

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		REFERENCE DWG
											CAB TB	TO TB		NO	NO	
O2 GAS SUPPLY STAGE 1 FLOW	FT-2101	Kg/hr	0-100	2-01	4W	AI	1	1	0	B1						
O2 GAS SUPPLY STAGE 2 FLOW	FT-2102	Kg/hr	0-100	2-01	4W	AI	1	1	1	B2						
O2 GAS SUPPLY STAGE 3 FLOW	FT-2103	Kg/hr	0-100	2-01	4W	AI	1	1	2	B3						
N2 REACTOR SAMPLE PROBE OUTER COOLING FLOW	FT-2105	Kg/hr	0-100	2-01	4W	AI	1	1	3	B4						
N2 REACTOR SAMPLE PROBE INNER COOLING FLOW	FT-2106	Kg/hr	0-25	2-01	4W	AI	1	1	4	B5						
N2 QS SAMPLE PROBE COOLING FLOW	FT-2107	Kg/hr	0-100	2-01	4W	AI	1	1	5	B6						
CO2 GAS SUPPLY STAGE 1 FLOW	FT-2108	Kg/hr	0-430	2-01	4W	AI	1	1	6	B7						
CO2 GAS SUPPLY STAGE 2 FLOW	FT-2109	Kg/hr	0-430	2-01	4W	AI	1	1	7	B8						
CO2 GAS SUPPLY STAGE 3 FLOW	FT-2110	Kg/hr	0-430	2-01	4W	AI	1	2	0	B1						
CO2 GAS SUPPLY TO REACTOR HEAD FLOW	FT-2111	Kg/hr	0-430	2-01	4W	AI	1	2	1	B2						
CO2 INTERMEDIATE QUENCH JACKET FLOW	FT-2104	Kg/hr	0-100	2-01	4W	AI	1	2	2	B3						
HP NATURAL GAS STAGE 3 FLOW	FT-2201	Kg/hr	0-30	2-02	4W	AI	1	2	3	B4						
HP NATURAL GAS STAGE 2 FLOW	FT-2202	Kg/hr	0-30	2-02	4W	AI	1	2	4	B5						
HP NATURAL GAS STAGE 1 FLOW	FT-2203	Kg/hr	0-30	2-02	4W	AI	1	2	5	B6						
LIQUID FUEL SYS DISCHARGE PUMP FLOW [FUTURE]	FT-2401	Kg/hr	Future	2-04	4W	AI	1	2	6	B7						
LOW PRESS WATER SUPPLY TO REACTOR COOLER FLOW	FT-2501	Kg/hr	0-2000	2-05	4W	AI	1	2	7	B8						
HIGH PRESS WATER RECYCLE PUMP FLOW	FT-2604	Kg/hr	0-300	2-06	4W	AI	1	3	0	B1						
QUENCH INJECTION FLOW	FT-2603	Kg/hr	0-300	2-06	4W	AI	1	3	1	B2						
BUFFER SOLUTION FEED PUMP TO QUENCH INJECTION FLOW [FUTURE]	FT-2605	Kg/hr		2-06	4W	AI	1	3	2	B3						
BUFFER SOLUTION FEED PUMP TO SCRUBBER INJECTION FLOW [FUTURE]	FT-2606	Kg/hr		2-06	4W	AI	1	3	3	B4						
SCRUBBER INJECTION WATER FLOW	FT-2602	Kg/hr	0-1000	2-06	4W	AI	1	3	4	B5						
REACTOR INJECTION WATER FLOW	FT-2601	Kg/hr	0-300	2-06	4W	AI	1	3	5	B6						
SAMPEL GAS SYS OUTLET FLOW	FT-3201	Kg/hr	0-500	3-02	4W	AI	1	3	6	B7						
QUENCH LIQUID FILETERS OUTLET FLOW	FT-3301	Kg/hr	0-500	3-03	4W	AI	1	3	7	B8						
SCRUBBER LIQUID FILETERS OUTLET FLOW	FT-3302	Kg/hr	0-1000	3-03	4W	AI	1	4	0	B1						
LP COOLING WATER TO QUENCH JACKET FLOW	FT-4101	Kg/hr	0-120	4-01	4W	AI	1	4	1	B2						
LP COOLING WATER TO REACTOR PROBE NOZZLE FLOW	FT-4102	Kg/hr	0-120	4-01	4W	AI	1	4	2	B3						
LP COOLING WATER TO HEAD EXTERNAL FLOW	FT-4103	Kg/hr	0-120	4-01	4W	AI	1	4	3	B4						
LP COOLING WATER TO QUENCH LIQ HX OUTLET FLOW	FT-4104	Kg/hr	0-1200	4-01	4W	AI	1	4	4	B5						
LP COOLING WATER TO SCRUBBER LIQ SAMPLE HX FLOW	FT-4105	Kg/hr	0-1200	4-01	4W	AI	1	4	5	B6						
HP COOLING WATER TO OUTER BURNER COOLING FLOW	FT-4202	Kg/hr	0-100	4-02	4W	AI	1	4	6	B7						
HP COOLING WATER TO INNER BURNER COOLING FLOW	FT-4203	Kg/hr	0-100	4-02	4W	AI	1	4	7	B8						
HP WATER WALL RECIRCULATION PUMP OUTLET FLOW	FT-4301	Kg/hr	0-1000	4-03	4W	AI	1	5	0	B1						
REACTOR SAMPLE GAS SYS STAGE 1 FLOW	FT-5101	Kg/hr	0-5	5-01	4W	AI	1	5	1	B2						
REACTOR SAMPLE GAS SYS OUTLET FLOW	FT-5102	Kg/hr	0-1	5-01	4W	AI	1	5	2	B3						
QS LINE SAMPLE GAS SYS STAGE 1 FLOW	FT-5103	Kg/hr	0-5	5-01	4W	AI	1	5	3	B4						
QS LINE SAMPLE GAS SYS OUTLET FLOW	FT-5104	Kg/hr	0-1	5-01	4W	AI	1	5	4	B5						
SCRUBBER SAMPLE GAS SYS STAGE 1 FLOW	FT-5105	Kg/hr	0-5	5-01	4W	AI	1	5	5	B6						
SCRUBBER SAMPLE GAS SYS OUTLET FLOW	FT-5106	Kg/hr	0-1	5-01	4W	AI	1	5	6	B7						
					4W	AI	1	5	7	B8						

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											CABLE TO TB	CAB TB		TERM STRIP	TERM NO	
CO2 BULK TANK PRESS	PT-1101	bar		1-01		AI	1	6	0	B1						
CO2 BULK TANK LEVEL	LT-1101	%	0-100	1-01		AI	1	6	1	B2						
CO2 COMPRESSOR MOTOR CURRENT	IT-1101	AMPS		1-01		AI	1	6	2	B3						
CO2 COMPRESSOR INLET TEMP	TT-1101A	DEG C		1-01		AI	1	6	3	B4						
CO2 COMPRESSOR OUTLET TEMP	TT-1101B	DEG C		1-01		AI	1	6	4	B5						
CO2 COMPRESSOR INLET PRESS	PT-1101A	bar		1-01		AI	1	6	5	B6						
CO2 COMPRESSOR OUTLET PRESS	PT-1101B	bar		1-01		AI	1	6	6	B7						
CO2 BUFFER TANK PRESS	PT-1102	bar	0-150	1-01		AI	1	6	7	B8						
O2 LARGE TANK PRESS	PT-1201	bar		1-02		AI	1	7	0	B1						
O2 LARGE TANK LEVEL	LT-1201	%	0-100	1-02		AI	1	7	1	B2						
O2 SMALL TANK PRESS	PT-1202	bar		1-02		AI	1	7	2	B3						
O2 SMALL TANK LEVEL	LT-1202	%	0-100	1-02		AI	1	7	3	B4						
O2 COMPRESSOR MOTOR CURRENT	IT-1201	AMPS		1-02		AI	1	7	4	B5						
O2 COMPRESSOR INLET TEMP	TT-1201A	DEG C		1-02		AI	1	7	5	B6						
O2 COMPRESSOR OUTLET TEMP	TT-1201B	DEG C		1-02		AI	1	7	6	B7						
O2 COMPRESSOR INLET PRESS	PT-1201A	bar		1-02		AI	1	7	7	B8						
O2 COMPRESSOR OUTLET PRESS	PT-1201B	bar		1-02		AI	1	8	0	B1						
O2 BUFFER TANK PRESS	PT-1203	bar	0-150	1-02		AI	1	8	1	B2						
N2 SMALL TANK PRESS	PT-1301	bar		1-03		AI	1	8	2	B3						
N2 SMALL TANK LEVEL	LT-1301	%	0-100	1-03		AI	1	8	3	B4						
N2 COMPRESSOR MOTOR CURRENT	IT-1301	AMPS		1-03		AI	1	8	4	B5						
N2 COMPRESSOR INLET TEMP	TT-1301A	DEG C		1-03		AI	1	8	5	B6						
N2 COMPRESSOR OUTLET TEMP	TT-1301B	DEG C		1-03		AI	1	8	6	B7						
N2 COMPRESSOR INLET PRESS	PT-1301A	bar		1-03		AI	1	8	7	B8						
N2 COMPRESSOR OUTLET PRESS	PT-1301B	bar		1-03		AI	1	9	0	B1						
N2 BUFFER TANK PRESS	PT-1302	bar	0-150	1-03		AI	1	9	1	B2						
NG COMPRESSOR MOTOR CURRENT	IT-1401	AMPS		1-04		AI	1	9	2	B3						
NG COMPRESSOR OUTLET PRESS	PT-1401	bar		1-04		AI	1	9	3	B4						
PRODUCED OILY WATER SUPPLY PUMP MOTOR CURRENT	IT-1603	AMPS		1-06		AI	1	9	4	B5						
PRODUCED OILY WATER RECIRC PUMP MOTOR CURRENT	IT-1604	AMPS		1-06		AI	1	9	5	B6						
PRODUCED OILY WATER RECIRC PUMP OUTLET PRESS	PT-1601	bar	0-150	1-06		AI	1	9	6	B7						
PRODUCED WATER SUPPLY PUMP MOTOR CURRENT	IT-1601	AMPS		1-06		AI	1	9	7	B8						
PRODUCED OILY WATER RECIRC CONTROL VALVE	PCV-1601	%	0-100	1-06		AO	1	10	0	C1						
PRODUCED WATER RECIRC CONTROL VALVE	PCV-1602	%	0-100	1-06		AO	1	10	1	C2						
CO2 GAS SUPPLY TO REACTOR HEAD CONTROL VALVE	FCV-2111	%	0-100	2-01		AO	1	10	2	C3						
CO2 INTERMEDIATE QUENCH JACKET FLOW CONTROL VALVE	FCV-2104	%	0-100	2-01		AO	1	10	3	C4						
HP NATURAL GAS STAGE 3 FLOW CONTROL VALVE	FCV-2201	kPa		2-02		AO	1	10	4	C5						
HP NATURAL GAS STAGE 2 FLOW CONTROL VALVE	FCV-2202	kPa		2-02		AO	1	10	5	C6						
HP NATURAL GAS STAGE 1 FLOW CONTROL VALVE	FCV-2203	kPa		2-02		AO	1	10	6	C7						
SLURRY TANK AGITATOR MOTOR SPEED CONTROL	SIC-2302	%	0-100	2-03		AO	1	10	7	C8						

