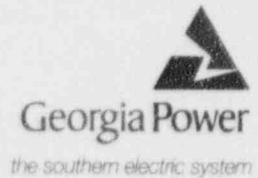


Georgia Power Company
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Post Office Box 1295
Birmingham, Alabama 35201
Telephone 205 992-7122



C. K. McCoy
Vice President, Nuclear
Vogtle Project

November 7, 1996

Docket No. 50-425

LCV-0788-H

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
FOLLOW UP RESPONSE TO NRC BULLETIN 96-01
END OF UNIT 2 CYCLE 5 DRAG TEST DATA
BEGINNING OF UNIT 2 CYCLE 6 ROD DROP TIME TEST DATA
UNIT 2 CYCLE 6 RODDED FUEL ASSEMBLY TYPE AND BURNUP DATA

By letter LCV-0788 dated April 4, 1996, Georgia Power Company (GPC) responded to NRC Bulletin 96-01. This response included commitments for control rod drop time testing following shutdown of Vogtle Electric Generating Plant (VEGP) Unit 2 Cycle 5, drag testing of Cycle 5 rodded assemblies, and control rod drop time testing of Cycle 6 rodded assemblies prior to Cycle 6 reactor startup. Drag test results and control rod drop time test results from tests performed prior to Cycle 6 reactor startup are contained in Enclosures 1 and 2, respectively. Results from control rod drop time testing following the shutdown of VEGP-2 Cycle 5 were submitted to the NRC previously by letter LCV-0788-E, dated September 13, 1996. Letter LCV-0788 also contained a commitment to provide, after VEGP-2 Cycle 6 criticality, a core map of Cycle 6 rodded fuel assemblies containing fuel type and burnup information. Enclosure 3 contains this information.

Enclosure 1 contains drag test results for all assemblies which were rodded during VEGP-2 Cycle 5. Drag tests were performed using the same Rod Cluster Control Assembly (RCCA) that resided in the assembly during Cycle 5. All 53 assemblies exhibited low drag forces which were well within the drag force criteria contained in Westinghouse specification F-5.1, Instructions, Precautions, and Limitations for Handling Rod Cluster Control Assemblies and Core Component Assemblies. The drag force values contained in Enclosure 1 represent the maximum of the withdrawal and insertion drag values obtained for each assembly.

Enclosure 2 contains control rod drop time test data for tests performed on the VEGP-2 Cycle 6 core prior to reactor startup. All control rods inserted fully. All rod drop times met the requirements of Technical Specification 3.1.3.4. Recoil was observed for all rods.

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PDR ADOCK 05000425
G PDR

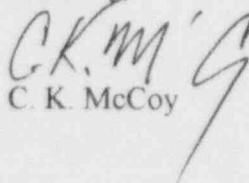
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Enclosure 3 contains a core map for VEGP-2 Cycle 6 indicating for each rodged location the control rod bank identification, the assembly identification number, the beginning of cycle burnup, and the projected end of cycle burnup. Enclosure 3 also contains a table of the physical assembly characteristics of the two regions of fuel in Cycle 6 which contain control rods.

Early in Cycle 6, on October 14, 1996, and again on October 23, 1996, VEGP-2 tripped, and timely complete control rod insertion was confirmed per normal trip response procedures. The VEGP-2 Cycle 6 core was at cycle average burnups of approximately 41 MWD/MTU and 319 MWD/MTU, respectively, at the time of the trips. Because all control rods inserted fully, and consistent with our commitments in letter LCV-0788, no additional control rod testing was performed.

All actions requested in Bulletin 96-01 and committed to by GPC in letter LCV-0788 have now been completed and results transmitted to the NRC. Therefore, GPC considers that no further actions or reporting are required by Bulletin 96-01 unless incomplete control rod insertion is observed at VEGP.

Sincerely,


C. K. McCoy

CKM/SH-K/gmb

Enclosures:

1. Vogtle-2 Cycle 5 Drag Tests Results During Refueling Outage
2. Vogtle-2 Cycle 6 BOC Rod Drop Time Test Results
3. Vogtle-2 Cycle 6 Core Map of BOC and EOC Burnup of Rodded Assemblies and Table of Physical Characteristics of Rodded Assemblies

U. S. Nuclear Regulatory Commission
Page 3

c(w): Georgia Power Company
Mr. J. B. Beasley, Jr.
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebnetter, Regional Administrator
Mr. L. L. Wheeler, Licensing Project Manager, NRR
Mr. C. R. Ogle, Senior Resident Inspector, Vogtle

