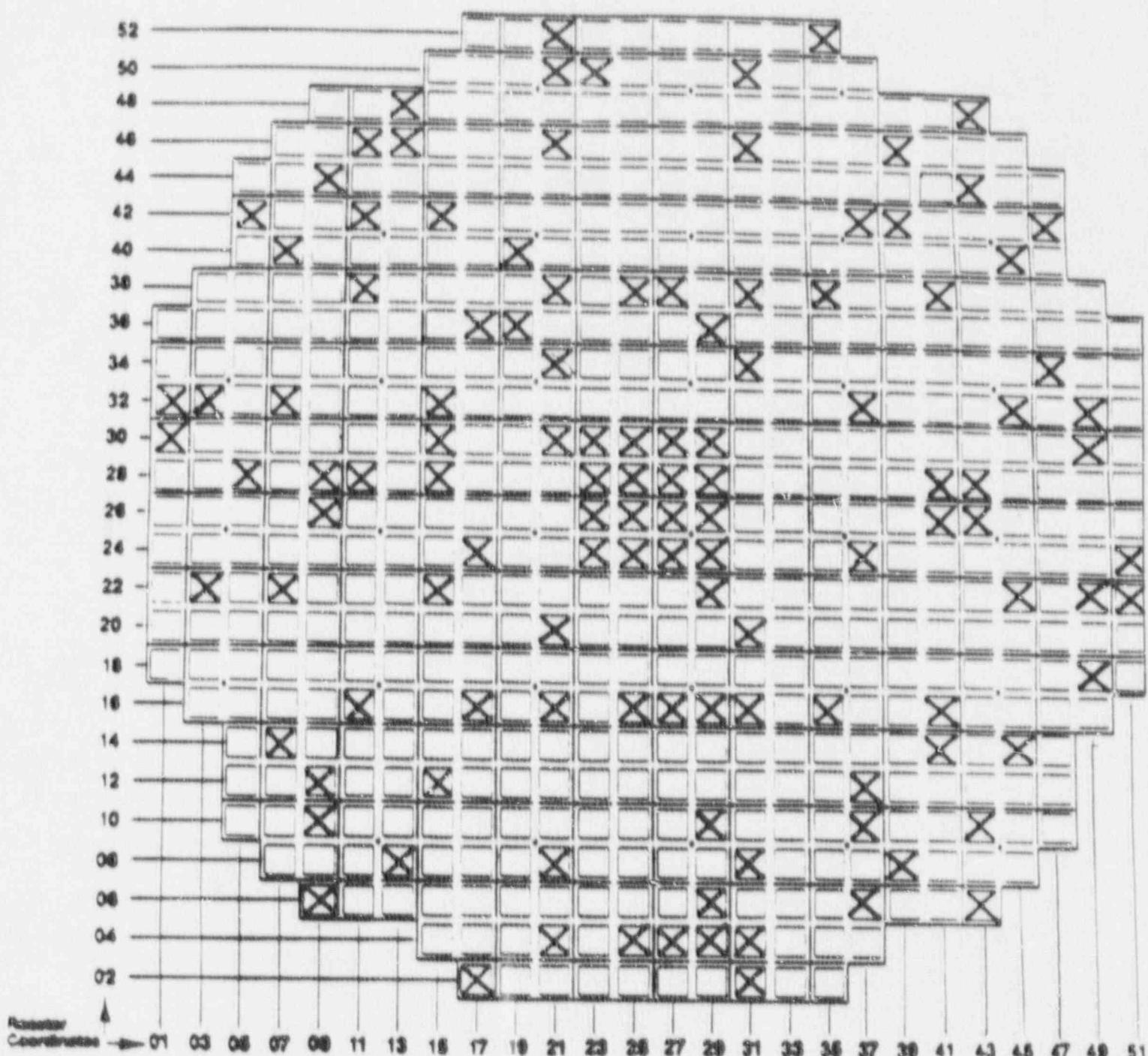
TABLE 4

## EOC 12 DISCHARGED REUSED CHANNELS NOT MEASURED DURING EOC 12 OUTAGE

CHANNEL S/N	CORE HISTORY	INITIAL REUSE CYCLE	FUEL ASSY NO.	TOTAL CHANNEL EXPOSURE GWD/MTU	MAXIMUM PREDICTED BOM INCHES	CHANNEL MEASUREMENT HISTORY					
						EOC 6	EOC 7	EOC 8	EOC 9	EOC 10	EOC 11
119C	CC CCC	10	J122	37.7811	0.0654						
124C	CC CCC	10	J188	38.495	0.0677						
125C	CCC CCP	10	J169	39.5498	0.0538						
127C	CCC CCC	10	J141	45.3192	0.0928						
135C	ACC CCP	10	J177	40.4448	0.0314						
143C	CCC CCC	10	J145	45.1632	0.0922						
145C	PCC CCC	10	J144	43.9156	0.0607						
148C	CCP CCP	10	J157	35.7732	0.0521						
151C	CCC CCC	10	J146	45.0346	0.0917						
165C	CCC CCC	10	G724	45.5667	0.0938						
216C	AC ACC	10	J134	35.9434	0.129						
225C	CCC CCC	10	J165	45.3987	0.0932						
252C	CAC CCC	10	G748	43.663	0.1359						
254C	CCC CCP	10	J158	39.9054	0.0551						
257C	CCC CCC	10	G735	45.4158	0.0932						
258C	PPAA CCC	10	G744	44.5081	0.0601	-0.084/4.4	-0.087/10.8				
265C	CCC CAC	10	J153	43.9595	0.0982						
268C	CCC CCC	10	J142	45.0774	0.0918						
271C	CC CUP	10	J174	32.9921	0.057						
289C	CAPP CCC	10	J190	43.7312	0.1211						
292C	CCC ACC	10	J131	43.3371	0.1054						
295C	CCC CCC	10	G747	44.5426	0.0897						
50013	CCC CCP	10	J178	39.9819	0.0724						
50023	CCC CCP	10	J149	39.7821	0.055						
50026	AC CCC	10	G733	38.6759	0.109						
50032	CAC CCC	10	G728	43.8049	0.1389						
50072	CC CCC	10	J137	37.3594	0.0641						
50078	CAC CCC	10	G749	43.4999	0.1378						
50082	CCC CAC	10	J154	43.2484	0.0965						
50093	CCC CCC	10	J166	45.2354	0.0925						
50094	CC CCC	10	J185	37.8772	0.0657						
50096	CC ACC	10	J130	35.8585	0.0919						