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											CTRL CAB TB	TO TB		TERM NO		
SLURRY TANK DISCHARGE PUMP FLOW CONTROL	FIC-2302	%	0-100	2-03		AO	1	11	0	C1						
LIQUID FUEL SYS DISCHARGE PUMP MOTOR FLOW CONTROL [FUTURE]	FIC-2401	%	0-100	2-04		AO	1	11	1	C2						
LOW PRESS WATER SUPPLY TO REACTOR COOLER FLOW CONTROL VALVE	FCV-251	%	0-100	2-05		AO	1	11	2	C3						
HIGH PRESS WATER RECYCLE PUMP FLOW CONTROL	FIC-2602	%	0-100	2-06		AO	1	11	3	C4						
HIGH PRESS WATER RECYCLE PUMP FLOW CONTROL VALVE	FIC-2604	%	0-100	2-06		AO	1	11	4	C5						
QUENCH INJECTION FLOW CONTROL VALVE	FCV-2603	%	0-100	2-06		AO	1	11	5	C6						
BUFFER SOLUTION FEED PUMP FLOW QUENCH INJECTION CONTROL VALVE [FUTURE]	FCV-2605	%	0-100	2-06		AO	1	11	6	C7						
BUFFER SOLUTION FEED PUMP FLOW SCRUBBER INJECTION CONTROL VALVE [FUTURE]	FCV-2606	%	0-100	2-06		AO	1	11	7	C8						
SCRUBBER INJECTION WATER FLOW CONTROL VALVE	FCV-2602	%	0-100	2-06		AO	1	12	0	C1						
REACTOR INJECTION WATER FLOW CONTROL VALVE	FCV-2601	%	0-100	2-06		AO	1	12	1	C2						
LOW PRESS WATER RECYCLE PUMP PRESS CONTROL	PIC-2601	%	0-100	2-06		AO	1	12	2	C3						
SAMPLE GAS VALVE TRAIN 1 PRESS CONTROL VALVE	PCV-3203	%	0-100	3-02		AO	1	12	3	C4						
SAMPLE GAS VALVE TRAIN 1 PRESS 1 CONTROL VALVE	PCV-3202	%	0-100	3-02		AO	1	12	4	C5						
SAMPLE GAS VALVE TRAIN 1 PRESS 2 CONTROL VALVE	PCV-3201	%	0-100	3-02		AO	1	12	5	C6						
SAMPLE GAS VALVE TRAIN 2 PRESS CONTROL VALVE	PCV-3204	%	0-100	3-02		AO	1	12	6	C7						
QUENCH LIQUID FILETERS OUTLET LEVEL CONTROL VALVE	LCV-3301	%	0-100	3-03		AO	1	12	7	C8						
PRODUCED WATER RECIRC PUMP MOTOR CURRENT	IT-1602	AMPS		1-06		AI	2	1	0	B1						
PRODUCED WATER RECIRC PUMP OUTLET PRESS	PT-1602	bar	0-150	1-06		AI	2	1	1	B2						
O2 GAS SUPPLY SYS PRESS	PT-2101	bar	0-125	2-01		AI	2	1	2	B3						
O2 GAS PRESS STAGE 2	PT-2104	bar	0-125	2-01		AI	2	1	3	B4						
O2 GAS PRESS STAGE 3	PT-2105	bar	0-125	2-01		AI	2	1	4	B5						
O2 GAS SUPPLY STAGE 1 FLOW CONTROL VALVE	FCV-2101	%	0-100	2-01		AI	2	1	5	B6						
O2 GAS SUPPLY STAGE 2 FLOW CONTROL VALVE	FCV-2102	%	0-100	2-01		AI	2	1	6	B7						
O2 GAS SUPPLY STAGE 3 FLOW CONTROL VALVE	FCV-2103	%	0-100	2-01		AI	2	1	7	B8						
O2 GAS SUPPLY PRESS TO BURNER	PT-2103	bar	0-125	2-01		AI	2	2	0	B1						
N2 GAS SUPPLY SYS PRESS	PT-2106	bar	0-125	2-01		AI	2	2	1	B2						
N2 REACTOR SAMPLE PROBE OUTER COOLING FLOW CONTROL VALVE	FCV-2105	0-1		2-01		AI	2	2	2	B3						
N2 REACTOR SAMPLE PROBE INNER COOLING FLOW CONTROL VALVE	FCV-2106	0-1		2-01		AI	2	2	3	B4						
N2 QS SAMPLE PROBE COOLING FLOW CONTROL VALVE	FCV-2107	0-1		2-01		AI	2	2	4	B5						
N2 REACTOR SAMPLE PROBE OUTER COOLING PRESS	PT-2109	bar	0-125	2-01		AI	2	2	5	B6						
N2 REACTOR SAMPLE PROBE INNER COOLING PRESS	PT-2110	bar	0-125	2-01		AI	2	2	6	B7						
N2 QS SAMPLE PROBE COOLING PRESS	PT-2111	bar	0-125	2-01		AI	2	2	7	B8						
<b>CO2 GAS SUPPLY SYS PRESS</b>	<b>PT-2120</b>	<b>bar</b>	<b>0-150</b>	<b>2-01</b>		<b>AI</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>B1</b>						
CO2 GAS PRESS STAGE 2	PT-2115	bar	0-125	2-01		AI	2	3	1	B2						
CO2 GAS PRESS STAGE 3	PT-2117	bar	0-125	2-01		AI	2	3	2	B3						
CO2 GAS SUPPLY STAGE 1 FLOW CONTROL VALVE	FCV-2108	%	0-100	2-01		AI	2	3	3	B4						
CO2 GAS SUPPLY STAGE 2 FLOW CONTROL VALVE	FCV-2109	%	0-100	2-01		AI	2	3	4	B5						
CO2 GAS SUPPLY STAGE 3 FLOW CONTROL VALVE	FCV-2110	%	0-100	2-01		AI	2	3	5	B6						
CO2 GAS SUPPLY PRESS TO BURNER	PT-2113	bar	0-125	2-01		AI	2	3	6	B7						
CO2 GAS SUPPLY TO REACTOR HEAD PRESS	PT-2119	bar	0-125	2-01		AI	2	3	7	B8						

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											CABLE TO TB	CAB TB		TERM STRIP	TERM NO	
CO2 INTERMEDIATE QUENCH JACKET SUPPLY PRESS	PT-2121	bar	0-30	2-01		AI	2	4	0	B1						
HP NATURAL GAS STAGE 3 PRESS	PT-2201	bar	0-125	2-02		AI	2	4	1	B2						
HP NATURAL GAS STAGE 2 PRESS	PT-2203	bar	0-125	2-02		AI	2	4	2	B3						
HP NATURAL GAS STAGE 1 PRESS	PT-2205	bar	0-125	2-02		AI	2	4	3	B4						
HP NATURAL GAS STAGE 3 OUTLET PRESS	PT-2202	bar	0-125	2-02		AI	2	4	4	B5						
HP NATURAL GAS STAGE 2 OUTLET PRESS	PT-2204	bar	0-125	2-02		AI	2	4	5	B6						
HP NATURAL GAS STAGE 1 OUTLET PRESS	PT-2206	bar	0-125	2-02		AI	2	4	6	B7						
SLURRY TANK AGITATOR MOTOR CURRENT	IT-2302	AMPS		2-03		AI	2	4	7	B8						
SLURRY TANK WEIGHT	WT-2301	Kg		2-03		AI	2	5	0	B1						
SLURRY TANK DISCHARGE PUMP MOTOR CURRENT	IT-2301	AMPS		2-03		AI	2	5	1	B2						
SLURRY TANK DISCHARGE PUMP PRESS	PT-2301	bar	0-125	2-03		AI	2	5	2	B3						
LIQUID FUEL SYS TANK LEVEL [FUTURE]	LT-2401	%	0-100	2-04		AI	2	5	3	B4						
LIQUID FUEL SYS DISCHARGE PUMP MOTOR CURRENT [FUTURE]	IT-2401	AMPS		2-04		AI	2	5	4	B5						
LIQUID FUEL SYS DISCHARGE PUMP PRESS [FUTURE]	PT-2401	bar		2-04		AI	2	5	5	B6						
LOW PRESS WATER SUPPLY PRESS	PT-2501	bar	0-10	2-05		AI	2	5	6	B7						
HIGH PRESS WATER RECYCLE PUMP MOTOR CURRENT	IT-2602	AMPS		2-06		AI	2	5	7	B8						
HIGH PRESS WATER RECYCLE PUMP PRESS	PT-2605	bar	0-125	2-06		AI	2	6	0	B1						
QUENCH INJECTION PRESSUSRE	PT-2604	bar	0-125	2-06		AI	2	6	1	B2						
SCRUBBER INJECTION WATER PRESS	PT-2603	bar	0-125	2-06		AI	2	6	2	B3						
REACTOR INJECTION WATER PRESS	PT-2602	bar	0-125	2-06		AI	2	6	3	B4						
LOW PRESS WATER RECYCLE PUMP MOTOR CURRENT	IT-2601	AMPS		2-06		AI	2	6	4	B5						
LOW PRESS WATER RECYCLE PUMP PRESS	PT-2601	bar	0-125	2-06		AI	2	6	5	B6						
REACTOR TOP HEAD PRESS	PT-3101	bar	0-100	3-01		AI	2	6	6	B7						
REACTOR QUENCH VESSEL OUTLET PRESS	PT-3102	bar	0-100	3-01		AI	2	6	7	B8						
REACTOR QUENCH TO ASH HANDLING SECTION 2 LEVEL	LT-3101	%	0-100	3-01		AI	2	7	0	B1						
HIPROX FACILITY INSTRUMENT AIR PRESS	PT-3103	kPa	0-1000	3-01		AI	2	7	1	B2						
HIPROX FACILITY ATMOSHPERE AIR PRESS	PT-3104	kPaA	70-110	3-01		AI	2	7	2	B3						
SCRUBBER VESSEL N2 PRESS	PT-3201	bar	0-100	3-02		AI	2	7	3	B4						
SCRUBBER VESSEL LEVEL	LT-3201	%	0-100	3-02		AI	2	7	4	B5						
GAS FILTER 1 DIFFERENTIAL PRESS	PDT-3201	bar	0-10	3-02		AI	2	7	5	B6						
GAS FILTER 2 DIFFERENTIAL PRESS	PDT-3202	bar	0-10	3-02		AI	2	7	6	B7						
GAS FILTERS OUTLET TO SAMPLE SYS/BLOWDOWN PRESS	PT-3202	bar	0-100	3-02		AI	2	7	7	B8						
SAMPLE GAS VALVE TRAIN 1 PRESS 1	PT-3203	bar	0-100	3-02		AI	2	8	0	B1						
SAMPLE GAS VALVE TRAIN 1 PRESS 2	PT-3204	bar	0-100	3-02		AI	2	8	1	B2						
SAMPEL GAS SYS OUTLET PRESS	PT-3208	bar	0-10	3-02		AI	2	8	2	B3						
QUENCH LIQUID FILETER 1 DIFFERENCTIAL PRESS	PDT-3301	bar	0-10	3-03		AI	2	8	3	B4						
QUENCH LIQUID FILETER 2 DIFFERENCTIAL PRESS	PDT-3302	bar	0-10	3-03		AI	2	8	4	B5						
SCRUBBER LIQUID FILETER 1 DIFFERENTIAL PRESS	PDT-3303	bar	0-10	3-03		AI	2	8	5	B6						
SCRUBBER LIQUID FILETER 2 DIFFERENTIAL PRESS	PDT-3304	bar	0-10	3-03		AI	2	8	6	B7						
BLOWDOWN TANK V-3401 LEVEL	LT-3401	%	0-100	3-04		AI	2	8	7	B8						

