Reference Documents:

PG&E Interconnection Handbook / Version: Online 4/2004.

Protective Relaying: Principles and Applications: J. Lewis Blackburn - 1997

Generator Protection Application Guide, Basler Electric

Reference Drawings:

RC - E - 3 3 Line Protection Relaying
RC - E - 4 Interconnection Site Pan
RC - E - 5 Relaying Logic Schematic

Notes:

Generator is shown as wired wye, grounded through a small KW P_P distribution transformer for the 59GN, 27-3N, and 51NG relays. The 51NG current relay is behind a 3rd Harmonic trap on the ground leg of the 59GN transformer.

(A) New surge protection at the air switch with heavy grounding wire to dam grid. A new in-river low impedance grounding plate will be installed.

(B) PF to be adjusted as advised by PG&E. Fuses may be internal to the PFCs.

(C) Dark circles are physically separate "series" relays - which will independently cause 52 or CB21 to trip. Their closure logged with others. They also trigger the 79 & 86 devices in the micro and CC.

NO	DATE	REVISION	Drawn BY
5	2/18/05	Added 21 kV CB	
4	2/10/05	Scaled to single unit to 450 kW target OP/ 500 kW max.	

Version Sent	Sent to	Archived	Media
5	J.Vard. PG&E	5/06/05	E-Mail
4	J.Vard. PG&E	3/30/05	E-Mail
2	J.Vard. PG&E	5/16/04	E-Mail
1	J.Vard. PG&E	5/12/04	E-Mail
0	AKM - PG&E	2/17/01	EM/post

SCALE NONE	INDEX	TITLE Single Line	
DRAWN BY ELY	DATE 2/17/01		
Updated/re	DATE 5/06/05	Project Rock Creek Retrofit Project	
DESIGNER/ENGINEER Staff		CONTACT 530 753-8864	File rc/filings/inter/electrical/graphics/rc-single_rev4

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DWG NO RC-E-1

REVISION 5

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