

NORTHEAST UTILITIES



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

NUSCO CALCULATION CHANGE NOTICE (CCN)

PAGE
1 OF 2

OP5837 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:
PA 79-126-742-742-GE	0	3	<input type="checkbox"/> NU <input type="checkbox"/> VENDOR
3. CALCULATION TITLE			
MP-1 Diesel Generator Loading			
4. REFERENCES			
5. REASON FOR CHANGE			
MP1 CORE SPRAY PUMP MOTOR REPLACEMENTS			
6. DESCRIPTION OF CHANGE & TECHNICAL JUSTIFICATION			
<p>THE 700HP CORE SPRAY MOTOR IS TO BE REPLACED WITH AN 800HP MOTOR. THE CORE SPRAY MOTOR IS SEQUENCED 3RD INTO THE EDG. THIS STEP LOAD WILL NOT CAUSE THE 2932KW (10% OVERLOAD) RATING TO BE EXCEEDED.</p>			
7. NUCLEAR INDICATOR			
<input checked="" type="checkbox"/> CAT I <input type="checkbox"/> RWQA <input type="checkbox"/> FPQA <input type="checkbox"/> ATWS			
8. AFFECTED CALC. PAGES			
9			
9. PREPARED BY: (PRINTED NAME)	SIGNATURE		DATE
RICHARD HALECK	<i>Richard Haleck</i>		6-20-91
10. REVIEWED BY: (PRINTED NAME)	SIGNATURE		DATE
Richard G. Ewing	<i>Richard G. Ewing</i>		6/24/91
11. APPROVED BY: (PRINTED NAME)	SIGNATURE		DATE
David B. Yail	<i>David B. Yail</i>		6-24-91

9110170184 911007
PDR ADOCK 05000245
PDR

DG Ratings		Time After DG Breaker Closure	Loads	HP Req.	KW Req.	Step KW	Total KW	DG Load	Comments
KVA Rating	3330	0 Sec.	(Connected Load)			219	219	8.2%	Assumes 50% 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
Constants			480 V Xlfr. 12F Losses	N/A	16.6				Note 2
KW/HP	0.748		Emergency Lights	N/A	70.0				Note 4
Large Mtr. Eff.	93%		Instrument AC	N/A	23.3				Note 5
Small Mtr. Eff.	80%		Stand-By Gas Treatment	N/A	9.7				Note 6
Start Check			Emergency Air Handling	N/A	37.0				Note 7
HP to KW	2.2		Water Cooled Condenser	N/A	63.3				Note 8
Running p.f.	0.86		Reactor Bldg. Elevator	N/A	23.3				Note 9
			Reactor Feed & Seal Water Return	N/A	4.7				Note 10
Starting Check Input		0 Sec.	Start Check	600	1320	401	620	23.3%	OK Start
2nd Emer. Service Water			1st LPCI Pump	500	401		1539	52.5%	Reference 3.6
Load		5 Sec.	Start Check	500	1100	401	1021	38.3%	OK Start
HP.4r			2nd LPCI Pump	500	401		1720	58.7%	Reference 3.6
HP.48r		10 Sec.	Start Check	800	1760	521	1542	57.9%	OK Start
KW.48			Core Spray Pump	650	521		2781	94.9%	Reference 3.6
		22 Sec.	Start Check	600	1320	401	1943	72.9%	OK Start
			Service Water Pump	500	401		2862	97.6%	Reference 3.5
		32 Sec.	Start Check	150	330	108	2052	77.0%	OK Start
			Turbine Bldg. Sec. Closed Clg. Wtr.	135	108		2273	77.6%	Reference 3.5
		47 Sec.	MOV's Stopped	N/A	-90	-90	1962	73.6%	Valves have Cycled
		5 Min.	Reactor Bldg. Elevator Off	N/A	-12	1	1963	73.7%	
			SBLC Heater	N/A	12.5				Note 13 - 50% Diversity
		10 Min.	Start Check	400	880	321	2284	85.7%	OK Start
			1st Emergency Service Water Pump	400	321		2843	97.0%	Reference 3.5
		10 Min.	Start Check	400	880	321	2605	97.7%	Loading OK
			2nd Emergency Service Water Pump	400	321		3164	107.9%	Check Start
		30 Min.	Battery Charger	N/A	9	9	2614	98.1%	Reference 3.5
									Loading OK