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											CAB TB	TO TB				
FLARE KNOCKOUT DRUM V-3403 LEVEL	LT-3403	%	0-100	3-04		AI	2	9	0	B1						
REACTOR REACTOR WATER WALL OUTLET PRESS	PT-4301	bar	0-125	4-03		AI	2	9	1	B2						
HP WATER WALL RECIRCULATION PUMP MOTOR CURRENT	IT-4301	AMPS		4-03		AI	2	9	2	B3						
HP WATER WALL RECIRCULATION PUMP OUTLET PRESS	PT-4303	bar	0-125	4-03		AI	2	9	3	B4						
RECYCLE WATER BURNER COOLER OUTLET PRESS	PT-4401	bar	0-125	4-04		AI	2	9	4	B5						
RECYCLE WATER VESSEL V-4401 LEVEL	LT-4401	%	0-100	4-04		AI	2	9	5	B6						
RECYCLE WATER VESSEL V-4401 OUTLET PUMP MOTOR CURRENT	IT-4401	AMPS		4-04		AI	2	9	6	B7						
GLYCOL COOLER PUMP OUTLET PRESS	PT-4501	bar	0-7	4-05		AI	2	9	7	B8						
SCRUBBER LIQUID FILETERS OUTLET LEVEL CONTROL VALVE	LCV-3302	%	0-100	3-03		AO	2	10	0	C1						
LP COOLING WATER TO QUENCH JACKET TEMP CONTROL VALVE	TCV-4101	%	0-100	4-01		AO	2	10	1	C2						
LP COOLING WATER TO REACTOR PROBE NOZZLE TEMP CONTROL VALVE	TCV-4102	%	0-100	4-01		AO	2	10	2	C3						
LP COOLING WATER TO HEAD EXTERNAL TEMP CONTROL VALVE	TCV-4103	%	0-100	4-01		AO	2	10	3	C4						
LP COOLING WATER TO QUENCH LIQ HX OUTLET TEMP CONTROL VALVE	TCV-4104	%	0-100	4-01		AO	2	10	4	C5						
LP COOLING WATER TO SCRUBBER LIQ SAMPLE HX TEMP CONTROL VALVE	TCV-4105	%	0-100	4-01		AO	2	10	5	C6						
HP COOLING WATER TO OUTER BURNER COOLING TEMP CONTROL VALVE	TCV-4202	%	0-100	4-02		AO	2	10	6	C7						
HP COOLING WATER TO INNER BURNER COOLING TEMP CONTROL VALVE	TCV-4203	%	0-100	4-02		AO	2	10	7	C8						
REACTOR REACTOR WATER WALL OUTLET TEMP CONTROL VALVE	TCV-4301	%	0-100	4-03		AO	2	11	0	C1						
REACTOR REACTOR WATER WALL OUTLET BYPASS TEMP CONTROL VALVE	TCV-4302	%	0-100	4-03		AO	2	11	1	C2						
HP WATER WALL RECIRCULATION PUMP FLOW CONTROL	FIC-4301	%	0-100	4-03		AO	2	11	2	C3						
RECYCLE WATER BURNER COOLER OUTLET PRESS CONTROL VALVE	PCV-4401	%	0-100	4-04		AO	2	11	3	C4						
REACTOR SAMPLE GAS SYS STAGE 1 FLOW CONTROL VALVE	FCV-5101	%	0-100	5-01		AO	2	11	4	C5						
REACTOR SAMPLE GAS SYS STAGE 2 FLOW CONTROL VALVE	FCV-5102	%	0-100	5-01		AO	2	11	5	C6						
QS LINE SAMPLE GAS SYS STAGE 1 FLOW CONTROL VALVE	FCV-5103	%	0-100	5-01		AO	2	11	6	C7						
QS LINE SAMPLE GAS SYS STAGE 2 FLOW CONTROL VALVE	FCV-5104	%	0-100	5-01		AO	2	11	7	C8						
REACTOR SAMPLE GAS SYS STAGE 1 FLOW CONTROL VALVE	FCV-5101	%	0-100	5-01		AO	2	12	0	C1						
REACTOR SAMPLE GAS SYS STAGE 2 FLOW CONTROL VALVE	FCV-5102	%	0-100	5-01		AO	2	12	1	C2						
QS LINE SAMPLE GAS SYS STAGE 1 FLOW CONTROL VALVE	FCV-5103	%	0-100	5-01		AO	2	12	2	C3						
QS LINE SAMPLE GAS SYS STAGE 2 FLOW CONTROL VALVE	FCV-5104	%	0-100	5-01		AO	2	12	3	C4						
SCRUBBER SAMPLE GAS SYS STAGE 1 FLOW CONTROL VALVE	FCV-5105	%	0-100	5-01		AO	2	12	4	C5						
SCRUBBER SAMPLE GAS SYS STAGE 2 FLOW CONTROL VALVE	FCV-5106	%	0-100	5-01		AO	2	12	5	C6						
						AO	2	12	6	C7						
						AO	2	12	7	C8						
REACTOR SAMPLE GAS SYS STAGE 1 PRESS	PT-5101	bar	0-20	5-01		AI	3	1	0	B1						
REACTOR SAMPLE GAS SYS STAGE 2 PRESS	PT-5102	bar	0-2	5-01		AI	3	1	1	B2						
QS LINE SAMPLE GAS SYS STAGE 1 PRESS	PT-5103	bar	0-20	5-01		AI	3	1	2	B3						
QS LINE SAMPLE GAS SYS STAGE 2 PRESS	PT-5104	bar	0-2	5-01		AI	3	1	3	B4						
SCRUBBER SAMPLE GAS SYS STAGE 1 PRESS	PT-5105	bar	0-20	5-01		AI	3	1	4	B5						
SCRUBBER SAMPLE GAS SYS STAGE 2 PRESS	PT-5106	bar	0-2	5-01		AI	3	1	5	B6						
						AI	3	1	6	B7						
						AI	3	1	7	B8						

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		TERM NO	REFERENCE DWG
											CAB TB	TO TB					
REACTOR SAMPLE GAS O2 ANALYZER	AT-5401A	%	0-25	5-04		AI	3	2	0	B1							
REACTOR SAMPLE GAS CO2 ANALYZER	AT-5401B	%	0-100	5-04		AI	3	2	1	B2							
REACTOR SAMPLE GAS CO ANALYZER	AT-5401C	%	0-20	5-04		AI	3	2	2	B3							
REACTOR SAMPLE GAS SO2 ANALYZER	AT-5401D	ppm	0-2000	5-04		AI	3	2	3	B4							
REACTOR SAMPLE GAS NOX ANALYZER	AT-5401E	ppm	0-2000	5-04		AI	3	2	4	B5							
						AI	3	2	5	B6							
						AI	3	2	6	B7							
						AI	3	2	7	B8							
BACK END SAMPLE GAS O2 ANALYZER	AT-5402A	%	0-25	5-04		AI	3	3	0	B1							
BACK END SAMPLE GAS CO2 ANALYZER	AT-5402B	%	0-100	5-04		AI	3	3	1	B2							
BACK END SAMPLE GAS CO ANALYZER	AT-5402C	%	0-20	5-04		AI	3	3	2	B3							
BACK END SAMPLE GAS SO2 ANALYZER	AT-5402D	ppm	0-2000	5-04		AI	3	3	3	B4							
BACK END SAMPLE GAS NOX ANALYZER	AT-5402E	ppm	0-2000	5-04		AI	3	3	4	B5							
						AI	3	3	5	B6							
						AI	3	3	6	B7							
						AI	3	3	7	B8							
QS SAMPLE GAS O2 ANALYZER	AT-5403A	%	0-25	5-04		AI	3	4	0	B1							
QS SAMPLE GAS CO2 ANALYZER	AT-5403B	%	0-20	5-04		AI	3	4	1	B2							
QS SAMPLE GAS CO ANALYZER	AT-5403C	%	0-100	5-04		AI	3	4	2	B3							
SCRUBBER SAMPLE GAS O2 ANALYZER	AT-5404A	%	0-25	5-04		AI	3	4	3	B4							
SCRUBBER SAMPLE GAS CO2 ANALYZER	AT-5404B	%	0-100	5-04		AI	3	4	4	B5							
SCRUBBER SAMPLE GAS CO ANALYZER	AT-5404C	%	0-20	5-04		AI	3	4	5	B6							
						AI	3	4	6	B7							
						AI	3	4	7	B8							
						AI	3	5	0	B1							
						AI	3	5	1	B2							
						AI	3	5	2	B3							
						AI	3	5	3	B4							
						AI	3	5	4	B5							
						AI	3	5	5	B6							
						AI	3	5	6	B7							
						AI	3	5	7	B8							
						AO	3	6	0	C1							
						AO	3	6	1	C2							
						AO	3	6	2	C3							
						AO	3	6	3	C4							
						AO	3	6	4	C5							
						AO	3	6	5	C6							
						AO	3	6	6	C7							
						AO	3	6	7	C8							

