VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 27, 1979

Serial No. 601
FR/CTS
Docket No. 50-338

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. O. D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton:

NORTH ANNA POWER STATION - UNIT 1
POWER DISTRIBUTION DATA

A telephone discussion was held on July 17, 1979 among members of the NRC Project Management and Core Performance groups and the Vepco Nuclear Fuel Operation group regarding a recent Licensee Event Report for North Anna Unit 1 (dated June 8, 1979, Report No. 79-079). During the course of this conversation, the NRC staff requested copies of recent incore flux map analysis results. Enclosed as Attachment 1 are the edits that were requested by the staff from the analyses of flux maps N1-1-53, N1-1-54, N1-1-61, and N1-1-62. The control rod position, core burnup, data, and power level for each map are shown on the attachment.

We are looking forward to meeting with your staff on August 21, 1979 to discuss this material and any other associated questions that you may have.

Very truly yours,

C. M. Stallings

C. M. Stallings, Vice President
Power Supply and Production
Operations

519 065

Enclosure

cc: Mr. James P. O'Reilly
Office of Inspection and
Enforcement, Region II

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INCORE - VEPCO VERSION 4 - 10/20/78 - RDD N. ANNA VERSION
N1-1-53A VNSA 0/220 9135 MWD/MTU 2/14/79 97 PCT VNICIFUA+FUA 00000010 02/15/79

ASSEMBLY-WISE MAXIMUM NUCLEAR F-DELTA-H

	K	P	N	M	L	K	J	H	G	F	E	D	C	B	A
1							0.706	0.705	0.563						
2						0.605	0.854	0.975	0.934	0.971	0.845	0.596			
3					0.656	0.988	1.057	1.059	1.135	1.060	1.068	0.996	0.649		
4				0.649	0.887	1.094	1.111	1.185	1.132	1.183	1.122	1.097	0.892	0.649	
5			0.575	0.955	1.077	1.112	1.206	1.150	1.214	1.164	1.221	1.120	1.091	0.979	0.589
6			0.834	1.047	1.104	1.222	1.170	1.238	1.177	1.240	1.173	1.198	1.100	1.043	0.836
7		0.565	0.969	1.057	1.171	1.121	1.218	1.179	1.236	1.180	1.239	1.144	1.162	1.040	0.954	0.572
8		0.679	0.928	1.133	1.118	1.173	1.150	1.235	1.164	1.223	1.165	1.188	1.110	1.117	0.936	0.713
9		0.548	0.954	1.040	1.158	1.121	1.193	1.133	1.210	1.164	1.219	1.136	1.161	1.046	0.973	0.563
10			0.827	1.039	1.086	1.182	1.119	1.188	1.144	1.205	1.146	1.185	1.117	1.047	0.847	
11			0.591	0.982	1.084	1.092	1.165	1.117	1.169	1.119	1.192	1.117	1.111	1.000	0.595	
12				0.660	0.898	1.049	1.074	1.145	1.044	1.153	1.096	1.092	0.908	0.669	
13					0.660	0.996	1.027	1.020	1.105	1.037	1.041	0.997	0.670		
14						0.601	0.853	0.962	0.918	0.951	0.829	0.588			
15							0.705	0.692	0.545						

INCORE - VEPCO VERSION 4 - 10/20/78 - ROD N. ANNA VERSION
N1-1-53A VNSA D/220 9135 MWD/MTU 2/14/79 97 PCT VNICIFDA.FOA 00000010 02/15/79

REG 2 NORMALIZED REACTION RATES N1-1-53A VNSA D/220 9135 MWD/MTU 2/14/79 97 PCT VNICIFDA.FOA 00000010

							0.615 H 1							
									0.739 F 2					
			0.586 M 3			1.172 J 3	1.014 H 3				D 3			
				0.478 L 4			1.245 H 4		1.220 F 4					
		0.785 N 5		1.225 L 5		1.265 J 5				1.224 E 5	0.986 D 5		B 5	
				L 6			1.284 H 6		F 6					
		1.269 N 7				1.284 J 7		1.269 G 7			1.054 D 7		B 7	
R 8		1.018 N 8		1.075 L 8					1.281 F 8			1.022 C 8	B 8	
				L 9				1.282 G 9	1.090 F 9					0.507 A 9
		0.951 N10				1.088 J10					D10		0.729 B10	
				L11			1.066 H11		1.069 F11	1.221 E11				
		0.580 N12				1.050 J12					1.002 D12	0.565 C12		
							1.031 H13		0.961 F13					
				L14				0.762 G14						
						0.500 J15								

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POOR ORIGINAL

INCORE - VEPCO VERSION 4 - 10/20/78 - RDD N. ANNA VERSION
N1-1-54A VNSA D/22o 10346 MWD/MTU 3/19/79 97 PCT VN1C1FDA 00000010 03/21/79

