p note #515

R. Oberholtzer

Site Power

Worst Case All devices ON — 5.875 MVA

Note .585 MVA is installed pwr

5.29 MVA

Worst Case machine ON (Ext. Line OFF) 325.3 KVA — 5.29 MVA

-.3253

4.964 MVA

1 ϕ Bldg Power

Deb - Acc Transfer Supplies	—	43 KVA
Acc - Deb Ring Devices + Utilities		775 KVA
		818 KVA

1Φ Bldg Ring Supplies

Acc Inj Septum	25 KVA	
Acc Ext Kicker	15 KVA	
Deb Ext Septum	25 KVA	
Deb Ext Kicker	15 KVA	
Relay Racks	50 KVA	
Control Room	30 KVA	
Correction Magnets	25 KVA	
Tunnel Power (60-20)	45 KVA	*
Tunnel Power 480/277 (60-20)	150 KVA	*
	380 KVA	

* Installed Power

2/6/84

Add to 1Φ Bldg Ring Supplies

	KVA
Q_S	92
Q_F	156
Q_D	147
	395 KVA
+ ABOVE	380 KVA
	775 KVA

1Φ Bldg Power Supplies

Device	KVA
TQ 1-3	11
TQ 4-6	6.5
TQ 7	.5
TB 1	25
	43 KVA

3Φ Bldg Power

Acc Extraction Supplies	184.3	KVA
Acc + Deb Ring Devices + Utilities	430	KVA
	614.3	KVA

Booster to Deb. Line 25 KVA

3Φ Bldg Ring Power

Device	KVA
Stochastic TWT P.S.	125
Acc Ext. Kicker	15
Relay Racks	50
Tunnel Outlets (20-40) 120/208	45 *
Tunnel 480/277 (20-40)	150 *
Correction Magnets	25
Helium Engine Room	20
	430

* Installed Power

3Φ Bldg Power Supplies

Device	KVA
EQ 8+9	1.3
EQ 7	.5
EQ 3 A+B	27
EQ 1-2, 4-6	38.5
E LAM	47
EBV 1+2	70
	184.3 KVA

Booster to Debuncher Line

Device	KVA
BQ 8+9	12
BQ 10	1
BB 6	12
	25 KVA

5Ø Bldg Power

Deb Inj Supplies	169 KVA
Ring Supplies	1692 KVA
Ring Equipment	410 KVA
	1.27 MVA

* Note - Deb Dipole	—	1140 KVA
Acc Dipole	—	944 KVA
		2.084 MVA

* seperate substations

5Ø Bldg Ring Supplies

Ring	Device	KVA	
~~Deb~~	~~Q_S~~	~~92~~	
~~Deb~~	~~Q_F~~	~~156~~	
~~Deb~~	~~Q_D~~	~~147~~	
Deb	Bend	1140	*
Deb	Sex F	52	
Deb	Sex V	52	
		1.244	(104)

Acc	$Q_F + Q_D$	112	
Acc	Q_L	295	
Acc	Q_S	83	
Acc	Bend	944	*
Acc	Sex F S.A.	6	
Acc	Sex D S.A.	6	
Acc	Sex F L.A	43	
Acc	Sex D L.A.	43	
		1532	(588)

* Deb. + ACC. Bend Supplies each have their own 1.5 MVA Substation

5Φ Bldg Power Supplies

Device	KVA
IQ 18-21 24-28	13
IB 2-7	89
IQ 29-30	22
IQ 31-33	33
IBV1	12
	169 KVA

5ϕ Bldg Ring Equipment

R.F.	100 KVA	
Relay Racks	50 KVA	
Correction Magnets	25 KVA	
Tunnel Outlets (40-60) 120/208	45 KVA	*
Tunnel 480/277 (40-60)	150 KVA	*
Deb Inj Septum	25 KVA	
Deb Inj Kicker	15 KVA	
	410 KVA	

* Installed Power

11/83

Target Bldg Power Supplies

Device	KVA
IQ 1+4-6	31.5
IQ 2+3	11
IB 1	7.3
EB 5+6	25.5
EQ 27-29	21
EQ 25+26	3
EB 1-4	62
Li. Lens P.S	26
C Mag P.S.	26
	213.3 KVA

Bldg Outlets 120/208	45 KVA
Bldg Power 480/277	150 KVA

Service Bldg F-27 Power Supplies

Device	KVA
IQ 7-15	7.8
IQ 16-17 22-23	16.7
EQ 20-24	3.3
EQ 15, 17-19	15
EQ-16	1
EQ 10-13	8.2
EQ-14	2
	54 KVA

Bldg Outlets 120/208	45 KVA
Bldg Power 480/277	150 KVA

Service Bldg F-23 Power Supplies

Device	KVA	Avg KVA
P LAM 1+2	232 Peak	151
PB 1+2 PBR 1+2	495 Peak	211
PQ-1	6.5	
PQ-2	3.6	
PBR 3 PB3-5	478 Peak	180
PQ-3	15	
PQ-4	27	
PQ 5A+B	73.5	
PBV 1+2	37	
PQ 6 A+B	35	
PQ 7 A+B	22	
PQ 8 A+B	30.5	
PQ 9 A+B	35	
	1.49 MVA	827 KVA

Bldg Outlets 120/208	45 KVA
Bldg Power 480/277	150 KVA