Date (mmm dd yyyy)	Issued For	Rev.
12-07-2007	TITLE II DESIGN 30% REVIEW SUBMITTAL	C
03-28-2008	TITLE II DESIGN 60% REVIEW SUBMITTAL	D
07-31-2008	TITLE II DESIGN 90% REVIEW SUBMITTAL	E
08-25-2008	TITLE II DESIGN 100% OWNER REVIEW	F
02-19-2009	TITLE II CONSTRUCTION BID ISSUE	0

SUBSTATION 600B

Load Description	Total Connected Load (Amps)	Total Load (KVA)	Total Demand Load (Amps	Total Demand KVA
13.8 KV 3 PHASE, 3 WIRE				
Substation 600-B	361.5	8713.3	285.4	6877.8
4160 VOLT, 3 PHASE, 3 WIRE				
Switchgear 600-2	1208.5	8713.3	953.9	6877.8

SWITCHGEAR 600-2

4160V, 3 PHASE, 3 WIRE

Load Description	Amps	Demand	Demand Load (Amps)	Demand (KVA)
Substation 600-2	528.5	———	409.9	2955.6
Chiller CHL-5	136.0	0.80	108.8	784.4
Chiller CHL-6	136.0	0.80	108.8	784.4
Future Chiller CHL-7	136.0	0.80	108.8	784.4
Future Chiller CHL-8	136.0	0.80	108.8	784.4
Future Chiller CHL-9	136.0	0.80	108.8	784.4
Spare			0	0.0
Total Connected Amps	1208.5			
Total Connected KVA		8713.3		
Total Demand Amps			953.9	
Total Demand KVA				6877.8

Substation 600-2

480V, 3 PHASE, 3 WIRE

Position	Load Description	Amps	Demand load (Amps)
1-3	DP-2	91.7	
2-1	Busway BW-600-6	620.0	496.0
2-2	Busway BW-600-7	780.0	624.0
2-3	Spare		
2-4	MCC-600-4	764.6	582.9
3-1	Blank		
South End Total Connected Amps		2256.3	
South End Total Demand Amps			1702.9
3-2	Tie		
4-1	Busway BW-600-4	604.00	483.2
4-2	Busway BW-600-5	906.00	724.8
4-3	Spare		
4-4	MCC-600-3	117.4	93.9
5-3	MCC-600A-2	701.8	551.8
North End Total Connected Amps		2329.2	
North End Total Demand Amps			1853.8
Substation Total Connected Amps		4585.5	
Substation Total Connected KVA		3810.5	
Substation Total Demand Amps			3556.6
Substation Total Demand KVA			2955.6

DP-2

480V, 3 PHASE, 3 WIRE

Load description	Amps	KVA	Demand (Amps)	Demand KVA
RP-4 (Operating Floor)	15.4	12.8	13.8	11.5
RP-6 (Pipe Tunnel)	17.6	14.6	12.6	10.5
LP-2 (Operating Floor)	31.6	26.2	31.6	26.3
RP-U (Electrical Mezz)	21.8	18.1	21.8	18.1
RP-5 (Electrical Mezz)	5.3	4.4	5.3	4.4
		0.0		
		0.0		
		0.0		
Total Connected Amps	91.7			
Total Connected KVA		76.2		
Total Demand Amps			85.1	
Total Demand Kva				70.8

MCC-600A-2

480V, 3 PHASE, 3 WIRE

Position	Load Description	Amps	Demand	Demand Load (Amps)
1H	Space			0
IJ	Device Net Power Supply	1.0	0.8	0.8
IL	Metering Unit			0
2A	PCHP-2 (Future)	124.0	0.8	99.2
3A	PCHP-6 (Future)	124.0	0.8	99.2
4A	PCHP-7 (Future)	124.0	0.8	99.2
5A	PCHP-8	124.0	0.8	99.2
6A	PCHP-9	124.0	0.8	99.2
7A	Spare			0
7C	Spare			0
7E	EUH-3	14.0	0.8	11.2
7G	EF-2	4.8	0.8	3.84
7J	Control Net Bridge			0
7L	Space			0
8A	Spare			0
8C	Spare			0
8E	EUH-4	14.0	0.8	11.2
8G	Welding Outlet	48.0	0.6	28.8
8J	Spare			0
8L	Space			0
	Total Connected Amps	701.8		
	Total Connected KVA	583.2		
		Total Demand Amps		551.84
		Total Demand KVA		458.6

MCC-600-3

480V, 3 PHASE, 3 WIRE

Position	Load Description	Amps	Demand	Demand Load (Amps)
1C	Space			0.0
1E	Spare			0.0
1G	Spare			0.0
1J	ACU-2	1.8	0.8	1.4
1L	HWP-2	1.4	0.8	1.1
2A	MOV Cell 5	1.8	0.8	1.4
2C	MOV Cell 6	1.8	0.8	1.4
2E	MOV Cell 7 (Future)	1.8	0.8	1.4
2G	MOV Cell 8 (Future)	1.8	0.8	1.4
2J	MOV Cell 9 (Future)	1.8	0.8	1.4
2L	MOV Bypass	1.8	0.8	1.4
3A	Spare			0.0
3C	Condensate Receiv CNR-Z	6.8	0.8	5.4
3E	Metering Unit			0.0
3G	Duplex SP-3 & SP-4	8.6	0.8	6.9
3J	Device Net Power Supply	1.0	0.8	0.8
3L	Control Net Bridge			0.0
4A	EF-6	0.7	0.8	0.6
4C	EF-7	14.0	0.8	11.2
4E	EF-9	7.6	0.8	6.1
4J	DP-3	71.5	0.8	57.2
	Total Connected Amps	124.2		
	Total Connected KVA	103.2		
		Total Demand Amps		99.4
		Total Demand KVA		82.6