ASSEMBLYWISE MAXIMUM NUCLEAR F-DELTA-H

	H	P	N	M	L	K	J	H	G	F	E	D	C	B	A	
1							0.579.	0.722.	0.573.							1
2						0.610.	0.858.	0.984.	0.945.	0.982.	0.853.	0.601.				2
3					0.662.	0.998.	1.065.	1.058.	1.135.	1.061.	1.073.	1.001.	0.654.			3
4				0.656.	0.893.	1.100.	1.111.	1.181.	1.128.	1.181.	1.124.	1.101.	0.897.	0.654.		4
5			0.583.	0.969.	1.085.	1.117.	1.205.	1.148.	1.201.	1.157.	1.225.	1.125.	1.097.	0.987.	0.594.	5
6			0.840.	1.054.	1.108.	1.218.	1.161.	1.222.	1.160.	1.220.	1.167.	1.203.	1.103.	1.046.	0.843.	6
7		0.565.	0.971.	1.058.	1.167.	1.111.	1.204.	1.162.	1.216.	1.162.	1.221.	1.136.	1.161.	1.040.	0.956.	0.577.	7
8		0.681.	0.932.	1.134.	1.114.	1.163.	1.142.	1.216.	1.164.	1.205.	1.148.	1.176.	1.110.	1.118.	0.943.	0.719.	8
9		0.551.	0.956.	1.043.	1.157.	1.111.	1.182.	1.122.	1.194.	1.149.	1.204.	1.122.	1.163.	1.051.	0.980.	0.568.	9
10			0.831.	1.044.	1.091.	1.169.	1.111.	1.178.	1.131.	1.193.	1.136.	1.176.	1.111.	1.057.	0.854.		10
11			0.596.	0.991.	1.094.	1.097.	1.160.	1.110.	1.161.	1.112.	1.187.	1.116.	1.113.	1.007.	0.600.		11
12				0.669.	0.910.	1.114.	1.073.	1.142.	1.091.	1.152.	1.095.	1.092.	0.910.	0.674.			12
13					0.639.	1.009.	1.026.	1.026.	1.110.	1.044.	1.051.	1.004.	0.674.				13
14						0.607.	0.861.	0.959.	0.928.	0.959.	0.836.	0.593.					14
15							0.571.	0.701.	0.551.								15

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POOR ORIGINAL

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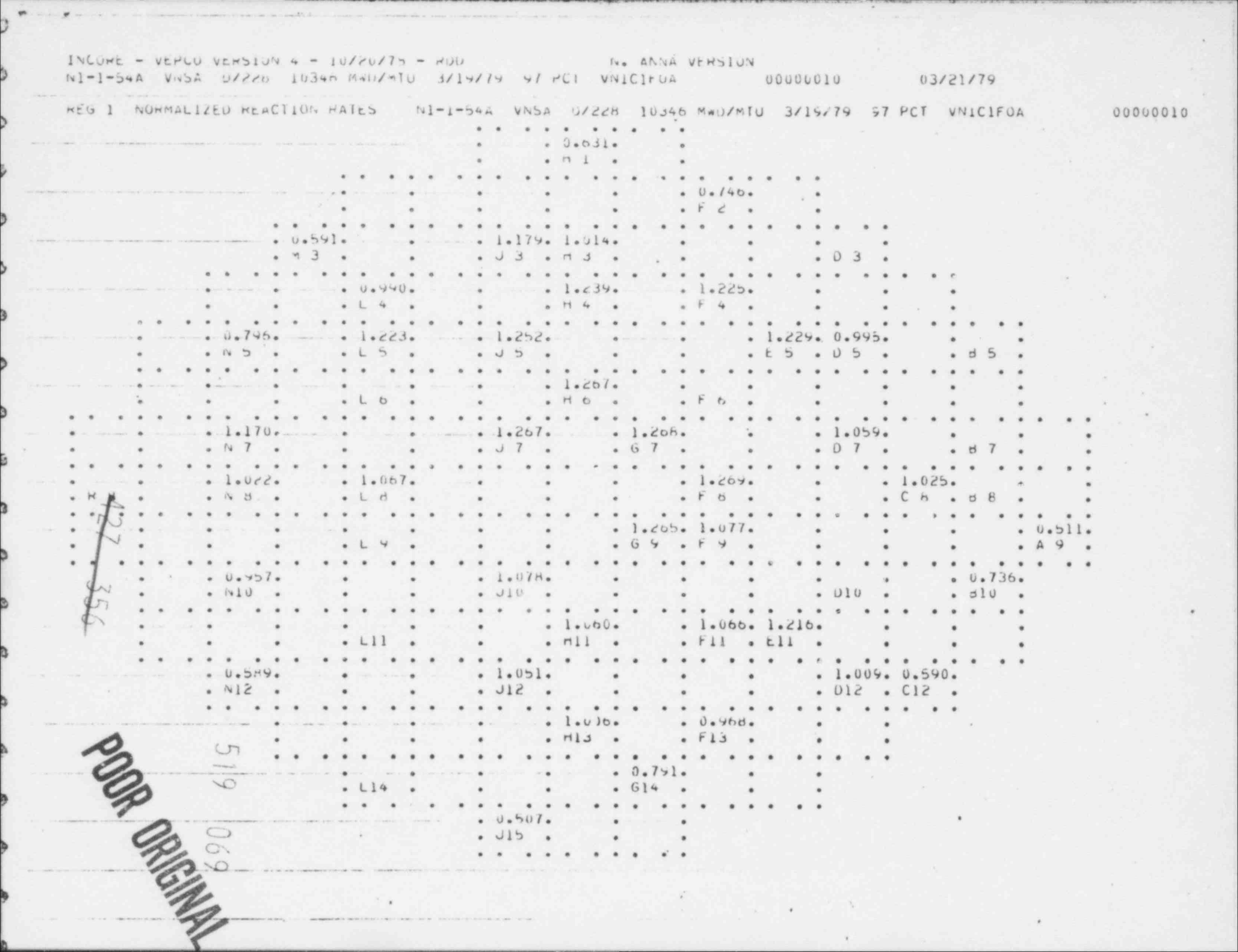
INCORE - VEPCO VERSION 4 - 10/20/75 - ROD N. ANNA VERSION
N1-1-54A VNSA 0/228 10346 MWD/MTU 3/19/79 97 PCT VN1C1F0A 00000010 03/21/79

