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DUQUESNE LIGHT COMPANY
SHIPPINGPORT ATOMIC POWER STATION

TEST RESULTS

DLCS 1560103
T-612081

XENON TRANSIENT

2790.5 EFPH

CORE 1, SEED 1

SECTION 1 OF 5 SECTIONS

FIRST ISSUE, APRIL 27, 1961

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20-1

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TEST RESULTS
DLCS 1560103
T-612061
XENON TRANSIENT
2790.5 EFPH
CORE 1 SEED 1

PURPOSE

TO DETERMINE IF THERE IS ENOUGH SUFFICIENT REACTIVITY PRESENT IN THE CORE TO OVERRIDE A PEAK XENON TRANSIENT AND TO OBTAIN DATA FOR ROD WORTH CALCULATIONS.

CONCLUSIONS

AFTER 2790.5 EFPH OF PLANT OPERATION IT WAS DETERMINED THAT THE REACTIVITY OF THE REACTOR WAS SUFFICIENT TO OVERRIDE PEAK XENON WITH ROD CONTROL GROUPS I, II, AND III WITHDRAWN TO 69 INCHES, AND GROUP IV WITHDRAWN TO APPROXIMATELY 40 INCHES. THE OVERRIDE OF PEAK XENON OCCURRED 8 HR. 50 MINUTES AFTER SHUTDOWN, WHERE THE TIME AT SHUTDOWN WAS CONSIDERED THE TIME WHEN THE TURBINE THROTTLE WAS TRIPPED.

DESCRIPTION OF TEST EQUIPMENT AND TEST PROCEDURE

EQUILIBRIUM XENON WAS ESTABLISHED AT 60 MW NET ELECTRICAL OUTPUT FOR APPROXIMATELY 35 HOURS PRIOR TO SHUTDOWN. THE FLUX WAS THEN REDUCED TO APPROXIMATELY 1×10^{-10} AMPERES ON THE INTERMEDIATE RANGE INSTRUMENTATION. THE REACTOR WAS THEN MAINTAINED CRITICAL BY WITHDRAWING OR INSERTING RODS AS NECESSARY. START UP RATES WERE MEASURED BY A BROWN RECORDER CONNECTED TO A KEITHLEY μ M AMMETER. THE XENON TRANSIENT WAS FOLLOWED IN THIS MANNER FOR 60 HOURS.

RESULTS

DLCS 1560103 WAS STARTED NOVEMBER 3, 1958 AT 1617 HOURS WHEN THE TURBINE THROTTLE WAS TRIPPED AND COMPLETED NOVEMBER 6, 1958. THE PLANT WAS OPERATED AT 60 MW NET ELECTRICAL OUTPUT FOR APPROXIMATELY 35 CONSECUTIVE HOURS PRIOR TO SHUTDOWN. AT THE POINT OF THROTTLE TRIP THE PLANT EFPH WAS 2790.5. FOR APPROXIMATELY THE FIRST 7 HOURS THE XENON TRANSIENT WAS NOT FOLLOWED DUE TO PERFORMING DLCS 259 WHICH REQUIRED APPROXIMATELY 5 HOURS. AFTER SETTING UP FOR DLCS 1560103, DATA WERE RECORDED AS SHOWN IN TABLES I, II, AND III. LOOP FLOWS ARE NOT LISTED IN THE TABLES IN AS MUCH AS INDIVIDUAL LOOP READINGS WERE PRACTICALLY CONSTANT ALL DURING THE TEST.

FIGURE 1 IS A SAMPLE GRAPH SHOWING REACTIVITY (ρ) VERSUS TIME AFTER SHUTDOWN OBTAINED FROM THE DATA TABULATED IN TABLE I. THE GRAPH CONSISTS OF VALUES OF REACTIVITY FOR A GIVEN ROD HEIGHT WITH INCREASING TIME DURING THE TEST. THERE ARE THREE VARIABLES SHOWN IN FIGURE 1 (TIME, REACTIVITY AND ROD HEIGHT). IT IS POSSIBLE TO DETERMINE ROD WORTH ($\Delta\rho/\text{IN.}$) BY ELIMINATING THE TIME VARIABLE. THIS WAS DONE AS SHOWN IN FIGURE 1. ROD WORTH CALCULATIONS WERE MADE IN THIS MANNER FOR THE VARIOUS CONTROLLING ROD GROUPS AT DIFFERENT ROD HEIGHTS.

TEST RESULTS DLCS 1560103

T-612081

XENON TRANSIENT (cont'd)

Figure 2 is a graph similar to Figure 1 showing reactivity (ρ) versus time during peak xenon poisoning. For a constant rod height, the reactivity (ρ) will be a minimum at maximum poisoning; therefore the time of peak poisoning can be determined. Peak poisoning occurred at 8 hours and 50 minutes after shutdown as shown in Figure 2.

Figure 3 is a graph showing rod height versus time for the various controlling rod groups during the xenon transient. The Group IV (8's) rods controlled during peak xenon while all other rod groups were at their top position (69"). As the xenon decayed, the Group IV (8's) rods were inserted to follow the transient. When they had been inserted to their bottom position, control was shifted to the Group III (4's) rods and the transient was followed until this group was inserted to the bottom. At that time the Group II (2's and 6's) rods were employed and the transient was followed until the end of the test 60 hours after shutdown. The data were plotted for 53 hours as there was little change in the last 7 hours.

The discontinuity between the different controlling groups can be attributed to the relatively low rod worth near the top and bottom of each controlling group as compared to the maximum rod worth occurring near the center of the core.

It should be noted that the rods followed total core poisoning due primarily to xenon poisoning, but also due to samarium poisoning present in the core. No attempt was made to separate the two.

Figure 4 is a graph showing rod worth ($\Delta\rho/\text{in.}$) versus rod height for the different controlling groups. Rod worth ($\Delta\rho/\text{in.}$) was calculated for average rod heights as shown in Figure 1.

The Group IV (8's) rods were withdrawn to 40 inches to override peak xenon and were inserted as the xenon poisoning decayed. The Group II (2's and 6's) rods were inserted to 40 inches at the end of the test. The Group III (4's) rods were the only controlling group to be inserted through their entire length. Thus, the rod worth versus rod height curve for this group is the only complete curve presented in Figure 4.

Pressures and temperatures were corrected to 1835 psig and 500 F respectively using a temperature coefficient of $1.74 \times 10^{-4} \Delta\rho/F$ and a pressure coefficient of $2.1 \times 10^{-6} \Delta\rho/\text{psig}$ obtained from DLCS 1510106.

Reactivity tables based on a delayed neutron fraction of 0.0064 were used for this test.

No β/β_{25} correction was applied to the data.

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT
DLCS 1560103
T-612081

20 007

TABLE I

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/3/58	1	2321	499.6	1833	37.90	1.184	17.32	Not Calculated	- .4	- .70	+2	+ .04	16.84	0035
		2322				1.046	16.16						15.68	
		2322				1.063	16.31						15.83	
	2	2330	499.7	1833	37.90	.785	13.64		- .3	- .52	+2	+ .04	13.16	
		2331				.835	14.16						13.68	
		2331				.795	13.74						13.26	
	3	2332				.835	14.16						13.68	
		2354	499.5	1833	37.90	.4305	9.18		- .5	- .87	+2	+ .04	8.35	
		2355				.472	9.79						8.96	
		2356				.448	9.44						8.61	
11/4/58	4	0031	499.7	1833	39.90	.684	12.50		- .3	- .52	+2	+ .04	11.84	
		0032				.7501	13.27						12.61	
		0033				.804	13.82						13.16	
	5	0041	499.9	1833	40.40	1.038	16.05		- .1	- .17	+2	+ .04	14.87	
		0042				.944	15.23						14.05	
		0043				.944	15.23						14.05	
	6	0043				.951	15.29						14.11	
		0052	499.2	1833	40.90	.973	15.49		- .8	-1.39	+2	+ .04	14.14	
		0053				1.104	16.66						15.31	
		0054				1.086	16.50						15.15	
	7	0101	499.1	1833	41.15	1.178	17.19		- .9	-1.57	+2	+ .04	15.66	
		0102				1.173	17.23						15.70	
		0102				1.173	17.23						15.70	
		0103				1.173	17.23						15.70	
	8	0110	499.2	1833	39.90	.582	11.27		- .8	-1.39	+2	+ .04	9.92	
		0111				.612	11.65						10.30	
		0112				.636	11.94						10.59	
		0113				.639	11.98						10.63	
	9	0121	499.5	1833	41.15	.877	14.59		- .5	- .87	+2	+ .04	13.76	
		0122				1.01	15.84						15.01	
		0123				1.058	16.27						15.44	
	10	0131	499.7	1833	39.90	.526	10.55		- .3	- .52	+2	+ .04	10.07	
		0132				.572	11.14						10.66	
		0133				.583	11.29						10.81	
		0134				.564	11.05						10.57	
	11	0142	499.9	1834	41.15	.835	14.65		- .1	- .17	+1	+ .02	14.50	
		0143				1.01	15.84						15.69	
		0143				1.058	16.27						16.12	
		0144				1.033	16.05						15.90	
	12	0152	499.9	1834	39.90	.554	10.92		- .1	- .17	+1	+ .02	10.77	
		0153				.587	11.34						11.19	
		0153				.6175	11.72						11.57	
		0154				.6385	11.98						11.83	
	13	0204	500.0	1833	41.15	.872	14.53		0		+2	+ .04	14.57	
		0205				1.173	17.23						17.27	
		0205				1.157	17.10						17.14	
		0215	500.0	1833	39.90	.644	12.04		0		+2	+ .04	12.08	
	14	0216				.710	12.84						12.88	
		0217				.730	13.04						13.08	
		0217				.749	13.25						13.29	
		0226	499.9	1833	41.15	1.195	17.40		- .1	- .17	+2	+ .04	17.27	
	15	0227				1.357	18.63						18.50	
		0227				1.386	18.84						18.71	
		0228				1.447	19.28						19.15	
		0241	499.9	1834	39.90	.766	13.44		- .1	- .17	+1	+ .02	13.29	
	16	0241				.944	15.23						15.08	
		0242				.969	15.46						15.31	
		0242				.987	15.63						15.48	
		0253	499.9	1834	38.90	.599	11.49		- .1	- .17	+1	+ .02	11.34	
	17	0254				.712	12.84						12.69	
		0255				.730	13.04						12.89	
		0255				.749	13.25						13.10	
		0304	499.8	1834	39.90	1.26	17.49		- .2	- .35	+1	+ .02	17.16	
	18	0305				1.357	18.63						18.30	
		0305				1.31	18.28						17.95	
		0305				1.357	18.63						18.30	
		0306												