## LOCATION OF CYCLE 13 REUSED CHANNELS

## OYSTER CREEK CORE MAP



X REUSED CHANNEL

FIGURE 1

## CYCLE 13 LIMITING FUEL ASSEMBLIES AND REUSED CHANNEL LOCATIONS

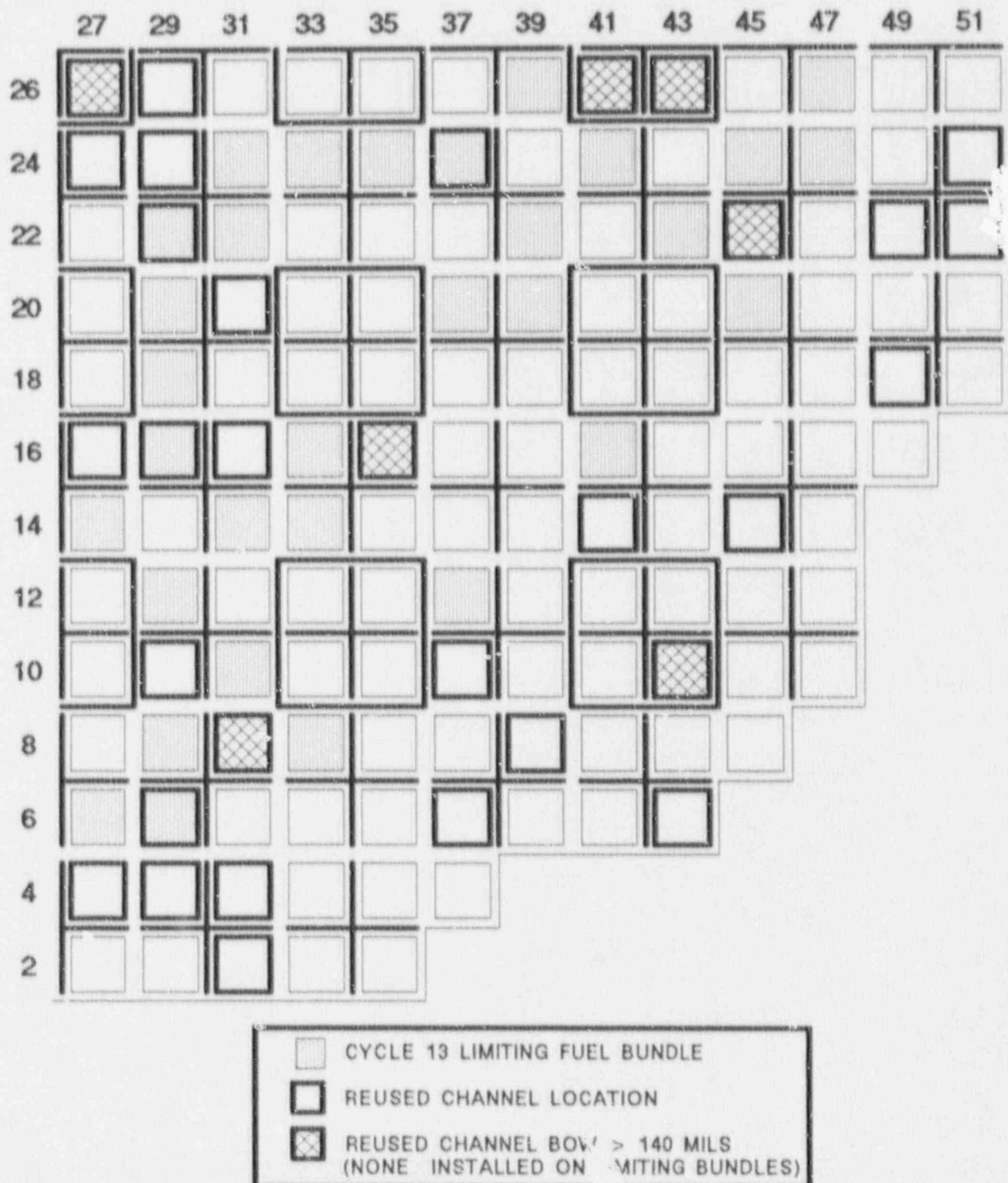


Figure 2