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		TERM NO	REFERENCE DWG
											CAB TB	TO TB					
						AO	3	7	0	C1							
						AO	3	7	1	C2							
						AO	3	7	2	C3							
						AO	3	7	3	C4							
						AO	3	7	4	C5							
						AO	3	7	5	C6							
						AO	3	7	6	C7							
						AO	3	7	7	C8							
<b>INTERNAL CABINET I/O</b>																	
						AI	3	8	0	C1							
						AI	3	8	1	C2							
						AI	3	8	2	C3							
						AI	3	8	3	C4							
						AI	3	8	4	C5							
						AI	3	8	5	C6							
						AI	3	8	6	C7							
						AI	3	8	7	C8							
<b>INTERNAL CABINET I/O</b>																	
						AO	3	9	0	C1							
						AO	3	9	1	C2							
						AO	3	9	2	C3							
						AO	3	9	3	C4							
						AO	3	9	4	C5							
						AO	3	9	5	C6							
						AO	3	9	6	C7							
						AO	3	9	7	C8							
<b>LOCAL CABINET I/O</b>																	
BMS - NO AUX BURNER TRIP	BC-2220	0-1		2-02		DI	3	10	0	C1							
BMS - PURGE IN PROGRESS	BC-2221	0-1		2-02		DI	3	10	1	B1							
BMS - PURGE COMPLETE	BC-2222	0-1		2-02		DI	3	10	2	C2							
BMS - AUX BURNER ON	BC-2223	0-1		2-02		DI	3	10	3	B2							
BMS - SPARE	BC-2224	0-1		2-02		DI	3	10	4	C3							
BMS - SPARE	BC-2225	0-1		2-02		DI	3	10	5	B3							
						DI	3	10	6	C4							
						DI	3	10	7	B4							
OPERATOR CONSOLE EMERGENCY STOP PB	HS-3177	0-1		3-01		DI	3	10	8	C5							
OPERATOR CONSOLE BUILDING SIREN SEL. SWITCH	HS-3178	0-1		3-01		DI	3	10	9	B5							
						DI	3	10	10	C6							
						DI	3	10	11	B6							
FLARE INTERLOCK	XC-3401	0-1		3-04		DI	3	10	12	C7							
						DI	3	10	13	B7							
						DI	3	10	14	C8							
						DI	3	10	15	B8							

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		TERM NO	REFERENCE DWG
											CAB TB	TO TB					
<b>LOCAL CABINET I/O</b>																	
BMS - DCS OK PULSE	BC-2226	0-1		2-02		DO	3	11	0	C1							
BMS - AUX BURNER FIRING PERMIT	BC-2227	0-1		2-02		DO	3	11	1	B1							
BMS - FLAME TEMP PROVEN	BC-2228	0-1		2-02		DO	3	11	2	C2							
BMS - RADIANT HEAT INTERLOCK PROVEN	BC-2229	0-1		2-02		DO	3	11	3	B2							
BMS - SPARE	BC-2230	0-1		2-02		DO	3	11	4	C3							
BMS - SPARE	BC-2231	0-1		2-02		DO	3	11	5	B3							
BMS - HP NATURAL GAS STAGE 3 ISOLATION VALVE CMD TO BMS, YV-2201A/B	BC-2232	0-1		2-02		DO	3	11	6	C4							
BMS - HP NATURAL GAS STAGE 2 ISOLATION VALVE CMD TO BMS, YV-2204A/B	BC-2233	0-1		2-02		DO	3	11	7	B4							
HIPROX FACILITY EMERGENCY LIGHTS (4)	ALM-3179	0-1		3-01		DO	3	11	8	C5							
HIPROX FACILITY EMERGENCY AUDIBLE ALARM	ALM-3180	0-1		3-01		DO	3	11	9	B5							
						DO	3	11	10	C6							
						DO	3	11	11	B6							
FLARE RUNNING	XO-3401	0-1		3-04		DO	3	11	12	C7							
						DO	3	11	13	B7							
						DO	3	11	14	C8							
						DO	3	11	15	B8							
CO2 COMPRESSOR RUNNING	XC-1101	0-1		1-01		DI	4	1	0	C1							
CO2 COMPRESSOR FAULT	XF-1101	0-1		1-01		DI	4	1	1	B1							
O2 COMPRESSOR RUNNING	XC-1201	0-1		1-02		DI	4	1	2	C2							
O2 COMPRESSOR FAULT	XF-1201	0-1		1-02		DI	4	1	3	B2							
N2 COMPRESSOR RUNNING	XC-1301	0-1		1-03		DI	4	1	4	C3							
N2 COMPRESSOR FAULT	XF-1301	0-1		1-03		DI	4	1	5	B3							
HP NATURAL GAS COMPRESSOR INLET PRESS. SWITCH LOW	PSL-1401	0-1		1-04		DI	4	1	6	C4							
HP NATURAL GAS COMPRESSOR INLET PRESS. SWITCH HIGH	PSH-1401	0-1		1-04		DI	4	1	7	B4							
NG COMPRESSOR RUNNING	XC-1401	0-1		1-04		DI	4	1	8	C5							
NG COMPRESSOR FAULT	XF-1401	0-1		1-04		DI	4	1	9	B5							
						DI	4	1	10	C6							
PRODUCED OILY WATER SUPPLY PUMP RUNNING	XC-1603	0-1		1-06		DI	4	1	11	B6							
PRODUCED OILY WATER SUPPLY PUMP FAULT	XF-1603	0-1		1-06		DI	4	1	12	C7							
PRODUCED OILY WATER FILTER DIFF PRESS. HIGH	PDSH-1602	0-1		1-06		DI	4	1	13	B7							
PRODUCED OILY WATER RECIRC PUMP RUNNING	XC-1604	0-1		1-06		DI	4	1	14	C8							
PRODUCED OILY WATER RECIRC PUMP FAULT	XF-1604	0-1		1-06		DI	4	1	15	B8							
PRODUCED WATER SUPPLY PUMP RUNNING	XC-1601	0-1		1-06		DI	4	2	0	C1							
PRODUCED WATER SUPPLY PUMP FAULT	XF-1601	0-1		1-06		DI	4	2	1	B1							
PRODUCED WATER FILTER DIFFERENTIAL PRESS. HIGH	PDSH-1601	0-1		1-06		DI	4	2	2	C2							
PRODUCED WATER RECIRC PUMP RUNNING	XC-1602	0-1		1-06		DI	4	2	3	B2							
PRODUCED WATER RECIRC PUMP FAULT	XF-1602	0-1		1-06		DI	4	2	4	C3							
						DI	4	2	5	B3							
						DI	4	2	6	C4							
SLURRY TANK AGITATOR RUNNING	XC-2302	0-1		2-03		DI	4	2	7	B4							
SLURRY TANK AGITATOR FAULT	XF-2302	0-1		2-03		DI	4	2	8	C5							
SLURRY TANK DISCHARGE PUMP IN AUTO	XA-2301	0-1		2-03		DI	4	2	9	B5							
SLURRY TANK DISCHARGE PUMP RUNNING	XC-2301	0-1		2-03		DI	4	2	10	C6							
SLURRY TANK DISCHARGE PUMP FAULT	XF-2301	0-1		2-03		DI	4	2	11	B6							
LIQUID FUEL SYS DISCHARGE PUMP RUNNING [FUTURE]	XC-2401	0-1		2-04		DI	4	2	12	C7							
LIQUID FUEL SYS DISCHARGE PUMP FAULT [FUTURE]	XF-2401	0-1		2-04		DI	4	2	13	B7							
LOW PRESS WATER SUPPLY PRESS LOW	PSL-2501	0-1		2-05		DI	4	2	14	C8							