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp.	Avg. Press.	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
			F	psig					ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/4/58	19	0316	499.8	1834	38.90	.905	14.85	Not Calculated	-.2	-.35	+1	+.02	14.52	0115
		0317				1.01	15.84						15.51	
		0318				1.042	16.12						15.79	
	20	0318				1.085	16.50		-.2	-.35	+1	+.02	16.17	0218
		0329	499.8	1834	37.40	.527	10.56						10.23	
		0330				.620	11.76						11.43	
	21	0331				.662	12.26		-.4	-.70	+1	+.02	11.93	
		0340	499.6	1834	37.40	.797	13.77						13.09	
		0340				.820	14.00						13.32	
	22	0441				.824	14.05		-.5	-.87	+1	+.02	13.37	
		0353	499.5	1834	37.40	.930	15.10						14.25	
		0354				1.034	16.05						15.20	
	23	0354				1.03	16.01		-.6	-1.04	+1	+.02	15.16	
		0355				1.085	16.50						15.56	
		0403	499.4	1834	37.40	1.20	17.46						16.44	
	24	0404				1.24	17.76		-.9	-1.57	+1	+.02	16.74	0315
		0404				1.29	18.14						17.12	
		0405				1.315	18.33						17.31	
	25	0413	499.1	1834	35.90	.736	13.11		-.3	-.50	+1	+.02	11.56	
		0414				.790	13.69						12.14	
		0414				.827	14.08						12.53	
	26	0415				.852	14.33		-.4	-.70	+1	+.02	12.78	
		0424	499.7	1834	35.90	.931	15.10						14.60	
		0425				1.037	16.09						15.61	
	27	0425				1.018	15.91		-.6	-1.04	+2	+.04	15.43	0359
		0426				1.085	16.50						16.02	
		0434	499.8	1834	35.90	1.068	16.35						15.67	
	28	0435				1.174	17.23		-.8	-1.39	+2	+.04	16.55	0449
		0435				1.235	17.72						17.04	
		0436				1.241	17.76						17.08	
	29	0446	499.4	1833	33.90	.508	10.30		-1.1	-1.91	+2	+.04	9.30	
		0447				.587	11.34						10.34	
		0448				.619	11.74						10.74	
	30	0449				.639	11.98		-.2	-.35	+2	+.04	10.98	
		0458	499.8	1833	33.90	.726	13.00						12.69	
		0459				.776	13.54						13.23	
	31	0459				.918	14.98		.8	-1.39	+2	+.04	14.67	
		0500				1.01	15.77						15.46	
		0500				1.034	16.05						15.74	
	32	0511	498.9	1833	33.90	1.058	16.27		.5	-.87	+2	+.04	14.40	
		0511				1.185	17.32						15.45	
		0512				1.206	17.49						15.62	
	33	0512				1.235	17.72		.1	-.17	+1	+.02	15.85	
		0524	499.2	1833	31.90	.456	9.56						8.21	
		0525				.553	10.91						9.56	
	34	0526				.599	11.49		.2	-.35	+1	+.02	10.14	0534
		0527				.621	11.76						10.41	
		0536	498.9	1833	31.90	.712	12.84						10.97	
	35	0536				.762	13.39		.1	-.17	+1	+.02	11.52	
		0537				.82	14.00						12.13	
		0538				.852	14.33						12.46	
	36	0547	499.2	1833	31.90	1.025	15.98		.2	-.35	+1	+.02	14.63	
		0548				1.168	17.19						15.84	
		0558	499.5	1833	31.90	1.335	18.48						17.65	
	37	0558				1.446	19.27		.1	-.17	+1	+.02	18.44	
		0559				1.40	18.95						18.12	
		0559				1.496	19.62						18.79	
	38	0610	499.5	1834	29.90	.472	9.79		.2	-.35	+1	+.02	9.64	
		0612				.587	11.34						11.19	
		0613				.612	11.65						11.50	
	39	0624	499.8	1834	29.90	.592	11.41		.1	-.17	+1	+.02	11.08	
		0625				.790	13.69						13.36	
		0626				.951	15.29						14.96	
	40	0626				.987	15.63		.1	-.17	+1	+.02	15.30	
		0627				1.021	15.94						16.27	
		0627												

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/4/58	36	0636	499.7	1834	29.90	1.194	17.40	Not Calculated	- .3	- .52	+1	+ .02	16.90	0612
		0636				1.357	18.63						18.13	
		0637				1.393	18.90						18.40	
		0637				1.40	18.95						18.45	
	37	0648	499.6	1834	27.90	.328	7.53		- .4	- .70	+1	+ .02	6.85	
		0649				.572	11.15						10.47	
		0650				.584	11.31						10.63	
	38	0658	499.5	1834	27.90	.724	12.97		- .5	- .87	+1	+ .02	12.12	
		0659				.814	13.95						13.10	
		0660				.868	14.50						13.65	
		0660				.888	14.70						13.85	0659
	39	0710	499.3	1834	27.90	1.163	17.15		- .7	-1.22	+1	+ .02	15.95	
		0711				1.206	17.49						16.29	
		0711				1.24	17.76						16.56	
	40	0721	498.7	1834	25.90	.373	8.28		-1.3	-2.26	+1	+ .02	6.04	
		0722				.452	9.50						7.26	
		0723				.486	9.99						7.75	
		0724				.511	10.34						8.14	
	41	0733	498.8	1834	25.90	.617	11.72		-1.2	-2.09	+1	+ .02	9.65	
		0734				.724	12.97						10.90	
		0735				.771	13.49						11.42	0727
		0736				.790	13.69						11.62	
	42	0746	498.8	1834	25.90	1.179	17.27		-1.2	-2.09	+1	+ .02	15.20	
		0747				1.174	17.23						15.16	
	43	0800	498.8	1834	24.40	.424	9.08		-1.2	-2.09	+1	+ .02	7.01	
		0801				.629	11.87						9.80	
		0802				.794	13.74						11.67	
		0803				.789	13.69						11.62	
		0803				.851	14.32						12.25	
	44	0811	498.8	1834	24.40	.824	14.05		-1.2	-2.09	+1	+ .02	11.98	
		0812				1.066	16.32						14.25	0820
		0812				1.173	17.23						15.16	
		0813				1.206	17.49						15.42	
	45	0844	498.6	1834	22.00	.326	7.50		-1.4	-2.44	+1	+ .02	5.08	
		0845				.443	9.37						6.95	
		0846				.529	10.58						8.16	
		0848				.596	11.46						9.04	
	46	0859	498.8	1834	22.00	.723	12.96		-1.2	-2.09	+1	+ .02	10.89	
		0859				.791	13.70						11.63	
		0900				.904	14.85						12.78	
		0901				.968	15.46						13.39	0833
	47	0910	498.5	1834	22.00	.965	15.43		-1.5	-2.61	+1	+ .02	12.84	
		0910				1.240	17.76						15.17	
		0911				1.328	18.42						15.83	
		0911				1.415	19.05						16.46	
	48	0922	499.2	1834	20.50	.499	10.17		- .8	-1.39	+1	+ .02	8.80	
		0923				.679	12.46						11.09	
		0924				.732	13.06						11.69	
		0925				.789	13.67						12.30	
	49	0936	498.3	1834	20.50	.651	12.14		-1.7	-2.96	+1	+ .02	9.20	
		0937				.991	15.66						12.72	0926
		0937				1.206	17.49						14.55	
		0938				1.252	17.85						14.91	
	50	0947	498.5	1834	19.00	.353	7.95		-1.5	-2.61	+1	+ .02	5.36	
		0948				.498	10.16						7.57	
		0949				.521	10.48						7.89	
		0950				.645	12.06						9.47	
	51	0959	498.8	1834	19.00	.712	12.84		-1.2	-2.09	+1	+ .02	10.77	
		1000				.930	15.10						13.03	
		1001				1.085	16.50						14.43	
		1001				1.103	16.65						14.58	0953
	52	1009	498.5	1834	19.00	1.446	19.27		-1.5	-2.16	+1	+ .02	16.68	
		1010				1.285	18.09						15.50	
		1010				1.446	19.27						16.68	
		1010				1.446	19.27						16.68	
	53	1021	499.2	1834	17.50	.543	10.77		- .8	-1.39	+1	+ .02	9.40	
		1022				.680	12.48						11.11	
		1023				.789	13.68						12.31	
		1024				.809	13.90						12.53	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT	Temp.	ΔP	Press.		
									F	$\Delta p \times 10^{-4}$	psig	$\Delta p \times 10^{-4}$		
11/4/58	54	1034	498.6	1834	17.50	.927	15.07	Not Calculated	-1.4	-2.44	+1	+0.2	12.65	1031
		1034				1.217	17.58						15.16	
		1035				1.276	18.04						15.62	
		1035				1.322	18.38						15.96	
	55	1045	498.6	1834	16.00	.511	10.34		+1.4	-2.44	+1	+0.2	7.92	1031
		1046				.617	11.72						9.30	
		1047				.724	12.97						10.55	
		1048				.762	13.39						10.97	
	56	1058	499.0	1834	16.00	.835	14.16		-1.0	-1.74	+1	+0.2	12.44	1044
		1058				1.002	15.77						14.05	
		1059				1.130	16.87						15.15	
		1059				1.168	17.18						15.46	
	57	1113	499.2	1834	14.50	.539	10.71		- .8	-1.39	+1	+0.2	9.34	1105
		1114				.678	12.44						11.07	
		1114				.775	13.53						12.16	
		1115				.809	13.90						12.53	
	58	1126	499.8	1834	14.50	.964	15.42		+ .2	- .35	+1	+0.2	15.09	1125
		1126				1.076	16.42						16.09	
		1127				1.205	17.49						17.16	
		1127				1.240	17.76						17.43	
	59	1139	500.2	1834	13.00	.564	11.05		+ .2	- .35	+1	+0.2	11.42	1208
		1140				.768	13.45						13.83	
		1140				.868	14.49						14.86	
		1141				.924	15.04						15.41	
	60	1155	500.9	1833	13.00	.964	15.42						15.79	1227
		1156				.748	13.23		+ .9	+1.57	+2	+0.4	14.84	
		1157				1.530	19.84						21.45	
		1157				1.670	20.73						22.34	
	61	1209	501.0	1833	11.00	1.098	16.61		+1.0	+1.74	+2	+0.4	18.39	1253
		1210				1.127	16.85						18.63	
		1210				1.178	17.27						19.05	
		1226				.336	7.67		+1.0	+1.74	+2	+0.4	9.45	
	62	1226	501.0	1833	5.00	.406	8.80						10.58	1331
		1229				.447	9.42						11.20	
	63	1238	500.9	1833	69.29*	.482	9.93		+ .9	+1.57	+2	+0.4	11.54	
		1239				.551	10.87						12.48	
		1240				.587	11.34						12.95	1227
		1241				.600	11.51						13.12	
	64	1251	500.8	1833	69.29	.512	10.35		+ .8	+1.39	+2	+0.4	11.78	
		1252				1.009	15.83						17.26	
		1253				1.137	16.93						18.36	1253
		1253				1.112	16.72						18.15	
		1254				1.177	17.25						18.68	
	65	1307	500.6	1833	65.00	.901	14.81		+ .6	+1.04	+2	+0.4	15.89	
		1308				1.034	16.05						17.13	1253
		1308				1.094	16.57						17.65	
	66	1318	500.5	1830	61.00	.369	8.21		+ .5	+ .87	+5	+0.11	9.19	
		1319				.459	9.60						10.58	
		1320				.475	9.83						10.81	1331
	67	1332	500.4	1830	61.00	.789	13.68		+ .4	+ .70	+5	+0.11	14.49	
		1333				.958	15.36						16.17	
		1334				.964	15.42						16.23	
	68	1342	500.1	1830	61.00	1.318	18.34		+ .1	+ .17	+5	+0.11	18.62	1331
		1343				1.536	19.86						20.14	
		1343				1.582	20.17						20.45	
	69	1353	500.1	1830	57.00	.371	8.25		+ .1	+ .17	+5	+0.11	8.53	
		1354				.416	8.96						9.24	1331
		1355				.512	10.35						10.63	
		1356				.524	10.52						10.80	
	70	1407	500.2	1830	57.00	.732	13.06		+ .2	+ .35	+5	+0.11	13.52	
		1407				.704	12.75						13.21	1331
		1408				.688	12.56						13.02	
	71	1418	500.4	1830	57.00	1.264	17.94		+ .4	+ .70	+5	+0.11	18.75	
		1419				1.497	19.61						20.42	
		1419				1.541	19.91						20.72	