ENCLOSURE 1

VOGTLE-2 CYCLE 5 DRAG TEST RESULTS DURING REFUELING OUTAGE

F/A ID	Maximum Dashpot Drag (lbs)	Max Thimble Tube Drag (lbs)	Cycle 5 RCCA Bank ID	Assembly Burnup (MWD/MTU)		Burnup Sharing	
				EOC4	EOC5	EOC4	EOC5
5S05	28	11	C	19800.5	43522.0	1.01	1.07
5S08	32	10	C	19949.3	43918.9	1.02	1.08
5S09	28	7	C	20095.4	44224.5	1.03	1.09
5S10	23	7	C	19724.9	43758.8	1.01	1.08
5S44	37	6	D	27007.6	48241.1	1.38	0.96
5S13	28	8	D	23901.5	47234.3	1.22	1.05
5S14	27	6	D	23730.1	47214.2	1.21	1.06
5S27	39	9	D	24152.0	47577.9	1.23	1.05
5S29	30	7	D	23707.5	46960.8	1.21	1.05
5S39	22	4	SA	26752.2	39886.4	1.37	0.59
5S40	31	7	SA	26733.7	40055.6	1.36	0.60
5S46	25	3	SA	26819.2	40022.5	1.37	0.59
5S47	31	5	SA	26705.6	39889.9	1.36	0.59
5S35	22	2	SA	26947.9	40182.8	1.38	0.60
5S37	29	10	SA	26906.3	40483.5	1.37	0.61
5S42	35	3	SA	26852.7	40437.1	1.37	0.61
5S49	26	6	SA	26801.1	40017.0	1.37	0.59
5T60	57	6	A		29895.0		1.35
5T69	48	2	A		29802.4		1.34
5T79	37	8	A		29983.0		1.35
5T82	39	7	A		29836.6		1.34
5T15	33	7	B		25856.9		1.16
5T21	23	5	B		26133.4		1.18
5T30	24	7	B		26411.8		1.19
5T32	27	6	B		25701.0		1.16
5T13	27	3	B		25667.8		1.16
5T14	30	5	B		25425.1		1.14
5T27	20	4	B		25819.7		1.16
5T29	18	3	B		25447.8		1.15
5T17	19	3	C		26401.0		1.19
5T22	26	5	C		26571.5		1.20
5T23	25	5	C		26291.9		1.18
5T26	37	3	C		26481.1		1.19
5T34	53	10	SB		29738.7		1.34
5T35	47	5	SB		29599.3		1.33
5T39	33	5	SB		29536.9		1.33
5T43	52	2	SB		29523.5		1.33
5T36	25	6	SB		29593.4		1.33
5T38	28	4	SB		29485.8		1.33
5T40	32	5	SB		29310.2		1.32
5T42	64	6	SB		29369.4		1.32
5T56	52	4	SC		29042.8		1.31
5T63	40	5	SC		29360.3		1.32
5T77	49	5	SC		29450.5		1.33
5T81	39	4	SC		29306.4		1.32
5T55	56	5	SD		29757.1		1.34
5T72	46	8	SD		29556.3		1.33
5T84	34	7	SD		30344.7		1.37
5T86	45	5	SD		30050.3		1.35
5T33	45	5	SE		29282.1		1.32
5T37	59	9	SE		29228.1		1.32
5T41	60	6	SE		29439.4		1.33
5T44	39	8	SE		29213.0		1.32

EOC4 BURNUP
EOC5 BURNUP

19596.5
22214.4

ENCLOSURE 2

VOGTLE-2 CYCLE 6 BOC ROD DROP TIME TEST RESULTS:

F/A ID	Cycle 6 RCCA Bank ID	Cycle 6 RCCA Location	Assembly Burnup (MWD/MTU) EOC5/BOC6	Cycle 5 Burnup Sharing	Rod Drop Times	
					Dashpot Entry (m/sec)	Turnaround (msec)
5T05	C	K06	20937.2	0.94	1602	2122
5T08	C	K10	20909.1	0.94	1596	2136
5T09	C	F10	21235.4	0.96	1606	2146
5T10	C	F06	21041.3	0.95	1644	2164
5T54	D	M04	29512.0	1.33	1634	2184
5T57	D	M12	29181.1	1.31	1572	2152
5T67	D	D12	29334.5	1.32	1584	2184
5T71	D	D04	29360.4	1.32	1574	2164
5T58	SA	P04	29661.6	1.34	1628	2158
5T64	SA	B12	30019.8	1.35	1570	2120
5T65	SA	M14	30193.3	1.36	1606	2196
5T73	SA	D02	29833.8	1.34	1636	2226
5T61	SA	D14	30025.7	1.35	1656	2186
5T78	SA	P12	30114.2	1.36	1588	2138
5T80	SA	M02	29823.9	1.34	1580	2150
5T85	SA	B04	30074.3	1.35	1628	2188
5T60	SE	M08	29895.0	1.35	1590	2150
5T69	SE	H04	29802.4	1.34	1612	2162
5T79	SE	H12	29983.0	1.35	1606	2126
5T82	SE	D08	29836.6	1.34	1640	2160
5U58	A	H06	0.0	N/A	1582	2142
5U66	A	F08	0.0	N/A	1614	2134
5U78	A	H10	0.0	N/A	1656	2146
5U85	A	K08	0.0	N/A	1612	2142
5U15	B	K02	0.0	N/A	1578	2098
5U16	B	F14	0.0	N/A	1604	2144
5U19	B	P10	0.0	N/A	1562	2122
5U25	B	B06	0.0	N/A	1590	2140
5U27	B	K14	0.0	N/A	1580	2120
5U29	B	P06	0.0	N/A	1566	2106
5U34	B	F02	0.0	N/A	1594	2124
5U37	B	B10	0.0	N/A	1650	2150
5U13	C	B08	0.0	N/A	1622	2122
5U18	C	H14	0.0	N/A	1608	2118
5U23	C	P08	0.0	N/A	1558	2078
5U24	C	H02	0.0	N/A	1564	2114
5U69	D	H08	0.0	N/A	1600	2120
5U56	SB	J03	0.0	N/A	1614	2174
5U70	SB	C07	0.0	N/A	1584	2124
5U73	SB	G13	0.0	N/A	1628	2158
5U76	SB	N09	0.0	N/A	1580	2230
5U51	SB	J13	0.0	N/A	1646	2156
5U59	SB	G03	0.0	N/A	1650	2200
5U71	SB	N07	0.0	N/A	1612	2112
5U75	SB	C09	0.0	N/A	1596	2146
5U46	SC	C11	0.0	N/A	1604	2104
5U60	SC	L13	0.0	N/A	1630	2170
5U72	SC	E03	0.0	N/A	1600	2110
5U82	SC	N05	0.0	N/A	1550	2090
5U43	SD	L03	0.0	N/A	1618	2158
5U64	SD	E13	0.0	N/A	1630	2160
5U65	SD	C05	0.0	N/A	1608	2148
5U84	SD	N11	0.0	N/A	1588	2128

EOC5 BURNUP

22214.4

ENCLOSURE 3

Vogtle 2 Cycle 6

R	P	N	M	L	K	J	H	G	F	E	D	C	B	A	
															1
		SA 5T80 29824 43483		B 5U15 0 27048		C 5U24 0 27898		B 5U34 0 27063		SA 5T73 29834 43518					2
			SD 5U43 0 29595		SB 5U56 0 30022		SB 5U59 0 30036		SC 5U72 0 29618						3
	SA 5T58 29662 43518		D 5T54 29512 51996			SE 5T69 29802 51478				D 5T71 29360 51996		SA 5T85 30074 43483			4
		SC 5U82 0 29618									SD 5U65 0 29595				5
	B 5U29 0 27063			C 5T05 20937 44040		A 5U58 0 29941		C 5T10 21041 44040				B 5U25 0 27048			6
		SB 5U71 0 30036									SB 5U70 0 30022				7
	C 5U23 0 27898		SE 5T60 29895 51478		A 5U85 0 29941		D 5U69 0 29805		A 5U66 0 29941		SE 5T82 29837 51478		C 5U13 0 27898		8
		SB 5U76 0 30022									SB 5U75 0 30036				9
	B 5U19 0 27048			C 5T08 20909 44040		A 5U78 0 29941		C 5T09 21235 44040				B 5U37 0 27063			10
		SD 5U84 0 29595									SC 5U46 0 29618				11
	SA 5T78 30114 43483		D 5T57 29181 51996			SE 5T79 29963 51478				D 5T67 29335 51996		SA 5T64 30020 43518			12
			SC 5U60 0 29618		SB 5U51 0 30036		SB 5U73 0 30022		SD 5U64 0 29595						13
		SA 5T65 30193 43518		B 5U27 0 27063		C 5U18 0 27898		B 5U16 0 27048		SA 5T61 30026 43483					14
															15

LEGEND

- ROD BANK
- ASSY. NUMBER
- CURR. BURNUP*
- PROJ. BURNUP
- @ EOC 6**
- (MWD/MTU)

* Actual as of 10/01/96

** Based on Design

PHYSICAL CHARACTERISTICS OF RODDED ASSEMBLIES

VOGTLE UNIT 2 CYCLE 6

	REGION 5T	REGION 5U
Assembly Type	VANTAGE 5*	VANTAGE 5*
Clad Material	Zircaloy-4	ZIRLO™
Grid Material		
Top grid	Inconel-718	Inconel-718
Mid-span grids	Zircaloy-4	Zircaloy-4
Bottom grid	Inconel-718	Inconel-718
Protective bottom grid	N/A	Inconel-718
Guide Tube Material	Zircaloy-4	Zircaloy-4
Guide Tube O.D. (inches)		
Above dashpot	0.4740	0.4740
At dashpot	0.4300	0.4300
Guide Tube I.D. (inches)		
Above dashpot	0.4420	0.4420
At dashpot	0.3970	0.3970

*17x17 assemblies with optimized fuel rod O.D. of 0.360 in. and with intermediate flow mixing (IFM) grids