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											CTRL CAB TB	TO TB		TERM NO		
						DI	4	2	15	B8						
HIGH PRESS WATER RECYCLE PUMP RUNNING	XC-2602	0-1		2-06		DI	4	3	0	C1						
HIGH PRESS WATER RECYCLE PUMP FAULT	XF-2602	0-1		2-06		DI	4	3	1	B1						
HIGH PRESS WATER RECYCLE PUMP FLOW SWITCH	FS-2604	0-1		2-06		DI	4	3	2	C2						
QUENCH INJECTION WATER HEATER SHEATH TEMP HIGH	TSH-2603	0-1		2-06		DI	4	3	3	B2						
BUFFER SOLUTION FEED PUMP RUNNING [FUTURE]	XC-2603	0-1		2-06		DI	4	3	4	C3						
SCRUBBER INJECTION WATER HEATER SHEATH TEMP HIGH	TSH-2602	0-1		2-06		DI	4	3	5	B3						
REACTOR INJECTION WATER HEATER SHEATH TEMP HIGH	TSH-2601	0-1		2-06		DI	4	3	6	C4						
LOW PRESS WATER RECYCLE PUMP RUNNING	XC-2601	0-1		2-06		DI	4	3	7	B4						
LOW PRESS WATER RECYCLE PUMP FAULT	XF-2601	0-1		2-06		DI	4	3	8	C5						
						DI	4	3	9	B5						
						DI	4	3	10	C6						
SCRUBBER VESSEL HEATER SHEATH TEMP HIGH	TSH-3201	0-1		3-02		DI	4	3	11	B6						
SAMPLE GAS FILTERS DRAIN COOLER INLET WATER FLOW SWITCH	FSL-3203	0-1		3-02		DI	4	3	12	C7						
HP WATER WALL RECIRCULATION PUMP IN AUTO	XA-4301	0-1		4-03		DI	4	3	13	B7						
HP WATER WALL RECIRCULATION PUMP RUNNING	XC-4301	0-1		4-03		DI	4	3	14	C8						
HP WATER WALL RECIRCULATION PUMP FAULT	XF-4301	0-1		4-03		DI	4	3	15	B8						
HP REACTOR WALL COOLING WATER HEATER SHEATH TEMP HIGH	TSH-4301	0-1		4-03		DI	4	4	0	C1						
RECYCLE WATER VESSEL V-4401 OUTLET PUMP IN AUTO	XA-4401	0-1		4-04		DI	4	4	1	B1						
RECYCLE WATER VESSEL V-4401 OUTLET PUMP RUNNING	XC-4401	0-1		4-04		DI	4	4	2	C2						
RECYCLE WATER VESSEL V-4401 OUTLET PUMP FAULT	XF-4401	0-1		4-04		DI	4	4	3	B2						
GLYCOL COOLER RUNNING	XC-4503	0-1		4-05		DI	4	4	4	C3						
GLYCOL COOLER PUMP RUNNING	XC-4501	0-1		4-05		DI	4	4	5	B3						
GLYCOL COOLER FLOW LOW	FSL-4501	0-1		4-05		DI	4	4	6	C4						
BACK END SAMPLE SYS TO CEM FLOW LOW	FSL-5201	0-1		5-02		DI	4	4	7	B4						
REACTOR SAMPLE GAS FLOW LOW TO NO ANALYZER	FSL-5401	0-1		5-04		DI	4	4	8	C5						
REACTOR SAMPLE GAS FLOW LOW TO O2, CO2, CO, SO2 ANALYZERS	FSL-5402	0-1		5-04		DI	4	4	9	B5						
BACK END SAMPLE GAS FLOW LOW TO NO ANALYZER	FSL-5403	0-1		5-04		DI	4	4	10	C6						
BACK END SAMPLE GAS FLOW LOW TO O2, CO2, CO, SO2 ANALYZERS	FSL-5404	0-1		5-04		DI	4	4	11	B6						
QS SAMPLE GAS FLOW LOW TO EXHAUST	FSL-5405	0-1		5-04		DI	4	4	12	C7						
QS SAMPLE GAS FLOW LOW TO O2, CO2, CO ANALYZERS	FSL-5406	0-1		5-04		DI	4	4	13	B7						
SCRUBBER SAMPLE GAS FLOW LOW TO EXHAUST	FSL-5407	0-1		5-04		DI	4	4	14	C8						
SCRUBBER SAMPLE GAS FLOW LOW TO O2, CO2, CO ANALYZERS	FSL-5408	0-1		5-04		DI	4	4	15	B8						

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		REFERENCE DWG
											CTRL CAB TB	TO TB		TERM NO		
CO2 COMPRESSOR RUN PERMIT	XO-1101	0-1		1-01		DO	4	5	0	C1						
O2 COMPRESSOR RUN PERMIT	XO-1201	0-1		1-02		DO	4	5	1	B1						
N2 COMPRESSOR RUN PERMIT	XO-1301	0-1		1-03		DO	4	5	2	C2						
NG COMPRESSOR RUN PERMIT	XO-1401	0-1		1-04		DO	4	5	3	B2						
PRODUCED OILY WATER SUPPLY PUMP RUN ENABLE	XO-1603	0-1		1-06		DO	4	5	4	C3						
PRODUCED OILY WATER RECIRC PUMP RUN ENABLE	XO-1604	0-1		1-06		DO	4	5	5	B3						
PRODUCED WATER SUPPLY PUMP RUN ENABLE	XO-1601	0-1		1-06		DO	4	5	6	C4						
PRODUCED WATER RECIRC PUMP RUN ENABLE	XO-1602	0-1		1-06		DO	4	5	7	B4						
						DO	4	5	8	C5						
SLURRY TANK DISCHARGE PUMP RUN/STOP	XO-2301	0-1		2-03		DO	4	5	9	B5						
SLURRY TANK AGITATOR RUN/STOP	XO-2302	0-1		2-03		DO	4	5	10	C6						
LIQUID FUEL SYS DISCHARGE PUMP RUN/STOP [FUTURE]	XO-2401	0-1		2-04		DO	4	5	11	B6						
LOW PRESS WATER RECYCLE PUMP RUN/STOP	XO-2601	0-1		2-06		DO	4	5	12	C7						
HIGH PRESS WATER RECYCLE PUMP RUN/STOP	XO-2602	0-1		2-06		DO	4	5	13	B7						
BUFFER SOLUTION FEED PUMP RUN/STOP [FUTURE]	XO-2603	0-1		2-06		DO	4	5	14	C8						
HP WATER WALL RECIRCULATION PUMP RUN/STOP	XO-4301	0-1		4-03		DO	4	5	15	B8						
RECYCLE WATER VESSEL V-4401 OUTLET PUMP RUN/STOP	XO-4401	0-1		4-04		DO	4	6	0	C1						
GLYCOL COOLER PUMP RUN/STOP	XO-4501	0-1		4-05		DO	4	6	1	B1						
GLYCOL COOLER RUN/STOP	XO-4503	0-1		4-05		DO	4	6	2	C2						
REACTOR INJECTION WATER HEATER TEMP CONTROL	TIC-2601	0-1		2-06		DO	4	6	3	B2						
SCRUBBER INJECTION WATER HEATER TEMP CONTROL	TIC-2602	0-1		2-06		DO	4	6	4	C3						
QUENCH INJECTION WATER HEATER TEMP CONTROL	TIC-2603	0-1		2-06		DO	4	6	5	B3						
SCRUBBER VESSEL HEATER TEMP CONTROL	TIC-3201	0-1		3-02		DO	4	6	6	C4						
HP REACTOR WALL COOLING WATER HEATER TEMP CONTROL	TIC-4301	0-1		4-03		DO	4	6	7	B4						
O2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2101	0-1		2-01		DO	4	6	8	C5						
O2 GAS SUPPLY STAGE 1 SHUTOFF VALVE	YV-2102	0-1		2-01		DO	4	6	9	B5						
O2 GAS SUPPLY STAGE 2 SHUTOFF VALVE	YV-2103	0-1		2-01		DO	4	6	10	C6						
O2 GAS SUPPLY STAGE 3 SHUTOFF VALVE	YV-2104	0-1		2-01		DO	4	6	11	B6						
N2 TO O2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2105	0-1		2-01		DO	4	6	12	C7						
N2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2106	0-1		2-01		DO	4	6	13	B7						
N2 INTERMEDIATE PURGE ISOLATION VALVE	YV-2107A	0-1		2-01		DO	4	6	14	C8						
CO2 INTERMEDIATE QUENCH JACKET ISOLATION VALVE	YV-2107B	0-1		2-01		DO	4	6	15	B8						
N2 TO COD INTERMEDIATE ISOLATION VALVE	YV-2107C	0-1		2-01		DO	4	7	0	C1						
N2 TO CO2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2108	0-1		2-01		DO	4	7	1	B1						
N2 REACTOR SAMPLE PROBE OUTER COOLING SHUTOFF VALVE	YV-2109	0-1		2-01		DO	4	7	2	C2						
N2 REACTOR SAMPLE PROBE INNER COOLING SHUTOFF VALVE	YV-2110	0-1		2-01		DO	4	7	3	B2						
N2 QS SAMPLE PROBE COOLING SHUTOFF VALVE	YV-2111	0-1		2-01		DO	4	7	4	C3						
CO2 GAS SUPPLY STAGE 1 SHUTOFF VALVE	YV-2113	0-1		2-01		DO	4	7	5	B3						
CO2 GAS SUPPLY STAGE 2 SHUTOFF VALVE	YV-2114	0-1		2-01		DO	4	7	6	C4						
CO2 GAS SUPPLY STAGE 3 SHUTOFF VALVE	YV-2115	0-1		2-01		DO	4	7	7	B4						
CO2 TO N2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2116	0-1		2-01		DO	4	7	8	C5						
CO2 GAS SUPPLY TO REACTOR HEAD SHUTOFF VALVE	YV-2117	0-1		2-01		DO	4	7	9	B5						
CO2 GAS SUPPLY SYS SHUTOFF VALVE	YV-2118	0-1		2-01		DO	4	7	10	C6						
SLURRY TANK DIVERSION VALVE	YV-2302	0-1		2-03		DO	4	7	11	B6						
SLURRY SYS BUTANOL INJECTION VALVE	YV-2303	0-1		2-03		DO	4	7	12	C7						
LIQUID FUEL SYS DISCHARGE DIVERSION VALVE	YV-2401	0-1		2-04		DO	4	7	13	B7						
LOW PRESS WATER SUPPLY TO BLOWDOWN TANK MAKE-UP VALVE	YV-2501	0-1		2-05		DO	4	7	14	C8						
LOW PRESS WATER SUPPLY TO FLARE KNOCKOUT DRUM MAKE-UP VALVE	YV-2502	0-1		2-05		DO	4	7	15	B8						