* 4's Controlling - 8's Bottomed

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/4/58	72	1431	500.7	1830	53.00	.315	7.31	Not Calculated	+ .7	+1.22	+5	+ .11	8.64	1405
		1432				.416	8.96						10.29	
		1433				.432	9.20						10.53	
	74*	1455	500.1	1830	53.00	.858	14.39		+ .1	+ .17	+5	+ .11	14.67	
		1455				1.290	18.14						18.42	
		1456				1.407	19.00						19.28	
		1456				1.400	18.95						19.23	
	75	1508	499.8	1830	49.00	.2165	5.46		- .2	- .35	+5	+ .11	5.22	1453
		1510				.279	6.66						6.42	
		1512				.302	8.42						8.18	
	76	1523	500.4	1830	49.00	.503	10.23		+ .4	+ .70	+5	+ .11	11.04	
		1524				.612	11.65						12.46	
		1525				.725	12.98						13.79	
	77	1532	501.0	1830	49.00	.805	13.84		+1.0	+1.74	+5	+ .11	15.69	
		1533				.934	15.13						16.98	
		1534				.918	15.00						16.85	
	78	1556	498.5	1838	46.00	.450	9.47		-1.5	-2.61	-3	-.06	6.80	
		1557				.603	11.55						8.88	
		1558				.725	12.98						10.31	
	79	1624	497.6	1843	43.00	.533	10.63		-2.4	-4.18	-8	-.17	6.28	
		1625				.519	10.45						6.19	
		1626				.543	10.77						6.42	
	80	1636	499.0	1843	43.00	.536	10.68		-1.0	-1.74	-8	-.17	8.77	
		1637				.809	13.90						11.99	
		1637				.809	13.90						11.99	
	81	1645	498.9	1840	43.64	1.62	20.41		-1.1	-1.91	-5	-.11	18.39	
		1646				1.74	21.14						19.12	
	82	1656	499.3	1840	40.00	.20	5.12		- .7	-1.22	-5	-.11	3.79	1647
		1658				.22	5.52						4.19	
		1700				.30	7.04						5.71	
	83	1709	499.5	1840	40.00	.50	10.19		- .5	- .87	-5	-.11	9.21	
		1711				.51	10.32						9.34	
		1712				.62	11.76						10.78	
	84	1719	499.6	1840	40.00	.87	14.50		- .4	- .70	-5	-.11	13.69	
		1720				.835	14.16						13.35	
		1720				.816	13.96						13.15	
		1721				.906	14.86						14.05	
	85	1728	499.9	1839	38.00	.37	8.23		- .1	- .17	-4	-.08	8.15	1710
		1729				.288	6.82						6.74	
		1731				.30	7.04						6.96	
		1732				.353	7.95						7.87	
	86	1740	500.0	1839	38.00	.45	9.47		0		-4	-.08	9.39	
		1741				.543	10.77						10.69	
		1742				.535	10.66						10.58	
		1743				.587	11.34						11.26	
	87	1750	500.0	1839	38.00	.643	12.04		0		-4	-.08	11.96	
		1751				.804	13.84						13.76	
		1751				.856	14.38						14.30	
		1752				.820	14.01						13.93	
	88	1801	500.0	1839	37.00	.678	12.44		0		-4	-.08	12.36	
		1802				.658	12.21						12.13	
		1802				.726	13.00						12.92	
	89	1822	500.0	1839	36.00	.645	12.06		0		-4	-.08	11.98	1740
		1822				.835	14.16						14.08	
		1823				.824	14.04						13.96	
		1824				.923	15.03						14.95	
	90	1830	500.0	1839	36.00	1.20	17.45		0		-4	-.08	17.37	
		1832				1.17	17.19						17.11	
		1833				1.41	19.00						18.92	
	91	1844	500.0	1839	35.00	.905	14.85		0		-4	-.08	14.77	1758
		1845				1.09	16.54						16.46	
		1845				1.03	16.01						15.93	
		1846				1.09	16.54						16.46	
	92	1855	499.8	1839	33.00	.301	7.06		- .2	- .35	-4	-.08	6.63	1831
		1857				.417	8.97						8.54	
		1858				.424	9.08						8.65	
		1859				.494	10.09						9.66	

* Run 73 was no good.

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/4/58	93	1915	499.8	1839	33.00	.753	13.30	Not Calculated	- .2	- .35	-4	-.08	12.87	
		1916				.82	14.01						13.58	
	94	1917	499.8	1839	31.00	1.01	15.84		- .2	- .35	-4	-.08	15.41	1908
		1917				.965	15.43						15.00	
		1925				.236	5.84						5.41	
		1927				.308	7.18						6.75	
		1928				.328	7.53						7.10	
	95	1930	499.4	1839	31.00	.388	8.52		- .6	-1.04	-4	-.08	8.09	
		1943				.612	11.65						10.53	
		1944				.64	12.00						10.88	
		1944				.724	12.97						11.85	
	96	1945	499.6	1839	30.00	.724	12.97		- .4	- .70	-4	-.08	11.85	1925
		1952				.381	8.41						7.63	
		1953				.472	9.79						9.01	
		1954				.486	9.99						9.21	
	97	2000	499.3	1839	31.00	1.28	18.06		- .7	-1.04	-4	-.08	16.94	1900
		2000				1.38	18.80						17.68	
		2001				1.32	18.35						17.23	
	98	2006	499.5	1839	30.00	.812	13.92		- .5	- .87	-4	-.08	12.97	1925
		2007				.852	14.33						13.38	
		2007				.841	14.22						13.27	
		2012				1.06	16.27						15.32	
	99	2013	499.5	1839	30.00	1.06	16.27		- .5	- .87	-4	-.08	15.32	
		2013				1.04	16.10						15.15	
		2014				1.08	16.46						15.51	
		2020				.677	12.44						12.07	
	100	2021	499.8	1836	29.00	.639	11.98		- .2	- .35	-1	-.02	11.61	1944
		2021				.609	11.62						11.25	
		2026				.336	7.67						7.82	
	101	2027	500.1	1836	28.00	.318	7.36		+ .1	+ .17	-1	-.02	7.51	2002
		2032				.917	14.97						15.47	
	102	2033	500.3	1836	29.00	.944	15.23		+ .3	+ .52	-1	-.02	15.73	1944
		2033				.947	15.26						15.76	
		2039				.544	10.78						11.46	
	103	2040	500.4	1836	28.00	.536	10.68		+ .4	+ .70	-1	-.02	11.36	2002
		2041				.594	11.42						12.10	
		2047				.490	10.04						10.72	
	104	2049	500.4	1836	27.00	.333	7.62		+ .4	+ .70	-1	-.02	8.30	2024
		2050				.340	7.74						8.42	
		2056				1.22	17.62						17.31	
	105	2056	499.8	1833	28.00	1.174	17.23		- .2	- .35	+2	+.04	16.92	2002
		2056				1.152	17.06						16.75	
		2057				1.241	17.76						17.45	
		2103				.878	14.59						13.41	
	106	2104	499.7	1833	27.00	.789	13.68		- .7	-1.22	+2	+.04	12.50	2024
		2104				.728	13.02						11.84	
		2105				.819	14.00						12.82	
		2111				.440	9.32						8.32	
	107	2112	499.4	1833	26.00	.488	10.02		- .6	-1.04	+2	+.04	9.02	2047
		2113				.489	10.03						9.03	
		2119				1.364	18.69						17.34	
	108	2119	499.2	1833	27.00	1.446	19.27		- .8	-1.39	+2	+.04	17.92	2024
		2119				1.55	19.97						18.62	
		2124				.931	15.10						13.75	
	109	2124	499.2	1833	26.00	.868	14.49		- .8	-1.39	+2	+.04	13.14	2047
		2125				.814	13.97						12.62	
		2126				.887	14.68						13.33	
		2132				.548	10.83						9.48	
	110	2133	499.2	1833	25.00	.511	10.34		- .8	-1.39	+2	+.04	8.99	2105
		2134				.504	10.24						8.89	
		2140				.237	5.86						4.64	
	111	2142	499.3	1835	24.00	.277	6.62		- .7	-1.22	0		5.40	2126
		2143				.289	6.84						5.62	
		2149				1.058	16.27						14.53	
		2150				1.058	16.27						14.53	
	112	2150	499.0	1835	25.00	.994	15.69		-1.0	-1.74	0		13.95	2105
		2150				1.085	16.49						14.75	
		2150												

