

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
MOLYKKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

NUSCO CALCULATION CHANGE NOTICE (CCN)

PAGE
1 OF 2

OPS837 3-00

1. AFFECTED CALCULATION/PLANT			
<input checked="" type="checkbox"/> MP1 <input type="checkbox"/> MP2 <input type="checkbox"/> MP3 <input type="checkbox"/> CY <input type="checkbox"/> OTHER			
2. CALCULATION NO.	REVISION NO.	CHANGE NO.	CALCULATION ORIGINATED BY:
PA79-126-742-GE	0	5	<input checked="" type="checkbox"/> NU <input type="checkbox"/> VENDOR
3. CALCULATION TITLE			
MP-1 Diesel Generator Loading			
4. REFERENCES			
Three-Part memo			
NJain to DBVail & DBVail Repair			
dated 8/9/91			
5. REASON FOR CHANGE			
Evaluate the loading changes described in the referenced memo			
6. DESCRIPTION OF CHANGE & TECHNICAL JUSTIFICATION			
<p><u>CHANGES</u></p> <p>② After the auto-sequenced loads are running, start and run the RBCCW & CRD Pumps</p> <p>① prior to initiation of ESW secure RBCCW & CRD as well as UCL (change 4)</p> <p>③ once both ESW pumps are running, start the RBCCW or CRD pump</p> <p><u>TECH JUST</u></p> <p>CHANGE IN LOADING WILL INCREASE LOADING TO 94.1% OF CONTINUOUS RATING, UP FROM 86.7% DOCUMENTED IN CHANGE 4. THE LOAD IS STILL LESS THAN THE EDF CONTINUOUS RATING</p>			
7. NUCLEAR INDICATOR		9110170193 911007 PDR ADOCK 05000245 Q PDR	
<input checked="" type="checkbox"/> CAT I <input type="checkbox"/> RWQA <input type="checkbox"/> FPQA <input type="checkbox"/> ATWS		8. AFFECTED CALC. PAGES	
		2049 & 9049	
9. PREPARED BY: (PRINTED NAME)		SIGNATURE	
RICHARD HALLER		<i>Richard Haller</i>	
10. REVIEWED BY: (PRINTED NAME)		SIGNATURE	
Richard G. Ewing		<i>Richard G. Ewing</i>	
11. APPROVED BY: (PRINTED NAME)		SIGNATURE	
J. B. REGAN		<i>J. B. Regan</i>	
		DATE	
		8-9-91	
		DATE	
		8/9/91	
		DATE	
		8/22/91	

DG Ratings	Time After DG Breaker Closure	Loads	HP Req.	KW Req.	Step KW	Total KW	DG Load	Comments
KVA Rating	3330	(Connected Load)			219	219	8.2%	Assumes Diversity Factor
p.f.	0.8	Safety Injection MOV's	N/A	112.0				Note 3
KW	2665	Isolation MOV's	N/A	67.0				Notes 4 & 11
Short-time KW	2932	Diesel Auxiliaries	N/A	10.7				Note 1
Start KW	3000	480 V Xfmr. 12F Losses	N/A	18.6				Note 2
Constants		Emergency Lights	N/A	70.0				Note 4
KW/HP	0.746	Instrument AC	N/A	23.3				Note 5
Large Mtr. Eff.	93%	Stand-By Gas Treatment	N/A	9.7				Note 6
Small Mtr. Eff.	80%	Emergency Air Handling	N/A	37.0				Note 7
Start Check		Water Cooled Condenser	N/A	63.3				Note 8
HP to KW	1.8	Reactor Bldg. Elevator	N/A	23.3				Note 9
Running p.f.	0.86	Reactor Feed & Seal Water Return	N/A	4.7				Note 10
Starting Check Input	0 Sec.	Start Check	600	1080	427	646	24.2%	
2nd Emer. Service Water		1st LPCI Pump	532	427		1299	43.3%	
Load	5 Sec.	Start Check	500	900	427	1072	40.2%	
HP, 4r	2700	2nd LPCI Pump	532	427		1546	51.5%	
HP, 48r	202							
KW, 48	66	10 Sec.	Start Check	800	1440	590	1663	62.4%
Diversity	50%	Core Spray Pump	736	590		2512	83.7%	
	22 Sec.	Start Check	600	1080	401	2064	77.4%	
		Service Water Pump	500	401		2743	91.4%	
	32 Sec.	Start Check	150	270	108	2172	81.5%	
		Turbine Bldg. Sec. Closed Cig. Wtr.	135	108		2334	77.8%	
	47 Sec.	MOV's Stopped	N/A	-90	-90	2083	78.1%	
	60 Sec.	Start Check	250	450	201	2283	85.7%	
		Control Rod Drive Pump	250	201		2533	84.4%	
	65 Sec.	Start Check	250	450	201	2484	93.2%	
		RBCCW Pump	250	201		2733	91.1%	
	300 Sec.	Reactor Bldg. Elevator Off	N/A	-12	1	2484	93.2%	
		SBLC Heater	N/A	12.5				Note 13
	600 Sec.	Secure "C" LPCI Pump	-532	-427	-427	2058	77.2%	
	605 Sec.	Secure CRD and RBCCW	-500	-401	-401	1657	62.2%	
	610 Sec.	Start Check	400	720	321	1978	74.2%	
		1st Emergency Service Water Pump	400	321		2377	79.2%	
	615 Sec.	Start Check	400	720	321	2298	86.2%	
		2nd Emergency Service Water Pump	400	321		2698	89.9%	
	620 Sec.	Start Check	250	450	201	2499	93.8%	
		Restart CRD or RBCCW	250	201		2748	91.6%	
	30 Min.	Battery Charger	N/A	9	9	2508	94.1%	