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE CAB TB TO TB	JCT BOX	JB TERM STRIP	TERM NO	REFERENCE DWG
LOW PRESS WATER SUPPLY TO V-4401 MAKE-UP VALVE	YV-2503	0-1		2-05		DO	4	8	0	C1					
HIGH PRESS WATER RECYCLE TO RECURCULATION VALVE	YV-2601	0-1		2-06		DO	4	8	1	B1					
UNPLUG SLURYY LINE ISOLATION VALVE	YV-2602	0-1		2-06		DO	4	8	2	C2					
UNPLUG WATER TREATMENT ISOLATION VALVE	YV-2603	0-1		2-06		DO	4	8	3	B2					
REACTOR INJECTION WATER DIVERSION VALVE	YV-2604	0-1		2-06		DO	4	8	4	C3					
REACTOR INJECTION WATER ISOLATION VALVE	YV-2605	0-1		2-06		DO	4	8	5	B3					
SCRUBBER INJECTION WATER DIVERSION VALVE	YV-2606	0-1		2-06		DO	4	8	6	C4					
SCRUBBER INJECTION WATER ISOLATION VALVE	YV-2607	0-1		2-06		DO	4	8	7	B4					
QUENCH INJECTION PW/LP WATER DIVERSION VALVE	YV-2608	0-1		2-06		DO	4	8	8	C5					
QUENCH INJECTION ISOLATION VALVE	YV-2609	0-1		2-06		DO	4	8	9	B5					
HIGH PRESS WATER RECYCLE PUMP DISCHARGE VALVE	YV-2610	0-1		2-06		DO	4	8	10	C6					
HIGH PRESS WATER RECYCLE PUMP DISCHARGE DIVERSION VALVE	YV-2611	0-1		2-06		DO	4	8	11	B6					
HIGH PRESS WATER RECYCLE TO PW/RECURCULATION VALVE	YV-2612	0-1		2-06		DO	4	8	12	C7					
REACTOR AHS HANDLING SECTION 2 DISCHARGE VALVE 1 [FUTURE]	YV-3101	0-1		3-01		DO	4	8	13	B7					
REACTOR AHS HANDLING SECTION 2 DISCHARGE VALVE 2 [FUTURE]	YV-3102	0-1		3-01		DO	4	8	14	C8					
REACTOR QUENCH VESSEL DRAIN ISOLATION VALVE	YV-3103	0-1		3-01		DO	4	8	15	B8					
SCRUBBER VESSEL HIGH N2 PRESSURIZATION VALVE	YV-3201	0-1		3-02		DO	4	9	0	C1					
SCRUBBER VESSEL HIGH N2 BYPASS TO BLOWDOWN VALVE	YV-3202	0-1		3-02		DO	4	9	1	B1					
GAS FILTER 1 INLET ISOLATION VALVE	YV-3203	0-1		3-02		DO	4	9	2	C2					
GAS FILTERS BYPASS VALVE	YV-3204	0-1		3-02		DO	4	9	3	B2					
GAS FILTER 1 OUTLET DRAIN VALVE	YV-3205	0-1		3-02		DO	4	9	4	C3					
GAS FILTER 1 INLET ISOLATION VALVE	YV-3206	0-1		3-02		DO	4	9	5	B3					
GAS FILTER 1 OUTLET DRAIN VALVE	YV-3207	0-1		3-02		DO	4	9	6	C4					
SAMPLE GAS VALVE TRAIN 1 ISOLATION VALVE	YV-3208	0-1		3-02		DO	4	9	7	B4					
SAMPLE GAS VALVE TRAIN 1 DIVERSION VALVE	YV-3209	0-1		3-02		DO	4	9	8	C5					
SAMPLE GAS VALVE TRAIN 1 BYPASS VALVE	YV-3210	0-1		3-02		DO	4	9	9	B5					
SAMPLE GAS VALVE TRAIN 2 ISOLATION VALVE	YV-3211	0-1		3-02		DO	4	9	10	C6					
SCRUBBER VESSEL PW/HP WATER VALVE 1	YV-3214	0-1		3-02		DO	4	9	11	B6					
SCRUBBER VESSEL PW/HP WATER VALVE 2	YV-3215	0-1		3-02		DO	4	9	12	C7					
SCRUBBER VESSEL PW/HP WATER VALVE 3	YV-3216	0-1		3-02		DO	4	9	13	B7					
SCRUBBER VESSEL PW/HP WATER VALVE 4	YV-3217	0-1		3-02		DO	4	9	14	C8					
QUENCH LIQUID FILETER 1 INLET ISOLATION VALVE	YV-3301	0-1		3-03		DO	4	9	15	B8					

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB		JCT BOX	JB		REFERENCE DWG
											CABLE TO TB	CAB TB		TERM STRIP	TERM NO	
QUENCH LIQUID FILETER 2 INLET ISOLATION VALVE	YV-3302	0-1		3-03		DO	4	10	0	C1						
SCRUBBER LIQUID FILETER 1 INLET ISOLATION VALVE	YV-3303	0-1		3-03		DO	4	10	1	B1						
SCRUBBER LIQUID FILETER 2 INLET ISOLATION VALVE	YV-3304	0-1		3-03		DO	4	10	2	C2						
BLOWDOWN TANK V-3401 DRAIN DIVERSION VALVE	YV-3401	0-1		3-04		DO	4	10	3	B2						
LP COOLING WATER TO QUENCH JACKET ISOLATION VALVE	YV-4101	0-1		4-01		DO	4	10	4	C3						
LP COOLING WATER TO REACTOR PROBE NOZZLE ISOLATION VALVE	YV-4102	0-1		4-01		DO	4	10	5	B3						
LP COOLING WATER TO HEAD EXTERNAL ISOLATION VALVE	YV-4103	0-1		4-01		DO	4	10	6	C4						
LP COOLING WATER TO QUENCH LIQ HX OUTLET ISOLATION VALVE	YV-4104	0-1		4-01		DO	4	10	7	B4						
LP COOLING WATER TO SCRUBBER LIQ SAMPLE HX ISOLATION VALVE	YV-4105	0-1		4-01		DO	4	10	8	C5						
LP COOLING WATER TO ACTIVELY COOLED WALL ISOLATION VALVE	YV-4106	0-1		4-01		DO	4	10	9	B5						
REACTOR LP PNEUMATIC PUMP RUN/STOP VALVE	YV-4301	0-1		4-03		DO	4	10	10	C6						
REACTOR SAMPLE GAS SYS ISOLATION VALVE	YV-5101	0-1		5-01		DO	4	10	11	B6						
REACTOR SAMPLE GAS SYS N2 PURGE VALVE	YV-5102	0-1		5-01		DO	4	10	12	C7						
QS LINE SAMPLE GAS SYS ISOLATION VALVE	YV-5103	0-1		5-01		DO	4	10	13	B7						
QS LINE SAMPLE GAS SYS N2 PURGE VALVE	YV-5104	0-1		5-01		DO	4	10	14	C8						
SCRUBBER SAMPLE GAS SYS ISOLATION VALVE	YV-5105	0-1		5-01		DO	4	10	15	B8						
SCRUBBER SAMPLE GAS SYS N2 PURGE VALVE	YV-5106	0-1		5-01		DO	4	11	0	C1						
QUENCH LIQUID SAMPLING SYS ISOLATION VALVE	YV-5301	0-1		5-03		DO	4	11	1	B1						
LP WATER TO QUENCH LIQ SAMPLE SYS COOLER ISOLATION VALVE	YV-5302	0-1		5-03		DO	4	11	2	C2						
QUENCH LIQUID SAMPLING SYS SAMPLE 1 VALVE	YV-5303	0-1		5-03		DO	4	11	3	B2						
QUENCH LIQUID SAMPLING SYS SAMPLE 2 VALVE	YV-5304	0-1		5-03		DO	4	11	4	C3						
QUENCH LIQUID SAMPLING SYS SAMPLE 3 VALVE	YV-5305	0-1		5-03		DO	4	11	5	B3						
QUENCH LIQUID SAMPLING SYS SAMPLE 4 VALVE	YV-5306	0-1		5-03		DO	4	11	6	C4						
QUENCH LIQUID SAMPLING SYS TO BLOWDOWN VALVE	YV-5307	0-1		5-03		DO	4	11	7	B4						
SCRUBBER LIQUID SAMPLING SYS ISOLATION VALVE	YV-5308	0-1		5-03		DO	4	11	8	C5						
LP WATER TO SCRUBBER LIQ SAMPLE SYS COOLER ISOLATION VALVE	YV-5309	0-1		5-03		DO	4	11	9	B5						
SCRUBBER LIQUID SAMPLING SYS SAMPLE 1 VALVE	YV-5310	0-1		5-03		DO	4	11	10	C6						
SCRUBBER LIQUID SAMPLING SYS SAMPLE 2 VALVE	YV-5311	0-1		5-03		DO	4	11	11	B6						
SCRUBBER LIQUID SAMPLING SYS SAMPLE 3 VALVE	YV-5312	0-1		5-03		DO	4	11	12	C7						
SCRUBBER LIQUID SAMPLING SYS SAMPLE 4 VALVE	YV-5313	0-1		5-03		DO	4	11	13	B7						
SCRUBBER LIQUID SAMPLING SYS TO BLOWDOWN VALVE	YV-5314	0-1		5-03		DO	4	11	14	C8						
						DO	4	11	15	B8						
REACTOR QUENCH VESSEL DRAIN LEG TEMP	TE-3115	DEG C		3-01		TE	5	1	0	C1-B1			JKPNL-115-1	1	1	
REACTOR QUENCH VESSEL DRAIN COOLER INLET WATER TEMP	TE-3124	DEG C		3-01		TE	5	1	1	C2-B2			JKPNL-115-1	1	2	
REACTOR QUENCH VESSEL DRAIN COOLER OUTLET WATER TEMP	TE-3125	DEG C		3-01		TE	5	1	2	C3-B3			JKPNL-115-1	1	3	
REACTOR QUENCH VESSEL DRAIN COOLER OUTLET TEMP	TE-3123	DEG C		3-01		TE	5	1	3	C4-B4			JKPNL-115-1	1	4	
SCRUBBER VESSEL DRAIN OUTLET TEMP	TE-3203	DEG C		3-02		TE	5	1	4	C5-B5			JKPNL-115-1	1	5	
RECYCLE WATER COOLER WATER OUTLET TEMP	TE-3211	DEG C		3-02		TE	5	1	5	C6-B6			JKPNL-115-1	1	6	
RECYCLE WATER COOLER LP WATER INLET TEMP	TE-3212	DEG C		3-02		TE	5	1	6	C7-B7			JKPNL-115-1	1	7	
RECYCLE WATER COOLER LP WATER OUTLET TEMP	TE-3213	DEG C		3-02		TE	5	1	7	C8-B8			JKPNL-115-1	1	8	