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp.	Avg. Press.	Average Rod Height	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
			F	psig	Inches				ΔT	Temp.	ΔP	Press.		
11/4/58	113	2157	499.0	1835	24.00	.73	13.04	Not Calculated	-1.0	-1.74	0		11.30	2126
		2158				.648	12.10						10.36	
		2158				.628	11.85						10.11	
	114	2204	499.1	1840	23.00	.362	8.11		-.9	-1.57	-5	-.11	6.43	2145
		2205				.361	8.09						6.41	
		2207				.356	8.01						6.33	
	115	2213	499.5	1840	24.00	1.085	16.49		-.5	-.87	-5	-.11	15.51	2126
		2214				1.038	16.09						15.11	
		2214				1.123	16.81						15.83	
	116	2221	499.5	1840	23.00	.684	12.52		-.5	-.87	-5	-.11	11.54	2145
		2222				.700	12.71						11.73	
		2222				.696	12.65						11.67	
	117	2228	499.3	1840	22.00	.427	9.13		-.7	-1.22	-5	-.11	7.80	2205
		2229				.430	9.17						7.84	
		2230				.483	9.94						8.61	
	118	2237	499.2	1840	23.00	1.085	16.49		-.8	-1.39	-5	-.11	14.99	2145
		2238				1.355	18.63						17.13	
		2238				1.24	17.76						16.26	
	119	2238	499.1	1840	22.00	1.364	18.69		-.9	-1.57	-5	-.11	17.19	2204
		2244				.895	14.76						13.08	
		2245				.927	15.07						13.39	
	120	2245	499.0	1840	21.00	.94	15.20		-1.0	-1.74	-5	-.11	13.52	2225
		2252				.620	11.76						9.91	
		2253				.554	10.92						9.07	
	121	2254	499.2	1840	20.00	.607	11.60		-.8	-1.39	-5	-.11	9.75	2242
		2301				.345	7.82						6.32	
		2302				.338	7.70						6.20	
	122	2304	498.6	1859	21.00	.406	8.80		-1.4	-2.44	-24	-.5	7.30	2225
		2310				1.24	17.76						14.82	
		2311				1.23	17.67						14.73	
	123	2316	498.8	1835	20.00	.944	15.23		-1.2	-2.09	0		13.14	2242
		2317				.744	13.20						11.11	
		2318				.776	13.54						11.45	
	124	2323	499.3	1836	19.00	.579	11.24		-.7	-1.22	-1	-.02	10.00	
		2324				.428	9.14						7.90	
		2325				.482	9.93						8.69	
11/5/58	125	0028	499.8	1839	15.00	.424	9.08		-.2	-.35	-4	-.08	8.65	2400
		0029				.536	10.68						10.25	
		0030				.528	10.57						10.14	
	126	0031	499.6	1839	15.73	.595	11.44		-.4	-.70	-4	-.08	11.01	2400
		0045				1.355	18.62						17.84	
		0046				1.400	18.95						18.17	
	127	0047	499.4	1838	14.00	1.550	19.97		-.6	-1.04	-3	-.06	19.19	
		0101				1.302	18.23						17.13	
		0102				1.241	17.76						16.66	
	128	0102	499.4	1836	11.00	1.322	18.38		-.4	-.70	-1	-.02	17.28	0041
		0113				.616	11.71						10.99	
		0114				.700	12.71						11.99	
	129	0114	499.4	1836	9.00	.708	12.80		-.6	-1.04	-1	-.02	12.08	
		0115				.762	13.39						12.67	
		0127				.613	11.67						10.61	
	130	0128	499.4	1836	3.00	.749	13.25		-.6	-1.04	-1	-.02	12.19	
		0128				.738	13.13						12.07	
		0129				.820	14.01						12.95	
	131	0143	499.4	1836	68.25	.532	10.62		-.6	-1.04	-1	-.02	9.56	
		0143				.668	12.33						11.27	
		0144				.660	12.23						11.17	
	132	0156	499.4	1838	65.00	.680	12.48		-.6	-1.04	-1	-.02	11.42	0117
		0157				.804	13.84						12.78	
		0157				.872	14.53						13.47	
	132	0158				.869	14.50						13.44	
		0158				.937	15.17						14.11	
		0209				.1830	4.71		-.6	-1.04	-3	-.06	3.61	0154
		0211				.2245	5.61						4.51	
		0213				.304	7.11						6.01	
	132	0215				.323	7.45						6.35	
		0216				.367	8.18						7.08	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT	Temp. $\Delta p \times 10^{-4}$	ΔP psig	Press. $\Delta p \times 10^{-4}$		
11/5/58	133	0226	499.3	1830	66.00	.812	13.92	Not Calculated	- .7	-1.22	-3	-.06	12.64	
		0227				.965	15.43						14.15	
		0227				.965	15.43						14.15	
		0228				1.034	16.05						14.77	
	134	0237	499.6	1838	65.00	.756	13.32		- .4	-.70	-3	-.06	12.56	0154
		0237				.762	13.39						12.63	
		0238				.822	14.03						13.27	
		0239				.820	14.01						13.25	
		0239				.918	14.98						14.22	
	135	0248	499.3	1838	63.00	.1958	5.02		- .7	-1.22	-3	-.06	3.74	0230
		0250				.251	6.13						4.85	
		0252				.332	7.60						6.32	
		0254				.334	7.63						6.35	
		0255				.385	8.48						7.20	
	136	0311	499.3	1838	63.00	.576	11.20		- .7	-1.22	-3	-.06	9.92	
		0311				.712	12.84						11.56	
		0312				.712	12.84						11.56	
		0313				.762	13.39						12.11	
	137	0323	499.3	1838	62.00	.444	9.38		- .7	-1.22	-3	-.06	8.10	0252
		0324				.483	9.95						8.67	
		0325				.528	10.57						9.29	
		0325				.571	11.14						9.86	
	138	0336	499.3	1838	63.00	.984	15.59		- .7	-1.22	-3	-.06	14.31	0230
		0336				1.400	18.95						17.67	
		0336				1.578	20.16						18.88	
		0337				1.550	19.97						18.69	
	139	0347	499.3	1836	62.00	.722	12.95		- .7	-1.22	-1	-.02	11.71	0252
		0347				1.033	16.05						14.81	
		0348				1.142	16.98						15.74	
		0348				1.142	16.98						15.74	
		0349				1.228	17.67						16.43	
	140	0401	499.3	1836	60.00	.284	6.75		- .7	-1.22	-1	-.02	5.51	0342
		0402				.280	6.68							
		0404				.348	7.87							
		0405				.356	8.01							
		0406				.397	8.67							
	141	0420	499.5	1838	61.00	1.472	19.44		- .5	-.87	-3	-.06	18.51	
		0421				1.400	18.95							
		0421				1.532	19.85							
	142	0432	500.0	1841	60.00	.736	13.11		0		-6	-.13	12.98	0342
		0432				.869	14.50							
		0433				.860	14.41							
	143	0444	500.6	1841	58.50	.944	15.23		+ .6	+1.04	-6	-.13	6.31	0413
		0446				.273	6.55						7.46	
		0447				.330	7.57						8.48	
		0449				.342	7.77						8.68	
		0451				.395	8.64						9.55	
	144	0507	499.6	1841	57.50	.168	4.43		- .4	-.70	-6	-.13	3.60	0439
		0510				.275	6.58						5.75	
		0512				.333	7.57						6.74	
		0512				.342	7.77						6.94	
		0515				.420	9.02						8.19	
	145	0525	498.7	1841	58.50	1.400	18.95		-1.3	-2.26	-6	-.13	16.56	0413
		0526				1.550	19.97						17.58	
	146	0535	498.8	1841	57.50	.600	11.51		-1.2	-2.09	-6	-.13	9.39	0439
		0535				.776	13.54						11.42	
		0536				.846	14.27						12.15	
		0537				.852	14.33						12.21	
		0537				.930	15.10						12.98	
	147	0545	499.1	1841	56.50	.358	8.04		- .9	-1.57	-6	-.13	6.34	0517
		0546				.362	8.01						6.31	
		0548				.446	9.41						7.71	
		0549				.426	9.11						7.41	
		0550				.475	9.83						8.13	
	148	0605	499.5	1841	56.00	.337	7.68		- .5	-.87	-6	-.13	6.68	0527
		0608				.536	10.68						9.68	
		0608				.531	10.61						9.61	
		0609				.603	11.55						10.55	
	149	0621	498.9	1841	56.50	.931	15.10		-1.1	-1.91	-6	-.13	13.06	0517
		0621				1.173	17.23						15.19	
		0621				1.247	17.81						15.77	
		0622				1.240	17.76						15.72	
		0623				1.316	18.33						16.29	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT	Temp. $\Delta p \times 10^{-4}$	ΔP	Press. $\Delta p \times 10^{-4}$		
11/5/58	150	0631	499.0	1841	56.00	.856	14.38	Not Calculated	-1.0	-1.74	-6	-.13	12.51	0527
		0632				.965	15.43						13.56	
		0632				1.076	16.42						14.55	
		0633				1.058	16.27						14.40	
	151	0633	499.1	1841	55.00	1.148	17.02		-.9	-1.57	-6	-.13	15.15	0604
		0644				.497	10.15						8.45	
		0645				.612	11.65						9.99	
		0646				.590	11.37						9.67	
	152	0647	499.2	1839	54.00	.658	12.21		-.8	-1.39	-4	-.08	10.51	0636
		0658				.232	5.76						4.29	
		0700				.300	7.04						5.57	
		0702				.308	7.18						5.71	
	153	0704	499.1	1839	55.00	.345	7.82		-.9	-1.57	-4	-.08	6.35	0604
		0712				.948	15.26						13.61	
		0713				1.240	17.76						16.11	
		0713				1.315	18.33						16.68	
	154	0714	499.0	1834	54.00	1.142	16.97		-1.0	-1.74	+1	+.02	15.32	0636
		0722				.660	12.23						10.51	
		0723				.562	11.01						9.29	
		0724				.652	12.14						10.42	
	155	0724	498.9	1834	54.00	.630	11.87		-1.1	-1.91	+1	+.02	11.15	
		0725				.712	12.84						11.12	
		0732				.868	14.49						12.60	
		0732				.782	13.61						11.72	
	156	0733	498.9	1838	53.00	.886	14.67		-1.1	-2.09	-3	-.06	12.78	0711
		0733				.857	14.39						12.50	
		0734				.944	15.23						13.34	
		0747				.362	8.11						5.96	
	157	0748	498.7	1841	53.00	.422	9.04		-1.3	-2.26	-6	-.13	6.89	
		0750				.510	10.32						8.17	
		0751				.505	10.25						8.10	
		0752				.556	10.94						8.79	
	158	0801	498.8	1841	53.00	.592	11.41		-1.2	-2.09	-6	-.13	9.02	
		0802				.789	13.68						11.29	
		0803				.766	13.44						11.05	
		0804				1.010	15.84						13.45	
	159	0812	498.8	1841	53.00	.764	13.42		-.8	-1.39	-8	-.17	11.20	
		0813				.896	14.76						12.54	
		0814				.892	14.73						12.51	
		0821				.886	14.67						12.45	
	160	0821	499.2	1843	53.00	.934	15.13		+.1	+.17	-6	-.13	13.57	0747
		0822				1.051	16.20						14.64	
		0822				1.010	15.84						14.28	
		0832				.305	7.13						7.17	
	161	0834	500.1	1841	52.00	.381	9.06		+.2	+.35	-8	-.17	9.10	
		0835				.423	9.81						9.81	
		0836				.448	10.02						10.06	
		0846				.448	10.02						10.06	
	162	0847	500.2	1843	52.00	.448	9.44		+.4	+.70	-8	-.17	9.62	
		0848				.575	11.19						11.37	
		0849				.642	12.02						12.20	
		0857				.629	11.87						12.05	
	163	0858	500.1	1843	52.00	.595	11.44		+.3	+.52	-6	-.13	11.97	
		0858				.718	12.91						13.44	
		0908				.539	11.03						14.56	
		0909				.987	10.71						11.10	
	164	0909	500.1	1840	51.00	1.090	15.63		+.1	+.17	-5	-.11	16.02	0829
		0910				1.072	16.54						16.93	
		0919				.355	7.99						8.05	
		0920				.452	9.50						8.81	
	165	0921	500.4	1841	51.00	.550	10.86		-.1	-.17	-6	-.13	9.56	
		0930				.487	10.00						10.92	
		0931				.603	11.55						9.87	
		0932				.751	13.27						11.42	
	166	0941	499.9	1841	51.00	.653	12.16		-.1	-.17	-6	-.13	13.14	
		0941				.852	14.33						11.86	
		0942				.974	15.50						14.03	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/5/58	167	0951	499.8	1841	51.00	.818	14.00	Not Calculated	- .2	- .35	-	-.13	15.20	0912
		0951				1.062	16.29						13.52	
		0952				1.158	17.10						15.81	
	168	1001	499.8	1839	50.50	.638	11.97		- .2	- .35	-4	-.08	16.62	
		1002				.790	13.69						11.54	
		1002				.915	14.96						13.26	
	169	1011	499.8	1839	50.50	.797	13.77		- .2	- .35	-4	-.08	14.53	
		1012				1.010	15.84						13.34	
		1012				1.085	16.49						15.41	
	170	1021	499.8	1839	50.00	.539	10.71		- .2	- .35	-4	-.08	10.28	
		1022				.762	13.39						12.96	
		1023				.966	15.43						15.00	
	171	1032	499.8	1841	50.00	.804	13.84		- .2	- .35	-6	-.13	13.36	
		1032				.868	14.49						14.01	
		1033				1.105	16.66						16.18	
	172	1041	499.8	1839	49.50	.533	10.63		- .2	- .35	-4	-.08	10.20	
		1042				.658	12.21						11.78	
		1043				.785	13.64						13.21	
	173	1053	499.8	1838	49.50	.603	11.55		- .2	- .35	-3	-.06	11.14	
		1054				.819	14.00						13.59	
		1054				1.022	15.94						15.53	
	174	1102	499.9	1838	49.00	.427	9.13		- .1	- .17	-3	-.06	8.90	
		1103				.571	11.14						10.91	
		1104				.717	12.89						12.66	
	175	1111	499.9	1838	49.00	.635	11.93		- .1	- .17	-3	-.06	11.70	
		1112				.782	12.50						12.27	
		1113				.857	14.39						14.16	
	176	1121	499.8	1838	49.00	.592	11.41		- .2	- .35	-3	-.06	11.00	
		1122				.965	15.43						15.02	
		1122				1.081	16.46						16.05	
	177	1130	499.7	1838	48.50	.701	12.71		- .3	- .52	-3	-.06	12.13	
		1131				.785	13.64						13.06	
		1131				.769	13.46						12.88	
	178	1140	499.6	1838	Unknown	.886	14.67							
		1141				.968	15.45							
		1142				.965	15.43							
	179	1153	499.6	1834	4800	.521	10.48		- .4	- .70	+1	+.02	9.76	
		1154				.643	12.04						11.32	
		1155				.750	13.26						12.54	
	180	1202	499.8	1840	48.00	.533	10.64		- .2	- .35	-5	-.11	10.18	
		1203				.789	13.68						13.22	
		1203				.892	14.73						14.27	
	181	1210	499.6	1836	48.00	.723	12.96		- .4	- .70	-1	-.02	12.24	
		1211				.904	14.84						14.12	
		1212				.983	15.59						14.87	
	182	1216	499.6	1836	48.00	1.050	16.19		- .4	- .70	-1	-.02	15.47	
		1217				1.085	16.49						15.77	
	183	1223	499.6	1836	47.50	.500	10.19		- .4	- .70	-1	-.02	9.47	
		1224				.700	12.71						11.99	
		1225				.8015	13.81						13.09	
	184	1231	499.6	1836	47.50	.536	10.68		- .4	- .70	-1	-.02	9.96	
		1232				.757	13.34						12.62	
		1232				.895	14.76						14.04	
	185	1239	499.6	1836	47.50	.676	12.42		- .4	- .70	-1	-.02	11.70	
		1239				.895	14.76						14.04	
		1240				1.090	16.54						15.82	
	186	1247	499.6	1834	47.00	.450	9.47		- .4	- .70	+1	+.02	8.79	
		1248				.643	12.04						11.36	
		1249				.723	12.96						12.28	
	187	1255	499.6	1834	47.00	.609	11.62		- .4	- .70	+1	+.02	10.94	
		1256				.730	13.04						12.36	
		1257				.887	14.68						14.00	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/5/58	188	1305	499.4	1833	47.00	.744	13.20	Not Calculated	-.6	-1.04	+2	+.04	12.20	1157
		1305				.924	15.04						14.04	
		1306				1.034	16.05						15.05	
	189	1313	499.3	1833	46.50	.505	10.25		-.7	-1.22	+2	+.04	9.07	
		1314				.620	11.76						10.58	
		1314				.736	13.11						11.93	
	190	1321	499.3	1833	46.50	.616	11.71		-.7	-1.22	+2	+.04	10.53	
		1321				.748	13.23						12.05	
		1322				.843	14.25						13.07	
	191	1329	499.3	1833	46.50	.595	11.44		-.7	-1.22	+2	+.04	10.26	
		1330				.852	14.33						13.15	
		1331				.984	15.59						14.41	
	192	1338	499.3	1835	46.00	.384	8.46		-.7	-1.22	0		7.24	1222
		1339				.605	11.56						10.34	
		1340				.688	12.56						11.34	
	193	1347	499.5	1839	46.00	.505	10.25		-.5	-.87	-4	-.08	9.30	
		1348				.668	12.33						11.38	
		1349				.758	13.34						12.39	
	194	1358	499.5	1839	46.00	.532	10.62		-.5	-.87	-4	-.08	9.67	
		1359				.804	13.84						12.89	
		1300				.921	15.01						14.06	
		1300				.915	14.95						14.00	
	195	1410	499.2	1836	46.00	.799	13.79		-.8	-1.39	-1	-.02	12.38	
		1410				1.059	16.27						14.86	
		1411				1.150	17.03						15.62	
	196	1418	499.1	1834	45.75	.561	11.06		-.9	-1.57	+1	+.02	9.51	
		1419				.904	14.85						13.30	
		1419				1.010	15.84						14.29	
	197	1425	499.3	1833	45.75	.991	15.61		-.7	-1.22	+2	+.04	14.43	
		1426				1.099	16.62						15.44	
		1426				1.127	16.25						15.07	
	198	1433	499.3	1836	45.00	.384	8.46		-.7	-1.22	-1	-.02	7.22	1330
		1434				.457	9.57						8.33	
		1435				.538	10.71						9.47	
	199	1441	499.3	1835	45.00	.426	9.11		-.7	-1.22	0		7.89	
		1442				.530	10.59						9.37	
		1443				.625	11.81						10.59	
	200	1449	499.3	1836	45.00	.507	10.28		-.7	-1.22	-1	-.02	9.04	
		1450				.638	11.97						10.73	
		1451				.706	12.77						11.53	
		1452				.689	12.58						11.34	
	201	1459	499.4	1836	45.00	.553	10.91		-.6	-1.04	-1	-.02	9.85	
		1500				.706	12.77						11.71	
		1500				.812	13.92						12.86	
	202	1507	499.5	1836	45.00	.646	12.06		-.5	-.87	-1	-.02	11.17	
		1508				.796	13.76						12.87	
		1508				.930	15.09						14.20	
	203	1517	499.5	1836	45.00	.775	13.53		-.5	-.87	-1	-.02	12.64	
		1518				.905	14.85						13.96	
		1518				1.081	16.46						15.57	
	204	1527	499.6	1836	44.50	.516	10.41		-.4	-.70	-1	-.02	9.69	1415
		1528				.575	11.19						10.47	
		1529				.684	12.52						11.80	
	205	1537	499.6	1835	44.50	.557	10.95		-.4	-.70	0		10.25	
		1538				.679	12.46						11.76	
		1539				.781	13.59						12.89	
	206	1544	499.8	1836	44.50	.585	11.31		-.2	-.35	-1	-.02	10.94	
		1544				.775	13.53						13.16	
		1545				.880	14.62						14.25	
		1546				.876	14.58						14.21	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp.	Avg. Press.	Average Rod Height	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
			F	psig	Inches				ΔT	Temp.	ΔP	Press.		
									F	$\Delta \rho \times 10^{-4}$	psig	$\Delta \rho \times 10^{-4}$		
11/5/58	207	1551	499.6	1836	44.50	.820	14.01	Not Calculated	- .4	- .70	-1	-.02	13.29	1446
		1552				1.038	16.09						15.37	
		1552				.984	15.60						14.88	
	208	1557	500.2	1836	44.00	.524	10.52		+ .2	+ .35	-1	-.02	10.85	
		1558				.536	10.68						11.01	
		1559				.515	10.39						10.72	
	209	1605	500.4	1836	44.00	.431	9.19		+ .4	+ .70	-1	-.02	9.87	
		1606				.536	10.68						11.36	
		1607				.600	11.51						12.19	
	210	1618	499.4	1827	44.00	.625	11.81		- .6	-1.04	+8	+ .17	10.94	
		1619				.851	14.32						13.45	
		1619				.921	15.01						14.14	
	211	1627	499.2	1827	44.00	.607	11.60		- .8	-1.39	+6	+ .17	10.38	
		1628				.904	14.85						13.63	
		1629				1.002	15.77						14.55	
	212	1629				.944	15.23						14.01	
		1640	499.6	1827	43.50	.374	8.30		- .4	- .70	+8	+ .17	7.77	1517
		1641				.550	10.86						10.33	
		1642				.652	12.14						11.61	
	213	1653	499.6	1827	43.50	.679	12.46		- .4	- .70	+8	+ .17	11.93	
		1654				.757	13.34						12.81	
		1655				.724	12.97						12.44	
	214	1705	499.4	1827	43.50	.520	10.46		- .6	-1.04	+8	+ .17	9.59	
		1706				.868	14.49						13.62	
		1707				.990	15.66						14.79	
	215	1708				.944	15.23						14.36	
		1723	498.9	1830	43.50	.868	14.49		-1.1	-1.91	+5	+ .17	12.69	
		1723				1.142	16.12						14.32	
	216	1724				1.259	17.90						16.10	
		1725				1.240	17.76						15.96	
		1741	499.2	1830	43.00	.633	11.91		- .8	-1.39	+5	+ .11	10.63	1555
	217	1742				.749	13.25						11.97	
		1743				.889	14.70						13.42	
		1753	499.0	1830	43.00	.783	13.61		-1.0	-1.74	+5	+ .11	11.98	
	218	1753				.944	15.23						13.60	
		1754				1.085	16.49						14.86	
		1754				1.060	16.28						14.65	
	219	1805	498.7	1831	42.50	.536	10.68		-1.3	-2.26	+4	+ .08	8.50	1639
		1805				.630	11.87						9.69	
		1806				.755	13.32						11.14	
	220	1812	498.6	1833	42.50	.758	13.34		-1.4	-2.44	+2	+ .04	10.94	
		1812				.854	14.36						11.96	
		1813				.816	13.86						11.46	
	221	1822	498.1	1833	42.50	.749	13.25		-1.9	-3.31	+2	+ .04	9.98	
		1823				.902	14.82						11.55	
		1824				.898	14.78						11.51	
	222	1837	499.3	1831	42.00	.517	10.42		- .7	-1.22	+4	+ .08	9.28	1732
		1838				.496	10.13						8.99	
		1847	499.3	1831	42.00	.437	9.28		- .7	-1.22	+4	+ .08	8.14	
	223	1848				.524	10.52						9.38	
		1849				.613	11.67						10.53	
		1905	499.3	1831	42.00	.509	10.31		- .7	-1.22	+4	+ .08	9.17	
	224	1906				.679	12.46						11.32	
		1906				.745	13.20						12.06	
		1907	499.5	1831		.724	12.97						11.83	
	1917	1917			42.00	.820	14.01		- .5	- .87	+4	+ .08	13.22	
		1917				.886	14.67						13.88	
		1918				.875	14.56						13.77	
		1919				.924	15.04						14.25	