REG 1 NORMALIZED REACTION RATES N1-1-54A VNSA 0/228 10346 MWD/MTU 3/19/79 97 PCT VN1C1F0A 00000010



ASSEMBLYWISE MAXIMUM NUCLEAR F-DELTA-H

	R	P	N	M	L	K	J	H	G	F	E	D	C	B	A	
1							0.582.	0.711.	0.583.							1
2					0.636.	0.882.	0.993.	0.901.	1.002.	0.901.	0.651.					2
3				0.693.	1.040.	1.101.	1.069.	1.134.	1.080.	1.130.	1.073.	0.725.				3
4			0.688.	0.928.	1.136.	1.124.	1.194.	1.131.	1.197.	1.148.	1.163.	0.958.	0.720.			4
5		0.608.	1.012.	1.108.	1.101.	1.174.	1.127.	1.192.	1.141.	1.221.	1.146.	1.153.	1.080.	0.666.		5
6		0.851.	1.079.	1.102.	1.163.	1.054.	1.176.	1.127.	1.175.	1.079.	1.204.	1.131.	1.116.	0.898.		6
7	0.554.	0.955.	1.045.	1.149.	1.078.	1.146.	1.118.	1.187.	1.123.	1.175.	1.117.	1.175.	1.059.	0.977.	0.564.	7
8	0.653.	0.866.	1.108.	1.092.	1.147.	1.102.	1.182.	1.131.	1.178.	1.114.	1.168.	1.114.	1.126.	0.897.	0.699.	8
9	0.543.	0.944.	1.032.	1.146.	1.087.	1.135.	1.068.	1.157.	1.107.	1.157.	1.113.	1.192.	1.071.	0.992.	0.575.	9
10		0.837.	1.061.	1.089.	1.157.	1.032.	1.121.	1.088.	1.145.	1.044.	1.168.	1.129.	1.104.	0.885.		10
11		0.612.	1.018.	1.111.	1.095.	1.134.	1.069.	1.131.	1.081.	1.168.	1.122.	1.150.	1.053.	0.633.		11
12			0.689.	0.919.	1.103.	1.077.	1.127.	1.068.	1.149.	1.108.	1.130.	0.950.	0.707.			12
13				0.685.	1.023.	1.057.	1.009.	1.089.	1.047.	1.088.	1.049.	0.708.				13
14					0.615.	0.861.	0.953.	0.868.	0.958.	0.857.	0.620.					14
15							0.560.	0.679.	0.552.							15