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB		JCT BOX	JB TERM STRIP	TERM NO	REFERENCE DWG
											CAB TB	TO TB				
RECYCLE WATER COOLER WATER INLET TEMP	TE-3214	DEG C		3-02		TE	5	2	0	C1-B1			JKPNL-115-1	2	9	
SCRUBBER VESSEL HEATER TEMP	TE-3215	DEG C		3-02		TE	5	2	1	C2-B2			JKPNL-115-1	2	10	
SCRUBBER VESSEL HEATER SKIN TEMP	TE-3216	DEG C		3-02		TE	5	2	2	C3-B3			JKPNL-115-1	2	11	
						TE	5	2	3	C4-B4			JKPNL-115-1	2	12	
						TE	5	2	4	C5-B5			JKPNL-115-1	2	13	
						TE	5	2	5	C6-B6			JKPNL-115-1	2	14	
						TE	5	2	6	C7-B7			JKPNL-115-1	2	15	
						TE	5	2	7	C8-B8			JKPNL-115-1	2	16	
QUENCH LIQUID SAMPLING SYS TEMP	TE-5301	DEG C		5-03		TE	5	3	0	C1-B1			JKPNL-115-2	1	1	
QUENCH LIQUID SAMPLING SYS COOLER OUTLET TEMP	TE-5302	DEG C		5-03		TE	5	3	1	C2-B2			JKPNL-115-2	1	2	
LP WATER TO QUENCH LIQ SAMPLE SYS COOLER OUTLET TEMP	TE-5303	DEG C		5-03		TE	5	3	2	C3-B3			JKPNL-115-2	1	3	
SCRUBBER LIQUID SAMPLING SYS TEMP	TE-5304	DEG C		5-03		TE	5	3	3	C4-B4			JKPNL-115-2	1	4	
SCRUBBER LIQUID SAMPLING SYS COOLER OUTLET TEMP	TE-5305	DEG C		5-03		TE	5	3	4	C5-B5			JKPNL-115-2	1	5	
LP WATER TO SCRUBBER LIQ SAMPLE SYS COOLER OUTLET TEMP	TE-5306	DEG C		5-03		TE	5	3	5	C6-B6			JKPNL-115-2	1	6	
						TE	5	3	6	C7-B7			JKPNL-115-2	1	7	
						TE	5	3	7	C8-B8			JKPNL-115-2	1	8	
PRODUCED OILY WATER SUPPLY PUMP OUTLET TEMP	TE-1603	DEG C		1-06		TE	5	4	0	C1-B1			JKPNL-116-1	1	1	
PRODUCED OILY WATER RECIRC PUMP OUTLET TEMP	TE-1604	DEG C		1-06		TE	5	4	1	C2-B2			JKPNL-116-1	1	2	
PRODUCED WATER SUPPLY PUMP OUTLET TEMP	TE-1601	DEG C		1-06		TE	5	4	2	C3-B3			JKPNL-116-1	1	3	
PRODUCED WATER RECIRC PUMP OUTLET TEMP	TE-1602	DEG C		1-06		TE	5	4	3	C4-B4			JKPNL-116-1	1	4	
						TE	5	4	4	C5-B5			JKPNL-116-1	1	5	
						TE	5	4	5	C6-B6			JKPNL-116-1	1	6	
						TE	5	4	6	C7-B7			JKPNL-116-1	1	7	
						TE	5	4	7	C8-B8			JKPNL-116-1	1	8	
LIQUID FUEL SYS DISCHARGE PUMP TEMP [FUTURE]	TE-2402	DEG C		2-04		TE	5	5	0	C1-B1			JKPNL-116-2	1	1	
BUFFER SOLUTION FEED PUMP QUENCY INJECTION TEMP [FUTURE]	TE-2605	DEG C		2-06		TE	5	5	1	C2-B2			JKPNL-116-2	1	2	
BUFFER SOLUTION FEED PUMP SCRUBBER INJECTION TEMP [FUTURE]	TE-2606	DEG C		2-06		TE	5	5	2	C3-B3			JKPNL-116-2	1	3	
LOW PRESS WATER TEMP	TE-2610	DEG C		2-06		TE	5	5	3	C4-B4			JKPNL-116-2	1	4	
RECYCLE WATER VESSEL V-4401 OUTLET TEMP	TE-4401	DEG C		4-04		TE	5	5	4	C5-B5			JKPNL-116-2	1	5	
GLYCOL COOLER OUTLET TEMP	TE-4502	DEG C		4-05		TE	5	5	5	C6-B6			JKPNL-116-2	1	6	
GLYCOL COOLER PUMP OUTLET TEMP	TE-4503	DEG C		4-05		TE	5	5	6	C7-B7			JKPNL-116-2	1	7	
						TE	5	5	7	C8-B8			JKPNL-116-2	1	8	
SCRUBBER INJECTION WATER HEATER TEMP (ELEMENT)	TE-2602A	DEG C		2-06		TE	5	6	0	C1-B1			JKPNL-M8-1	1	1	
SCRUBBER INJECTION WATER HEATER TEMP (OUTLET)	TE-2602B	DEG C		2-06		TE	5	6	1	C2-B2			JKPNL-M8-1	1	2	
QUENCH INJECTION WATER HEATER TEMP (ELEMENT)	TE-2603A	DEG C		2-06		TE	5	6	2	C3-B3			JKPNL-M8-1	1	3	
QUENCH INJECTION WATER HEATER TEMP (OUTLET)	TE-2603B	DEG C		2-06		TE	5	6	3	C4-B4			JKPNL-M8-1	1	4	
REACTOR REACTOR WATER WALL OUTLET TEMP	TE-4301	DEG C		4-03		TE	5	6	4	C5-B5			JKPNL-M8-1	1	5	
LOW PRESS WATER TO COOLER HX-4301 INLET TEMP	TE-4304	DEG C		4-03		TE	5	6	5	C6-B6			JKPNL-M8-1	1	6	
LOW PRESS WATER TO COOLER HX-4301 OUTLET TEMP	TE-4305	DEG C		4-03		TE	5	6	6	C7-B7			JKPNL-M8-1	1	7	
HP WATER WALL RECIRCULATION PUMP INLET TEMP	TE-4302	DEG C		4-03		TE	5	6	7	C8-B8			JKPNL-M8-1	1	8	

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											CAB TB	TO TB				
QUENCH JACKET OUTLET TO BLOWDOWN TEMP	TE-3113	DEG C		3-01		TE	5	7	0	C1-B1			JKPNL-M8-2	1	1	
REACTOR QUENCH VESSEL OUTLET TEMP 1	TE-3116	DEG C		3-01		TE	5	7	1	C2-B2			JKPNL-M8-2	1	2	
REACTOR QUENCH VESSEL OUTLET SURFACE TEMP 1	TE-3117	DEG C		3-01		TE	5	7	2	C3-B3			JKPNL-M8-2	1	3	
REACTOR QUENCH VESSEL OUTLET SURFACE TEMP 2	TE-3118	DEG C		3-01		TE	5	7	3	C4-B4			JKPNL-M8-2	1	4	
REACTOR QUENCH VESSEL OUTLET SURFACE TEMP 3	TE-3119	DEG C		3-01		TE	5	7	4	C5-B5			JKPNL-M8-2	1	5	
REACTOR QUENCH VESSEL OUTLET SURFACE TEMP 4	TE-3120	DEG C		3-01		TE	5	7	5	C6-B6			JKPNL-M8-2	1	6	
REACTOR QUENCH VESSEL OUTLET TEMP 2	TE-3121	DEG C		3-01		TE	5	7	6	C7-B7			JKPNL-M8-2	1	7	
LP WATER TO QUENCH JACKET TEMP	TE-3122	DEG C		3-01		TE	5	7	7	C8-B8			JKPNL-M8-2	1	8	
REACTOR QUENCH VESSEL TEMP	TE-3114	DEG C		3-01		TE	5	8	0	C1-B1			JKPNL-M8-2	2	9	
REACTOR QUENCH VESSEL SURFACE TEMP 1	TE-3169	DEG C		3-01		TE	5	8	1	C2-B2			JKPNL-M8-2	2	10	
REACTOR QUENCH VESSEL SURFACE TEMP 2	TE-3170	DEG C		3-01		TE	5	8	2	C3-B3			JKPNL-M8-2	2	11	
REACTOR QUENCH VESSEL SURFACE TEMP 3	TE-3171	DEG C		3-01		TE	5	8	3	C4-B4			JKPNL-M8-2	2	12	
REACTOR QUENCH VESSEL SURFACE TEMP 4	TE-3172	DEG C		3-01		TE	5	8	4	C5-B5			JKPNL-M8-2	2	13	
REACTOR QUENCH VESSEL SURFACE TEMP 5	TE-3173	DEG C		3-01		TE	5	8	5	C6-B6			JKPNL-M8-2	2	14	
REACTOR QUENCH VESSEL SURFACE TEMP 6	TE-3174	DEG C		3-01		TE	5	8	6	C7-B7			JKPNL-M8-2	2	15	
REACTOR QUENCH VESSEL SURFACE TEMP 7	TE-3175	DEG C		3-01		TE	5	8	7	C8-B8			JKPNL-M8-2	2	16	
REACTOR QUENCH VESSEL SURFACE TEMP 8	TE-3176	DEG C		3-01		TE	6	1	0	C1-B1			JKPNL-M8-3	1	1	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3181	DEG C		3-01		TE	6	1	1	C2-B2			JKPNL-M8-3	1	2	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3182	DEG C		3-01		TE	6	1	2	C3-B3			JKPNL-M8-3	1	3	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3183	DEG C		3-01		TE	6	1	3	C4-B4			JKPNL-M8-3	1	4	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3184	DEG C		3-01		TE	6	1	4	C5-B5			JKPNL-M8-3	1	5	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3185	DEG C		3-01		TE	6	1	5	C6-B6			JKPNL-M8-3	1	6	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3186	DEG C		3-01		TE	6	1	6	C7-B7			JKPNL-M8-3	1	7	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3187	DEG C		3-01		TE	6	1	7	C8-B8			JKPNL-M8-3	1	8	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3188	DEG C		3-01		TE	6	2	0	C1-B1			JKPNL-M8-3	2	9	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3189	DEG C		3-01		TE	6	2	1	C2-B2			JKPNL-M8-3	2	10	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3190	DEG C		3-01		TE	6	2	2	C3-B3			JKPNL-M8-3	2	11	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3191	DEG C		3-01		TE	6	2	3	C4-B4			JKPNL-M8-3	2	12	
REACTOR ASH HANDLING SECTION 1 SURFACE TEMP	TE-3192	DEG C		3-01		TE	6	2	4	C5-B5			JKPNL-M8-3	2	13	
						TE	6	2	5	C6-B6			JKPNL-M8-3	2	14	
						TE	6	2	6	C7-B7			JKPNL-M8-3	2	15	
						TE	6	2	7	C8-B8			JKPNL-M8-3	2	16	
SCRUBBER VESSEL N2 TEMP	TE-3201	DEG C		3-02		TE	6	3	0	C1-B1			JKPNL-M8-4	1	1	
SCRUBBER VESSEL PRODUCT GAS INLET TEMP	TE-3202	DEG C		3-02		TE	6	3	1	C2-B2			JKPNL-M8-4	1	2	
SCRUBBER VESSEL SURFACE TEMP 1	TE-3219	DEG C		3-02		TE	6	3	2	C3-B3			JKPNL-M8-4	1	3	
SCRUBBER VESSEL SURFACE TEMP 2	TE-3220	DEG C		3-02		TE	6	3	3	C4-B4			JKPNL-M8-4	1	4	
SCRUBBER VESSEL SURFACE TEMP 3	TE-3221	DEG C		3-02		TE	6	3	4	C5-B5			JKPNL-M8-4	1	5	
SCRUBBER VESSEL SURFACE TEMP 4	TE-3222	DEG C		3-02		TE	6	3	5	C6-B6			JKPNL-M8-4	1	6	
SCRUBBER SAMPLE GAS COOLER INLET TEMP	TE-5113	DEG C		5-01		TE	6	3	6	C7-B7			JKPNL-M8-4	2	7	
SCRUBBER SAMPLE GAS COOLER OUTLET TEMP	TE-5115	DEG C		5-01		TE	6	3	7	C8-B8			JKPNL-M8-4	2	8	