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/5/58	225	1928	499.8	1831	42.00	.915	14.95	Not Calculated	- .2	- .35	+4	+.08	14.68	1809
		1929				.987	15.63						15.36	
		1929				1.021	15.94						15.67	
		1930				1.083	16.49						16.22	
	226	1946	499.4	1831	41.50	.528	10.57		- .6	-1.04	+4	+.08	9.61	
		1947				.668	12.33						11.37	
		1948				.658	12.21						11.25	
	227	1958	499.3	1831	41.50	.656	12.19		- .7	-1.57	+4	+.08	10.70	
		1959				.804	13.84						12.35	
		1959				.918	14.98						13.49	
		2000				.944	15.23						13.74	
	228	2013	498.8	1831	41.50	.660	12.23		-1.2	-2.09	+4	+.08	10.22	
		2014				.987	15.63						13.62	
		2015				1.113	16.72						14.71	
		2015				1.113	16.72						14.71	
	229	2025	499.2	1831	41.00	.364	8.14		- .8	-1.39	+4	+.08	6.83	1854
		2027				.526	10.55						9.24	
		2028				.565	11.06						9.75	
		2029				.595	11.44						10.13	
	230	2042	499.5	1831	41.00	.505	10.25		- .5	- .87	+4	+.08	9.46	
		2043				.639	11.98						11.19	
		2044				.704	12.75						11.96	
		2044				.736	13.11						12.32	
	231	2103	499.5	1831	41.00	.685	12.52		- .5	- .87	+4	+.08	11.73	
		2104				.819	14.00						13.21	
		2105				.914	14.95						14.16	
		2105				.944	15.23						14.44	
	232	2123	499.4	1833	41.00	.824	14.04		- .6	-1.04	+2	+.04	13.04	
		2124				.987	15.63						14.63	
		2124				1.114	16.73						15.73	
		2125				1.143	16.98						15.98	
	233	2142	499.3	1833	40.50	.653	12.16		- .7	-1.22	+2	+.04	10.98	1939
		2143				.744	13.20						12.02	
		2144				.769	13.46						12.28	
		2144				.771	13.49						12.31	
	234	2201	499.4	1833	40.50	.547	10.83		- .6	-1.04	+2	+.04	9.83	
		2202				.790	13.69						12.69	
		2203				.895	14.76						13.76	
		2203				.944	15.23						14.23	
	235	2220	499.2	1834	40.50	.498	10.16		- .8	-1.39	+1	+.02	8.79	
		2220				.965	15.43						14.05	
		2221				.965	15.43						14.05	
		2223				1.205	17.48						16.13	
	236	2238	499.2	1834	40.00	.427	9.13		- .8	-1.39	+1	+.02	7.76	2039
		2239				.603	11.55						10.18	
		2241				.686	12.54						11.17	
		2242				.712	12.84						11.47	
	237	2253	499.2	1834	40.00	.474	9.81		- .8	-1.39	+1	+.02	8.44	
		2254				.712	12.84						11.47	
		2255				.799	13.79						12.42	
		2256				.877	14.59						13.22	
	238	2312	499.3	1834	40.00	.526	10.55		- .7	-1.22	+1	+.02	9.35	
		2313				.827	14.08						12.88	
		2314				.835	14.16						12.96	
		240*				.958	15.36						15.21	
11/6/58	240*	0036	499.9	1834	39.50	.987	15.63		- .1	- .17	+1	+.02	15.48	
		0037				1.054	16.23						16.08	
		0037				.700	12.71						11.69	
		0048				1.017	15.90						14.88	
	241	0048	499.4	1834	39.50	1.113	16.72		- .6	-1.04	+1	+.02	15.70	
		0049				1.127	16.84						15.82	
		0049				1.113	16.72						15.70	
		0050				1.113	16.72						15.70	

* Run No. 239 left out; Insufficient data

TABLE I (cont'd)

XENON TRANSIENT TESTS

Date	Run No.	Mean Time	Avg. Temp. F	Avg. Press. psig	Average Rod Height Inches	Start-up Rate Dec/min	Uncorrected Reactivity $\rho \times 10^{-4}$	Average Uncorrected Reactivity $\rho \times 10^{-4}$	Reactivity Corrections To 500 F and 1800 psig				Corrected Reactivity $\rho \times 10^{-4}$	Criticality Time
									ΔT F	Temp. $\Delta \rho \times 10^{-4}$	ΔP psig	Press. $\Delta \rho \times 10^{-4}$		
11/6/58	242	0114	499.4	1834	39.00	.514	10.38	Not Calculated	- .6	-1.04	+1	+.02	9.36	2209
		0115				.690	12.59						11.57	
		0116				.708	12.80						11.78	
		0117				.762	13.39						12.37	
		0117				.753	13.30						12.28	
	243	0130	499.3	1834	39.00	.462	9.65		- .7	-1.22	+1	+.02	8.45	
		0131				.734	13.09						11.89	
		0132				.790	13.69						12.49	
		0133				.840	14.21						13.01	
		0133				.835	14.16						12.96	
	244	0155	499.1	1834	39.00	.688	12.56		- .9	-1.57	+1	+.02	11.01	
		0156				.924	15.04						13.49	
		0156				1.055	16.23						14.68	
		0157				1.059	16.27						14.72	
		0157				1.051	16.20						14.65	
	245	0243	498.9	1834	38.50	.610	11.63		-1.1	-1.91	+1	+.02	9.74	0010
		0244				.690	12.59						10.70	
		0245				.764	13.42						11.53	
		0246				.776	13.54						11.65	
		0246				.764	13.42						11.53	
	246	0312	499.8	1834	38.50	.485	9.88		- .2	- .35	+1	+.02	9.55	
		0313				.700	12.71						12.38	
		0314				.835	14.16						13.83	

Time.