MCC-600-4

480V, 3 PHASE, 3 WIRE

Position	Load Description	Amps	Demand	Demand Load (Amps)
1C	Metering Unit			0.0
1E	Welder Outlet	48.0	0.6	28.8
1G	Welder Outlets	48.0	0.6	28.8
1J	Spare			0.0
1L	Control Net Bridge			0.0
2A	Spare			0.0
2C	AHU-3	92.0	0.8	73.6
2G	AHU-4	40.0	0.8	32.0
2J	Space			0.0
2L	Space			0.0
3A	IAC-3	233.0	0.8	186.4
3F	EF-8	14.0	0.8	11.2
3H	Welder Outlet	48.0	0.6	28.8
3K	Space			0.0
3M	Space			0.0
4A	IAC-4 (Future)	233.0	0.8	186.4
4F	Spare			0.0
4H	Device net Power Supply	1.0	0.8	0.8
4K	Space			0.0
4M	Space			0.0
5A	EF-10	7.6	0.8	6.1
5E	Space			0.0
5G	Space			0.0
5J	Space			0.0
5L	Space			0.0
	Total Connected Amps	764.6		
	Total Connected KVA	635.4		
		Total Demand Amps		582.9
		Total Demand Kva		484.4

DP-3

480V, 3 PHASE, 3 WIRE

Load description	Amps	KVA	Demand (Amps)	Demand KVA
Sonoxide System	13.3	11.1	10.6	8.8
Basin Heaters	19.2	16.0	15.4	12.8
HTCP-2	21.0	17.5	16.8	14.0
MLC-2	18.0	15.0	14.4	12.0
		0.0		
		0.0		
		0.0		
Total Connected Amps	71.5			
Total Connected KVA		59.4		
Total Demand Amps			57.2	
Total Demand Kva				47.6

Busway BW 600-4

480V, 3 PHASE, 3 WIRE

Load Description	Amps	Demand	Demand Load (Amps)
CHP-5 (Secondary Pump)	302.0	0.8	241.6
CHP-6 (Secondary Pump)	302.0	0.8	241.6
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Total Connected Amps	604.0		
Total Connected KVA	501.924		
	Total Demand Amps		483.2
	Total Demand KVA		401.5

Busway BW 600-5

480V, 3 PHASE, 3 WIRE

Load Description	Amps	Demand	Demand Load (Amps)
Future CHP-7 (Secondary Pump)	302.0	0.8	241.6
Future CHP-8 (Secondary Pump)	302.0	0.8	241.6
Future CHP-9 (Secondary Pump)	302.0	0.8	241.6
			0.0
			0.0
			0.0
			0.0
			0.0
Total Connected Amps	906.0		
Total Connected KVA	752.886		
	Total Demand Amps		724.8
	Total Demand KVA		602.3

Busway BW 600-6

480V, 3 PHASE, 3 WIRE

Load Description	Amps	Demand	Demand Load (Amps)
CTC-5 (Cooling Tower Fan)	124.0	0.8	99.2
CTC-6 (Cooling Tower Fan)	124.0	0.8	99.2
Future CTC-7 (Cooling Tower Fan)	124.0	0.8	99.2
Future CTC-8 (Cooling Tower Fan)	124.0	0.8	99.2
Future CTC-9 (Cooling Tower Fan)	124.0	0.8	99.2
			0.0
			0.0
			0.0
Total Connected Amps	620.0		
Total Connected KVA	515.22		
	Total Demand Amps		496.0
	Total Demand KVA		412.2

Busway BW 600-7

480V, 3 PHASE, 3 WIRE

Load Description	Amps	Demand	Demand Load (Amps)
CWP-5 (Condenser Water Pump)	156.0	0.8	124.8
CWP-6 (Condenser Water Pump)	156.0	0.8	124.8
Future CWP-7 (Condenser Water Pump)	156.0	0.8	124.8
Future CWP-8 (Condenser Water Pump)	156.0	0.8	124.8
Future CWP-9 (Condenser Water Pump)	156.0	0.8	124.8
			0.0
			0.0
			0.0
Total Connected Amps	780.0		
Total Connected KVA	648.18		
	Total Demand Amps		624.0
	Total Demand KVA		518.5

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JOB NO.	SHEET	NO	REVISION	DATE	DWN.	APP'D.	QA
		A					

BROOKHAVEN NATIONAL LABORATORY

UNDER CONTRACT WITH
UNITED STATES DEPARTMENT OF ENERGY
PLANT ENGINEERING DIVISION
UPTON, NEW YORK 11973

Giffels, Partnership
25200 Telegraph Road, Suite 200
Southfield, Michigan 48033 USA
Tel. 248-936-8000
Fax 248-936-8111

Approved By: R BARTOY
Project Manager: G. KAPLAN
Project Engineer/Architect: J BOSSORY
Project No.: SF070003

JOB TITLE: CENTRAL CHILLED WATER FACILITY PHASE II		DWG. TITLE: POWER LOAD SUMMARY	
ILR,GPP,LNI, HEM	DATE	ACCT. NO.	SHEET OF
SCALE: NONE	DWN. BY: EWB / REV'D BY: RB	JOB NO.: 11705	DWG. NO.: E-003
ESHQ RISK LEVEL	APP'D. BY: R BARTOY	BLDG. NO.: 600	
PATH:			