REG 2 NORMALIZED REACTION RATES N1-1-61A VNSC D/182 11750 MWD/MTU 5/31/79 65 PCT VN1C1FDC,FOC

							0.656.									
							H 1									
									0.804.							
									F 2							
		0.621.			1.209.	1.057.					0.634.					
		M 3			J 3	H 3					D 3					
			1.037.			1.257.		1.258.								
			L 4			H 4		F 4								
	0.835.		1.239.		1.246.				1.260.	1.065.		0.596.				
	N 5		L 5		J 5				E 5	D 5		B 5				
			1.071.			1.238.										
			L 6			H 6		F 6								
	1.176.				1.236.		1.249.			1.091.		0.847.				
	N 7				J 7		G 7			D 7		B 7				
	1.033.		1.051.					1.240.			1.059.					
R 8	N 8		L 8					F 8			C 8	B 8				
			1.224.				1.233.	1.076.					0.531.			
			L 9				G 9	F 9					A 9			
	0.986.				1.057.					1.235.		0.774.				
	N10				J10					D10		B10				
			1.206.			1.053.		1.071.	1.237.							
			L11			H11		F11	E11							
	0.604.				1.052.					1.058.	0.615.					
	N12				J12					D12	C12					
						1.015.		1.021.								
						H13		F13								
		0.550.				0.826.										
		L14				G14										
					0.512.											
					J15											

ASSEMBLYWISE MAXIMUM NUCLEAR F-DELTA-H

	R	P	N	M	L	K	J	H	G	F	E	D	C	B	A	
1							0.589.	0.730.	0.586.							1
2					0.614.	0.860.	0.993.	0.948.	0.997.	0.870.	0.629.					2
3				0.670.	1.011.	1.078.	1.052.	1.126.	1.060.	1.093.	1.037.	0.705.				3
4			0.662.	0.899.	1.108.	1.107.	1.173.	1.112.	1.171.	1.116.	1.127.	0.923.	0.691.			4
5		0.590.	0.980.	1.085.	1.093.	1.183.	1.128.	1.187.	1.136.	1.205.	1.116.	1.109.	1.033.	0.636.		5
6		0.842.	1.063.	1.088.	1.169.	1.125.	1.199.	1.134.	1.203.	1.141.	1.195.	1.102.	1.084.	0.872.		6
7	0.583.	0.989.	1.050.	1.149.	1.087.	1.170.	1.131.	1.193.	1.137.	1.203.	1.127.	1.162.	1.049.	0.979.	0.568.	7
8	0.723.	0.944.	1.124.	1.098.	1.161.	1.118.	1.193.	1.136.	1.186.	1.124.	1.171.	1.102.	1.126.	0.950.	0.719.	8
9	0.583.	0.980.	1.034.	1.150.	1.106.	1.168.	1.091.	1.171.	1.122.	1.183.	1.120.	1.176.	1.063.	1.002.	0.585.	9
10		0.832.	1.051.	1.088.	1.182.	1.113.	1.151.	1.102.	1.174.	1.120.	1.181.	1.110.	1.085.	0.873.		10
11		0.598.	0.994.	1.092.	1.095.	1.156.	1.085.	1.143.	1.098.	1.183.	1.113.	1.122.	1.024.	0.617.		11
12			0.666.	0.897.	1.090.	1.075.	1.135.	1.077.	1.151.	1.096.	1.106.	0.921.	0.684.			12
13				0.669.	1.016.	1.058.	1.023.	1.104.	1.041.	1.059.	1.017.	0.684.				13
14					0.611.	0.873.	0.995.	0.939.	0.968.	0.837.	0.601.					14
15							0.593.	0.712.	0.554.							15
	R	P	N	M	L	K	J	H	G	F	E	D	C	B	A	

REG 1 NORMALIZED REACTION RATES N1-1-62A VNSC D/228 12001 MWD/MTU 6/7/79 99 PCT VN1C1FOC 00000010

						0.650.								
						H 1								
								0.775.						
								F 2						
		0.606.			1.198.	1.035.					0.632.			
		M 3			J 3	H 3					D 3			
			1.030.			1.244.		1.247.						
			L 4			H 4		F 4						
	0.824.		1.232.		1.266.				1.237.	1.038.		0.574.		
	N 5		L 5		J 5				E 5	D 5		B 5		
			1.075.			1.265.		1.275.						
			L 6			H 6		F 6						
	1.189.				1.262.		1.269.			1.090.		0.830.		
	N 7				J 7		G 7			D 7		B 7		
0.644.	1.039.		1.072.					1.265.			1.052.			
R 8	N 8		L 8					F 8			C 8	B 8		
			1.255.				1.261.	1.094.					0.534.	
			L 9				G 9	F 9					A 9	
	0.986.				1.081.					1.238.		0.769.		
	N10				J10					D10		B10		
			1.217.			1.072.		1.097.	1.235.					
			L11			H11		F11	E11					
	0.596.				1.064.					1.036.	0.612.			
	N12				J12					D12	C12			
						1.039.		1.002.						
						H13		F13						
			0.552.				0.811.							
			L14				G14							
					0.535.									
					J15									