TABLE II

PLANT CONDITIONS IMMEDIATELY PRIOR TO SHUTDOWN

Time 1558				Time 1555		Time 1605	
Date 11/3/58				Rod No.	Inches	Invtr No.	Inches
1A	Coolant	Loop Th	508.8	11	69.25	1	0.112
1B	Coolant	Loop Th	510.7	12	69.27	2	0.228
1C	Coolant	Loop Th	509.3	13	69.32	3	0.154
1D	Coolant	Loop Th	509.8	14	69.30	4	0.179
1A	Coolant	Loop T _c	487.3	21	68.60	5	0.206
1B	Coolant	Loop T _c	487.8	22	61.02	6	0.150
1C	Coolant	Loop T _c	488.0	23	69.09	7	0.174
1D	Coolant	Loop T _c	486.8	24	63.09	8	0.118
1A	Coolant	Loop Flow	7.28	31	69.61	9	0.182
1B	Coolant	Loop Flow	7.20	32	69.63	10	0.219
1C	Coolant	Loop Flow	7.28	33	69.56		
1D	Coolant	Loop Flow	7.13	34	69.63		
1A	Coolant	Loop Pressure	1815	41	1.05		
1B	Coolant	Loop Pressure	1840	42	1.00		
1C	Coolant	Loop Pressure	1805	43	.98		
1D	Coolant	Loop Pressure	1855	44	.94		
Coolant Average Temp.			499.5	51	68.65		
E.F.P.H. at 1600 hours			2790.5	52	68.64		
				53	68.60		
				54	68.63		
Time 1500				61	61.13		
Gross Generator Load			68.6	62	69.16		
Net Generator Load			60.2	63	63.12		
				64	68.65		
				71	69.33		
				72	69.28		
				73	69.23		
Shutdown Started at 1616				74	69.27		
All rods bottomed at 1650				81	1.02		
				82	0.96		
				83	1.05		
				84	1.00		

TABLE II (cont'd)

ROD POSITIONS

Start of Shutdown at 1616 11/3/58												
Date 11/5/58												
Time	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545
Rods												
21	68.22	68.22	68.22	68.22	68.22	68.22	68.40	68.40	68.60	68.60	68.60	68.60
22	60.87	60.87	60.87	60.87	60.89	60.89	60.82	60.78	60.78	60.78	60.78	61.02
23	68.69	68.69	68.69	68.69	68.70	68.70	68.88	69.09	69.09	69.09	69.09	69.09
24	62.70	62.70	62.70	62.70	62.70	62.70	63.89	63.69	63.69	63.69	63.69	63.09
61	60.97	60.97	60.97	60.97	60.97	60.97	60.53	60.80	60.80	60.80	60.80	61.13
62	68.74	68.74	68.74	68.74	68.74	68.74	68.95	69.16	69.16	69.16	69.16	69.16
63	62.71	62.71	62.71	62.71	62.71	62.71	62.92	63.12	63.12	63.12	63.12	63.12
64	68.25	68.25	68.25	68.25	68.25	68.25	68.45	68.65	68.65	68.65	68.65	68.65
Rod Group I - Completely Withdrawn Rod Groups III & IV - Inserted												
Station Output for 30 hours prior to shutdown												
Date	Time	Output*	Date	Time	Output*	Date	Time	Output *				
11/2/59	2400	68.4	11/2/59	1400	68.3	11/3/59	0400	68.5				
	0100	68.5		1500	68.2		0500	68.5				
	0200	68.8		1600	68.6		0600	67.7				
	0300	68.9		1700	69.0		0700	68.6				
	0400	68.9		1800	69.3		0800	68.3				
	0500	68.6		1900	69.3		0900	68.2				
	0600	68.3		2000	69.0		1000	68.9				
	0700	68.3		2100	68.9		1100	69.0				
	0800	69.1		2200	68.7		1200	68.7				
	0900	69.3		2300	68.4		1300	68.4				
	1000	69.3	11/3/59	2400	68.3		1400	68.6				
	1200	68.6		0200	68.8							
	1300	68.3		0300	68.6							

* Gross output in MW.

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III
COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
1	11/3/58	2321	499.6	499.4	00S	500.0	499.6	499.3	499.2	499.8	1820	1840	1860	1850
2		2330	499.6	499.4	00S	500.1	499.6	499.3	499.2	499.8	1820	1840	1820	1850
3		2354	499.6	499.4	00S	499.5	499.5	499.2	499.2	499.5	1820	1840	1820	1850
4	11/4/58	0031	499.6	499.4	500.2	499.0	499.6	499.4	499.1	499.5	1820	1840	1820	1850
5		0041	499.2	499.1	499.9	499.8	499.2	498.9	499.0	499.2	1820	1840	1820	1850
6		0052	499.2	499.1	499.9	498.7	499.0	499.0	498.9	499.1	1820	1840	1820	1850
7		0101	499.1	498.9	499.7	498.6	499.0	498.9	498.9	499.0	1820	1840	1820	1850
8		0110	499.1	499.1	499.8	499.8	498.9	498.9	498.9	499.0	1820	1840	1820	1850
9		0121	499.2	499.2	500.3	499.1	499.2	499.1	499.1	499.6	1820	1840	1820	1850
10		0131	499.6	499.3	500.5	499.4	499.4	499.4	499.4	499.7	1820	1840	1820	1850
11		0142	499.8	499.4	500.7	499.6	499.7	499.7	499.6	499.9	1820	1840	1825	1850
12		0152	499.8	499.5	500.7	499.6	499.8	499.7	499.7	500.0	1825	1840	1820	1850
13		0204	500.0	499.6	500.6	499.6	499.8	499.8	499.7	499.9	1825	1835	1820	1850
14		0215	500.0	499.8	500.5	499.6	499.8	499.8	499.7	500.0	1825	1835	1820	1850
15		0226	500.0	499.8	500.5	499.4	499.8	499.8	499.6	500.0	1825	1835	1820	1850
16		0241	500.0	499.8	500.5	499.4	500.8	499.7	499.5	499.9	1825	1840	1820	1850
17		0253	500.0	499.8	500.5	499.4	499.8	499.7	499.2	499.9	1825	1840	1820	1850
18		0304	500.0	499.6	500.5	499.2	499.8	499.5	499.4	499.8	1825	1840	1820	1850
19		0316	499.8	499.4	500.3	499.2	499.8	499.4	499.5	499.7	1825	1840	1820	1850
20		0329	499.7	499.4	500.3	499.2	499.5	499.2	499.1	499.7	1825	1840	1820	1850
21		0340	499.6	499.4	500.1	499.2	499.2	499.2	499.0	499.5	1825	1840	1820	1850
22		0353	499.5	499.4	500.1	499.0	499.2	499.1	499.0	499.5	1825	1840	1820	1850
23		0403	499.4	499.2	500.1	499.0	499.2	499.0	499.0	499.4	1825	1840	1820	1850
24		0413	499.2	498.9	499.7	498.6	499.0	498.6	498.7	499.0	1825	1840	1820	1850
25		0424	499.0	498.7	499.5	498.4	498.6	498.5	498.5	498.8	1825	1840	1820	1850
26		0434	499.4	499.4	500.2	499.2	499.3	499.3	499.1	499.8	1825	1840	1820	1850
27		0446	499.4	499.3	500.1	498.8	499.5	499.0	499.1	499.3	1820	1840	1820	1850
28		0458	499.0	498.9	499.7	498.2	498.8	498.6	499.2	498.8	1820	1840	1820	1850
29		0511	498.7	498.9	499.5	498.6	498.6	498.5	498.5	498.9	1820	1840	1820	1850
30		0524	499.2	499.0	500.5	498.8	499.2	499.2	499.1	499.4	1820	1840	1820	1850
31		0536	499.0	498.7	499.5	498.5	498.8	498.5	498.7	498.9	1820	1840	1820	1850
32		0547	499.0	498.9	499.7	499.0	499.0	499.0	499.0	499.2	1820	1840	1820	1850
33		0558	499.3	499.4	500.1	499.3	499.4	499.4	498.2	499.8	1820	1840	1820	1850
34		0610	499.7	500.0	500.3	499.6	499.8	499.8	499.8	500.0	1825	1840	1820	1850
35		0624	499.8	499.8	500.5	499.2	499.8	499.7	499.6	499.9	1825	1840	1820	1850
36		0636	499.7	499.4	500.3	499.2	499.6	499.3	499.2	499.7	1825	1840	1820	1850
37		0648	499.6	499.2	500.3	499.2	499.2	499.1	499.3	499.8	1825	1840	1820	1850

20 024

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)

COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
38	11/4/58	0658	499.6	499.1	500.1	499.0	499.2	499.0	499.2	499.6	1825	1840	1820	1850
39		0710	499.0	499.1	499.9	499.0	499.3	499.0	499.1	499.5	1825	1840	1820	1850
40		0721	499.1	498.8	499.6	498.2	499.0	498.6	498.7	498.8	1825	1840	1820	1850
41		0733	498.9	498.8	499.3	498.2	498.7	498.5	498.5	498.6	1825	1840	1820	1850
42		0746	498.9	498.8	499.3	498.3	498.7	498.5	498.5	498.8	1825	1840	1820	1850
43		0800	498.8	498.8	499.3	498.3	498.8	498.7	498.5	498.8	1825	1840	1820	1850
44		0811	498.7	498.7	499.3	498.4	498.8	498.8	498.5	499.8	1825	1840	1820	1850
45		0844	498.9	498.5	498.9	498.1	498.8	498.5	498.7	499.8	1825	1840	1820	1850
46		0859	498.9	498.5	499.5	498.1	498.7	498.5	498.3	499.0	1825	1840	1820	1850
47		0910	498.9	498.5	499.3	498.2	498.8	498.3	498.3	499.5	1825	1840	1820	1850
48		0922	498.9	498.5	499.3	500.1	498.8	498.5	498.5	499.5	1825	1840	1820	1850
49		0936	498.9	498.5	497.6	498.2	498.7	498.3	498.7	499.0	1825	1840	1820	1850
50		0947	498.7	498.3	499.1	498.0	498.5	498.7	498.7	499.3	1825	1840	1820	1850
51		0959	498.1	497.7	498.8	497.4	498.7	498.7	498.9	499.0	1825	1840	1820	1850
52		1009	498.5	498.3	499.1	498.0	498.7	498.7	498.9	499.0	1825	1840	1820	1850
53		1021	498.9	498.5	499.1	498.2	498.8	498.7	498.7	499.0	1825	1840	1820	1850
54		1034	498.9	498.3	499.1	498.0	498.8	498.7	498.7	499.0	1825	1840	1820	1850
55		1045	498.9	498.5	499.1	498.0	498.7	498.8	498.5	499.3	1825	1840	1820	1850
56		1058	499.1	498.9	499.5	498.6	498.7	498.8	498.7	499.5	1825	1840	1820	1850
57		1113	499.4	499.2	500.1	499.0	498.5	499.7	498.7	499.5	1825	1840	1820	1850
58		1126	500.0	500.2	500.9	499.8	498.5	498.8	498.8	499.5	1825	1840	1820	1850
59		1139	500.4	500.4	501.1	499.9	498.7	499.8	498.8	499.5	1825	1840	1820	1850
60		1155	500.8	500.8	501.5	500.3	498.8	499.7	499.8	499.7	1820	1840	1820	1850
61		1209	501.0	500.8	501.7	500.4	499.7	499.8	499.5	499.4	1820	1840	1820	1850
62		1226	501.0	500.8	501.7	500.5	500.5	500.5	500.5	501.0	1820	1840	1820	1850
63		1238	501.0	500.8	501.6	500.3	500.5	500.5	500.8	501.0	1820	1840	1820	1850
64		1251	500.8	500.6	501.5	500.2	500.5	500.7	500.7	501.0	1820	1840	1820	1850
65		1307	500.6	500.4	501.5	499.9	500.5	500.7	500.7	501.2	1820	1840	1820	1850
66		1318	500.4	500.4	501.3	499.0	500.5	500.2	500.1	500.2	1820	1835	1815	1850
67		1332	500.4	500.2	501.2	499.8	500.3	500.5	500.5	500.2	1820	1835	1815	1850
68		1342	500.2	499.8	500.7	499.6	500.0	500.0	500.3	500.0	1820	1835	1815	1850
69		1353	500.2	500.0	500.7	499.6	500.0	500.3	500.0	499.7	1820	1835	1815	1850
70		1407	500.2	500.0	500.9	499.8	500.0	500.0	499.7	499.8	1820	1835	1815	1850
71		1418	500.2	500.2	501.1	499.9	500.0	500.0	499.7	499.8	1820	1835	1815	1850
72		1413	500.6	500.5	501.5	500.1	500.2	500.3	500.1	500.5	1820	1835	1813	1850
74*		1455	500.1	499.8	500.9	499.6	500.0	499.8	500.1	500.0	1820	1835	1815	1850

* Run 73 was no good.

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)
COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
75	11/4/58	1508	500.0	499.6	500.5	499.2	500.0	499.5	499.5	499.8	1820	1835	1815	1850
76		1523	500.3	500.2	501.1	499.8	499.9	499.9	499.9	500.0	1820	1835	1815	1850
77		1532	501.1	501.3	-----	500.5	500.7	500.7	500.7	501.0	1820	1835	1815	1850
78		1556	498.9	497.3	499.0	498.9	499.5	499.2	499.4	499.5	1820	1845	1810	1860
79		1624	497.5	493.5	498.4	497.1	497.9	498.0	498.0	498.1	1830	1850	1830	1860
80		1636	499.1	498.7	499.5	498.6	499.0	498.8	499.0	499.0	1830	1850	1830	1860
81		1645	498.9	498.7	499.5	498.4	498.4	498.5	498.6	498.7	1825	1850	1825	1860
82		1656	499.4	498.5	500.2	499.0	499.1	499.2	499.1	499.4	1825	1850	1825	1860
83		1709	499.6	500.2	499.3	499.0	499.2	499.1	499.2	499.3	1825	1850	1825	1860
84		1719	499.6	499.4	500.3	499.2	499.2	499.4	499.3	499.7	1825	1850	1825	1860
85		1728	499.8	499.6	500.7	499.4	499.5	499.6	499.5	499.9	1825	1850	1820	1860
86		1740	499.9	499.8	500.7	499.6	499.6	499.8	499.7	500.0	1825	1850	1820	1860
87		1750	500.0	499.8	500.7	499.6	499.8	499.9	499.9	500.0	1825	1850	1820	1860
88		1801	500.0	599.8	500.7	499.6	499.8	499.9	499.9	500.0	1825	1850	1820	1860
89		1822	500.0	499.8	500.7	499.6	499.8	499.8	499.8	500.0	1825	1850	1820	1860
90		1830	500.0	499.8	500.9	499.6	499.8	499.9	499.9	500.0	1825	1850	1820	1860
91		1844	500.0	499.8	500.7	499.6	499.8	499.9	499.9	500.0	1825	1850	1820	1860
92		1855	500.0	499.2	500.7	499.4	499.8	499.8	499.8	500.0	1825	1850	1820	1860
93		1915	499.8	499.6	500.5	499.2	499.6	499.5	499.6	499.8	1825	1850	1820	1860
94		1925	499.8	499.6	500.5	499.2	499.6	499.3	499.3	499.7	1825	1850	1820	1860
95		1943	498.7	499.4	500.3	499.0	499.2	499.2	499.2	499.5	1825	1850	1820	1860
96		1952	499.6	499.4	500.2	499.6	499.1	499.1	499.1	499.3	1825	1850	1820	1860
97		2000	499.5	498.5	500.1	499.0	499.1	499.1	499.1	499.3	1825	1850	1820	1860
98		2006	499.5	499.4	500.0	498.9	499.1	499.1	499.1	499.3	1825	1850	1820	1860
99		2012	499.6	499.6	499.9	498.8	499.1	499.1	499.1	499.3	1825	1850	1820	1860
100		2020	499.8	499.8	500.3	499.2	499.1	499.1	499.2	499.7	1820	1845	1820	1860
101		2026	500.0	500.0	500.6	499.6	499.7	499.8	499.8	499.7	1820	1845	1820	1860
102		2032	500.2	500.2	500.8	499.8	500.0	500.0	500.0	500.1	1820	1845	1820	1860
103		2039	500.4	500.4	500.9	499.8	500.1	500.0	500.1	500.1	1820	1845	1820	1860
104		2047	500.4	500.4	500.9	499.8	500.0	500.1	500.0	501.0	1820	1845	1820	1860
105		2056	499.8	499.1	500.7	499.4	499.5	499.3	499.5	499.7	1820	1845	1810	1855
106		2103	499.7	498.5	500.7	499.9	499.5	499.3	499.3	499.6	1820	1845	1810	1855
107		2111	499.4	499.1	500.3	498.8	499.1	499.0	499.0	499.1	1820	1845	1810	1855
108		2119	499.2	499.1	499.9	498.6	499.0	499.0	499.0	499.0	1820	1845	1810	1855
109		2124	499.2	499.1	499.9	498.5	499.0	498.9	498.9	499.0	1820	1845	1810	1855
110		2132	499.2	499.1	499.9	498.6	499.0	499.0	498.9	499.0	1820	1845	1810	1855
111		2140	499.2	499.1	499.9	498.8	499.0	499.0	499.0	499.1	1825	1845	1810	1860

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)

COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
112	11/4/58	2149	499.1	498.9	499.7	498.4	499.0	499.0	499.0	499.1	1825	1845	1810	1860
113		2157	499.1	498.8	499.7	498.3	498.9	498.7	498.5	498.8	1825	1845	1810	1860
114		2204	499.1	498.9	499.9	498.6	498.9	498.9	498.8	499.0	1830	1850	1825	1855
115		2213	499.4	499.2	500.3	498.9	498.9	498.9	498.9	499.0	1830	1850	1825	1855
116		2221	499.4	499.2	500.3	499.0	499.0	499.0	499.0	499.5	1830	1850	1825	1855
117		2228	499.4	499.1	500.0	498.6	499.0	499.0	499.0	499.2	1830	1850	1825	1855
118		2237	499.0	499.1	499.9	498.6	499.0	499.0	499.0	499.2	1830	1850	1825	1855
119		2244	499.1	499.1	499.7	498.6	499.0	499.0	499.0	499.2	1830	1850	1825	1855
120		2252	498.9	499.1	499.7	498.4	499.0	499.0	499.0	499.3	1830	1850	1825	1855
121		2301	499.1	499.1	499.9	498.8	499.0	499.0	499.0	499.0	1830	1850	1825	1855
122		2310	498.9	498.4	499.1	498.0	498.3	498.3	498.2	498.5	1850	1860	1855	1870
123		2316	498.9	498.7	499.5	498.0	498.7	498.8	498.5	499.0	1830	1840	1810	1860
124		2323	499.2	498.9	500.1	498.9	499.0	499.0	499.0	499.2	1825	1850	1820	1860
125	11/5/58	0028	499.8	499.4	500.3	499.2	499.5	499.4	499.5	499.8	1825	1850	1820	1860
126		0045	499.6	499.3	500.2	499.1	-----	-----	-----	-----	-----	-----	-----	-----
127		0101	499.4	499.2	500.1	499.0	499.3	498.9	499.3	499.5	1825	1845	1825	1855
128		0113	499.4	499.2	500.1	499.0	499.5	499.0	499.0	499.4	1825	1845	1820	1855
129		0127	499.4	499.2	500.1	498.8	499.2	499.1	499.0	499.4	1825	1845	1820	1855
130		0143	499.4	499.2	500.1	498.8	499.2	499.1	499.0	499.5	1825	1845	1820	1855
131		0156	499.4	499.2	500.0	498.8	499.5	499.1	499.0	499.5	1825	1845	1820	1855
132		0209	499.4	499.2	500.0	498.8	499.5	499.1	499.0	499.5	1830	1845	1820	1855
133		0226	499.4	499.0	500.1	498.8	499.4	499.0	499.0	499.5	1825	1845	1820	1860
134		0237	499.3	499.1	500.1	499.9	499.1	499.0	499.0	499.4	1825	1845	1820	1860
135		0248	499.4	499.1	500.1	499.9	499.2	499.0	499.0	499.4	1830	1845	1820	1855
136		0311	499.4	499.1	500.0	498.8	499.1	499.0	499.0	499.4	1830	1845	1820	1855
137		0323	499.4	499.1	500.0	498.8	499.1	499.0	499.0	499.5	1830	1845	1820	1855
138		0336	499.4	499.1	500.0	498.8	499.1	499.0	499.0	499.5	1830	1845	1820	1855
139		0347	499.4	499.1	500.0	498.8	499.1	499.0	499.0	499.4	1825	1845	1820	1855
140		0401	499.3	499.1	500.0	498.8	499.1	499.0	499.0	499.4	1825	1845	1820	1855
141		0420	499.4	499.4	500.3	499.0	499.1	499.0	499.0	499.4	1825	1845	1825	1855
142		0432	499.5	500.2	500.7	499.4	499.9	499.8	499.7	500.0	1830	1845	1830	1860
143		0444	500.2	501.4	501.1	499.6	500.0	500.0	499.9	500.1	1830	1845	1830	1860
144		0507	499.4	499.4	500.4	499.2	499.2	499.1	499.1	499.6	1835	1845	1830	1855
145		0525	498.6	498.7	499.3	498.0	498.8	498.2	498.2	498.8	1835	1845	1830	1855
146		0535	498.7	498.8	499.3	498.4	498.7	498.6	498.4	499.0	1835	1845	1830	1855
147		0545	498.9	499.1	499.5	498.8	499.0	498.9	498.7	499.1	1835	1845	1830	1855

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)

COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
148	11/5/58	0605	499.5	499.6	499.9	499.0	499.1	499.0	499.0	499.1	1835	1845	1830	1855
149		0621	499.1	498.6	499.5	498.4	499.0	498.6	498.5	498.9	1835	1845	1830	1855
150		0631	499.1	498.6	499.5	498.4	499.0	498.8	498.6	498.9	1835	1845	1830	1855
151		0644	499.1	498.9	499.7	498.6	499.0	498.8	498.8	499.0	1835	1845	1830	1855
152		0658	499.1	499.1	499.9	498.6	499.0	498.9	498.8	499.0	1835	1845	1820	1855
153		0712	499.1	498.9	499.7	498.5	499.0	498.8	498.7	499.0	1830	1845	1820	1855
154		0722	499.1	498.8	499.7	498.4	499.0	498.6	498.7	499.0	1825	1840	1815	1855
155		0732	499.1	498.7	499.4	498.4	498.8	498.4	498.3	498.9	1825	1840	1820	1850
156		0747	498.9	498.7	499.4	498.2	498.7	498.6	498.3	498.9	1830	1845	1820	1855
157		0801	498.6	498.1	499.9	498.2	498.2	498.0	498.0	498.2	1835	1850	1825	1855
158		0812	499.0	498.7	499.1	498.4	499.0	498.8	498.8	499.0	1835	1850	1825	1855
159		0821	499.4	499.2	499.3	499.0	499.2	499.2	499.1	499.6	1835	1850	1830	1855
160		0832	499.8	499.6	500.5	500.3	499.7	499.8	499.4	499.9	1835	1850	1825	1855
161		0847	500.2	500.0	500.8	499.8	500.0	500.0	499.9	500.2	1835	1850	1830	1855
162		0857	500.0	500.4	501.1	500.1	500.1	500.2	500.0	500.4	1835	1850	1830	1855
163		0908	500.2	500.0	500.9	499.9	500.1	500.1	500.0	500.2	1835	1850	1825	1855
164		0919	500.2	499.8	500.7	499.6	499.9	499.9	499.8	500.0	1830	1850	1825	1855
165		0930	500.0	499.7	500.7	499.6	499.9	499.8	499.8	500.0	1830	1850	1830	1855
166		0941	499.9	499.6	500.5	499.4	499.7	499.6	499.6	499.8	1835	1850	1825	1855
167		0951	499.8	499.6	500.5	499.4	499.7	499.5	499.5	499.7	1835	1850	1825	1855
168		1001	499.8	499.6	500.3	499.4	499.7	499.5	499.5	499.8	1830	1845	1825	1855
169		1011	499.8	499.6	500.5	499.4	499.5	499.5	499.5	499.8	1830	1845	1825	1855
170		1021	499.8	499.6	500.4	499.4	499.7	499.6	499.6	499.8	1830	1845	1825	1855
171		1032	499.8	499.6	500.4	499.4	499.7	499.6	499.6	499.8	1830	1850	1825	1855
172		1041	499.8	499.6	500.3	499.4	499.6	499.6	499.5	499.8	1830	1850	1820	1855
173		1053	499.8	499.6	500.4	499.4	499.7	499.7	499.6	499.8	1825	1850	1820	1855
174		1102	499.8	499.8	500.5	499.4	499.5	499.7	499.6	499.8	1825	1850	1820	1855
175		1111	499.8	499.8	500.5	499.4	499.6	499.8	499.6	499.9	1825	1850	1820	1855
176		1121	499.6	499.6	500.3	499.4	499.3	499.4	499.5	499.8	1825	1850	1820	1855
177		1130	499.7	499.4	500.3	499.2	499.3	499.4	499.5	499.8	1825	1850	1820	1855
178		1140	499.6	499.4	500.1	499.2	499.3	499.2	499.3	499.7	1825	1850	1820	1855
179		1153	499.6	499.4	500.1	499.2	499.2	499.3	499.3	499.7	1815	1845	1820	1860
180		1202	499.6	499.4	500.1	500.1	499.2	499.2	499.2	499.7	1830	1850	1820	1860
181		1210	499.6	499.4	500.1	499.2	499.2	499.4	499.3	499.7	1825	1850	1815	1855
182		1216	499.6	499.4	500.1	499.2	499.2	499.3	499.3	499.7	1825	1850	1815	1855
183		1223	499.6	499.4	500.1	499.2	499.2	499.3	499.3	499.7	1825	1850	1815	1855
184		1231	499.6	499.4	500.3	499.1	499.2	499.3	499.2	499.7	1825	1850	1815	1855

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)

COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature °F								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
185	11/5/58	1239	499.6	499.4	500.1	499.0	499.2	499.3	499.3	499.6	1825	1850	1815	1855
186		1247	499.6	499.4	500.1	499.0	499.2	499.3	499.3	499.6	1825	1840	1820	1850
187		1255	499.6	499.4	500.3	499.1	499.1	499.2	499.2	499.5	1825	1840	1820	1850
188		1305	499.6	499.2	499.9	498.8	499.0	499.0	499.1	499.4	1825	1840	1810	1855
189		1313	499.5	499.1	499.9	498.8	499.0	499.0	499.0	499.2	1825	1845	1820	1855
190		1321	499.2	499.1	499.9	498.8	498.9	499.0	499.0	499.1	1825	1840	1815	1850
191		1329	499.1	499.0	499.7	498.4	498.8	498.8	498.9	499.0	1820	1845	1815	1850
192		1338	499.1	499.0	499.7	498.4	498.7	498.8	498.8	499.0	1825	1850	1815	1850
193		1347	499.4	499.4	500.1	499.0	499.0	499.2	499.1	499.5	1830	1850	1825	1850
194		1358	499.4	499.4	500.3	498.8	499.0	499.0	499.1	499.5	1825	1850	1825	1855
195		1410	499.1	499.1	499.9	498.6	498.8	499.0	499.0	499.1	1825	1850	1820	1850
196		1418	499.1	499.1	499.9	498.6	498.7	498.8	498.9	499.0	1825	1850	1810	1850
197		1425	499.2	499.1	499.9	498.8	498.7	498.9	498.9	499.0	1825	1845	1810	1850
198		1433	499.4	499.1	499.8	498.8	498.7	499.0	499.0	499.0	1825	1850	1820	1850
199		1441	499.2	499.1	499.9	498.8	498.9	499.0	499.1	499.0	1825	1845	1820	1850
200		1449	499.2	499.1	499.9	498.8	498.9	499.0	499.0	499.2	1825	1850	1820	1850
201		1459	499.4	499.2	500.1	498.8	498.9	499.0	499.0	499.2	1825	1850	1820	1850
202		1507	499.6	499.4	500.1	499.0	499.0	499.1	499.0	499.4	1825	1850	1820	1850
203		1517	499.4	499.4	500.1	499.0	499.0	499.1	499.1	499.5	1825	1850	1820	1850
204		1527	499.6	499.4	500.3	499.0	499.0	499.5	499.5	499.9	1825	1850	1820	1850
205		1537	499.6	499.4	500.3	499.2	499.1	499.3	499.3	499.5	1825	1850	1820	1850
206		1544	499.6	499.6	500.3	499.2	499.2	499.6	499.5	499.6	1825	1850	1820	1850
207		1551	499.6	499.4	500.3	499.2	499.2	499.2	499.5	499.6	1825	1850	1820	1850
208		1557	500.2	500.0	500.0	499.8	499.3	499.4	499.4	499.5	1825	1850	1820	1850
209		1605	500.2	500.2	501.1	499.9	499.8	500.2	500.0	500.2	1825	1850	1820	1850
210		1618	499.5	499.1	499.9	499.0	498.7	498.9	499.9	499.0	1820	1830	1810	1850
211		1627	499.2	499.1	499.9	498.6	498.6	499.0	499.0	499.2	1820	1830	1810	1850
212		1640	499.6	500.4	499.3	499.2	499.0	499.5	499.4	499.6	1820	1830	1810	1850
213		1653	499.6	499.4	500.3	499.2	499.0	499.5	499.4	499.6	1820	1830	1810	1850
214		1705	499.6	499.1	499.9	498.8	499.0	499.5	499.4	499.6	1820	1830	1810	1850
215		1723	499.1	498.7	499.4	498.2	498.7	498.8	498.8	498.8	1820	1840	1810	1850
216		1741	499.2	499.1	499.6	498.8	498.9	499.0	499.9	499.0	1820	1840	1810	1850
217		1753	499.1	499.1	499.5	498.4	498.5	498.6	498.0	498.9	1820	1840	1810	1850
218		1805	498.9	498.5	499.2	498.1	498.3	498.2	498.2	498.5	1825	1840	1810	1850
219		1812	498.7	498.3	499.3	498.0	498.2	498.2	498.2	498.3	1825	1840	1810	1850
220		1822	498.7	498.5	499.3	498.0	498.2	498.2	498.2	498.6	1825	1840	1810	1850
221		1837	499.2	499.1	499.9	498.8	498.9	499.0	499.0	499.0	1825	1840	1810	1850

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT TESTS
DLCS 1560103
T-612081

TABLE III (cont'd)
COOLANT TEMPERATURE AND PRESSURE DATA

Run No.	Date	Mean Time	Temperature OF								Pressure PSIG			
			1A Tc	1B Tc	1C Tc	1D Tc	1A Th	1B Th	1C Th	1D Th	1A	1B	1C	1D
222	11/5/58	1847	499.4	499.2	499.9	498.8	499.0	499.0	499.0	499.2	1825	1840	1810	1850
223		1905	499.2	499.1	499.9	498.8	499.0	499.0	499.0	499.3	1825	1840	1810	1850
224		1907	499.4	499.4	500.1	499.0	499.1	499.2	499.2	499.6	1825	1840	1810	1850
225		1928	499.8	499.6	500.5	499.4	499.3	499.5	499.5	499.8	1825	1840	1810	1850
226		1946	499.4	499.4	499.9	499.0	499.0	499.0	499.0	499.4	1825	1840	1810	1850
227		1958	499.2	499.1	499.6	498.6	498.8	498.8	498.8	498.9	1825	1840	1810	1850
228		2013	498.9	498.7	499.3	498.2	498.3	498.3	398.3	398.5	1825	1840	1810	1850
229		2025	499.1	499.1	499.7	498.8	499.0	499.1	499.0	499.3	1825	1840	1810	1850
230		2042	499.4	499.6	500.1	499.0	499.1	499.1	499.1	499.5	1825	1840	1810	1850
231		2103	499.4	499.4	500.1	499.0	499.0	499.1	499.1	499.5	1825	1840	1810	1850
232		2123	499.4	499.1	500.1	498.8	499.1	499.0	499.1	499.3	1825	1845	1810	1850
233		2142	499.4	500.0	499.0	498.8	499.1	499.0	499.1	499.2	1825	1845	1810	1850
234		2201	499.4	499.1	500.1	498.8	499.0	499.0	499.0	499.1	1825	1845	1810	1850
235		2220	499.2	499.1	500.0	498.6	499.0	499.0	499.0	499.0	1825	1845	1810	1855
236		2238	499.2	499.1	499.7	498.8	499.0	499.0	499.0	499.1	1825	1845	1810	1855
237		2253	499.2	499.1	499.7	498.8	499.0	499.0	499.0	499.1	1825	1845	1810	1855
238*		2312	499.2	499.1	499.9	499.0	499.0	499.1	499.0	499.2	1825	1845	1810	1855
240	11/6/58	0036	499.8	499.6	500.1	499.2	499.2	499.5	499.3	499.6	1825	1845	1810	1855
241		0048	499.4	499.4	499.7	499.0	499.2	499.0	499.0	499.5	1825	1845	1810	1855
242		0114	499.4	499.4	499.7	499.0	499.2	499.0	499.0	499.2	1825	1845	1810	1855
243		0130	499.4	499.2	499.7	499.0	499.0	499.0	499.0	499.5	1825	1845	1810	1855
244		0155	499.4	498.9	499.5	498.4	498.6	498.5	498.5	499.0	1825	1845	1810	1855
245		0243	498.9	498.7	499.5	498.4	498.5	498.4	498.5	498.7	1825	1845	1810	1855
246		0312	499.8	499.6	500.3	499.4	499.5	499.5	499.5	499.8	1825	1845	1810	1855

* Run No. 239 was left out; insufficient data.

DUQUESNE LIGHT COMPANY
POWER STATIONS DEPARTMENT
SHIPPINGPORT ATOMIC POWER STATION

XENON TRANSIENT
DLCS 1560103
T-612081

Results Prepared By Gerald E. Eckenrode

Results Reviewed By John Franko Jr.

Approved (Duquesne Light Company) George A. Santel Date 4-27-61