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB		JCT BOX	JB TERM STRIP	TERM NO	REFERENCE DWG
											CAB TB	TO TB				
REACTOR SAMPLE GAS COOLER INLET TEMP	TE-5101	DEG C		5-01		TE	6	4	0	C1-B1			JKPNL-M8-4	2	9	
REACTOR SAMPLE GAS COOLER OUTLET TEMP	TE-5103	DEG C		5-01		TE	6	4	1	C2-B2			JKPNL-M8-4	2	10	
QS LINE SAMPLE GAS COOLER INLET TEMP	TE-5107	DEG C		5-01		TE	6	4	2	C3-B3			JKPNL-M8-4	2	11	
QS LINE SAMPLE GAS COOLER OUTLET TEMP	TE-5109	DEG C		5-01		TE	6	4	3	C4-B4			JKPNL-M8-4	2	12	
REACTOR SAMPLE GAS COOLER N2 OUTLET TEMP	TE-5119	DEG C		5-01		TE	6	4	4	C5-B5			JKPNL-M8-4	2	13	
QS LINE SAMPLE GAS COOLER N2 OUTLET TEMP	TE-5120	DEG C		5-01		TE	6	4	5	C6-B6			JKPNL-M8-4	2	14	
						TE	6	4	6	C7-B7						
						TE	6	4	7	C8-B8						
GAS FILTERS OUTLET TO SAMPLE SYS/BLOWDOWN TEMP	TE-3210	DEG C		3-02		TE	6	5	0	C1-B1			JKPNL-M8-5	1	1	
SAMPEL GAS SYS OUTLET TEMP	TE-3223	DEG C		3-02		TE	6	5	1	C2-B2			JKPNL-M8-5	1	2	
SAMPLE GAS FILTERS DRAIN COOLER OUTLET TEMP	TE-3224	DEG C		3-02		TE	6	5	2	C3-B3			JKPNL-M8-5	1	3	
SAMPLE GAS FILTERS DRAIN COOLER OUTLET WATER TEMP	TE-3225	DEG C		3-02		TE	6	5	3	C4-B4			JKPNL-M8-5	1	4	
						TE	6	5	4	C5-B5						
FLARE PILOT GAS EXIT TEMP	TE-3401	DEG C		3-04		TE	6	5	5	C6-B6						
FLARE GAS EXIT TEMP	TE-3402	DEG C		3-04		TE	6	5	6	C7-B7						
FLAGE GAS EXIT TEMP	TE-3403	DEG C		3-04		TE	6	5	7	C8-B8						
O2 GAS SUPPLY SYS TEMP	TE-2101	DEG C		2-01		TE	6	6	0	C1-B1			JKPNL-M9-1	1	1	
N2 GAS SUPPLY SYS TEMP	TE-2102	DEG C		2-01		TE	6	6	1	C2-B2			JKPNL-M9-1	1	2	
CO2 GAS SUPPLY SYS TEMP	TE-2103	DEG C		2-01		TE	6	6	2	C3-B3			JKPNL-M9-1	1	3	
						TE	6	6	3	C4-B4						
						TE	6	6	4	C5-B5						
						TE	6	6	5	C6-B6						
CO2 BUFFER TANK TEMP	TE-1101	DEG C		1-01		TE	6	6	6	C7-B7						
CO2 BUFFER TANK SURFACE TEMP	TE-1102	DEG C		1-01		TE	6	6	7	C8-B8						

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB		JCT BOX	JB TERM STRIP	TERM NO	REFERENCE DWG
											CTRL CAB TB	TO TB				
REACTOR SAMPLE GAS SYS OUTLET TEMP	TE-5106	DEG C		5-01		TE	6	7	0	C1-B1			JKPNL-M9-2	2	1	
QS LINE SAMPLE GAS SYS OUTLET TEMP	TE-5112	DEG C		5-01		TE	6	7	1	C2-B2			JKPNL-M9-2	2	2	
SCRUBBER SAMPLE GAS SYS OUTLET TEMP	TE-5118	DEG C		5-01		TE	6	7	2	C3-B3			JKPNL-M9-2	2	3	
BACK END SAMPLE SYS TO CEM TEMP	TE-5201	DEG C		5-02		TE	6	7	3	C4-B4			JKPNL-M9-2	2	4	
						TE	6	7	4	C5-B5						
						TE	6	7	5	C6-B6						
						TE	6	7	6	C7-B7						
						TE	6	7	7	C8-B8						
HP NATURAL GAS TEMP	TE-2201	DEG C		2-02		TE	6	8	0	C1-B1			JKPNL-Mezz-1	1	1	
LOW PRESS WATER COOLING HEAD INLET TEMP	TE-3110A	DEG C		3-01		TE	6	8	1	C2-B2			JKPNL-Mezz-1	1	2	
LOW PRESS WATER COOLING HEAD OUTLET TEMP	TE-3110B	DEG C		3-01		TE	6	8	2	C3-B3			JKPNL-Mezz-1	1	3	
LOW PRESS WATER COOLING NOZZLE INLET TEMP	TE-3112A	DEG C		3-01		TE	6	8	3	C4-B4			JKPNL-Mezz-1	1	4	
LOW PRESS WATER COOLING NOZZLE OUTLET TEMP	TE-3112B	DEG C		3-01		TE	6	8	4	C5-B5			JKPNL-Mezz-1	1	5	
PRODUCED WATER/HP WATER TO QUENCH INLET TEMP	TE-3111	DEG C		3-01		TE	6	8	5	C6-B6			JKPNL-Mezz-1	1	6	
						TE	6	8	6	C7-B7						
						TE	6	8	7	C8-B8						
REACTOR INJECTION WATER HEATER TEMP (ELEMENT)	TE-2601A	DEG C		2-06		TE	7	1	0	C1-B1			JKPNL-Mezz-2	1	1	
REACTOR INJECTION WATER HEATER TEMP (OUTLET)	TE-2601B	DEG C		2-06		TE	7	1	1	C2-B2			JKPNL-Mezz-2	1	2	
HP REACTOR WALL COOLING WATER HEATER TEMP (ELEMENT)	TE-4301A	DEG C		4-03		TE	7	1	2	C3-B3			JKPNL-Mezz-2	1	3	
HP REACTOR WALL COOLING WATER HEATER TEMP (OUTLET)	TE-4301B	DEG C		4-03		TE	7	1	3	C4-B4			JKPNL-Mezz-2	1	4	
						TE	7	1	4	C5-B5			JKPNL-Mezz-2	1	5	
						TE	7	1	5	C6-B6			JKPNL-Mezz-2	1	6	
						TE	7	1	6	C7-B7			JKPNL-Mezz-2	1	7	
						TE	7	1	7	C8-B8						
LIQUID FUEL/HP WATER TO INJECTOR BURNER TEMP	TE-3101	DEG C		3-01		TE	7	2	0	C1-B1			JKPNL-Mezz-3	1	1	
HP NATURAL GAS TO INJECTOR BURNER TEMP	TE-3102	DEG C		3-01		TE	7	2	1	C2-B2			JKPNL-Mezz-3	1	2	
LP/INTMP/HP CO2/N2 TO INJECTOR BURNER TEMP	TE-3103	DEG C		3-01		TE	7	2	2	C3-B3			JKPNL-Mezz-3	1	3	
LOW PRESS/INTMP WATER TO INJECTOR BURNER TEMP	TE-3104	DEG C		3-01		TE	7	2	3	C4-B4			JKPNL-Mezz-3	1	4	
INNER INJECTOR BURNER COOLER WATER INLET TEMP	TE-3105	DEG C		3-01		TE	7	2	4	C5-B5			JKPNL-Mezz-3	1	5	
INNER INJECTOR BURNER COOLER WATER OUTLET TEMP	TE-3106	DEG C		3-01		TE	7	2	5	C6-B6			JKPNL-Mezz-3	1	6	
OUTER INJECTOR BURNER COOLER WATER INLET TEMP	TE-3107	DEG C		3-01		TE	7	2	6	C7-B7			JKPNL-Mezz-3	1	7	
OUTER INJECTOR BURNER COOLER WATER OUTLET TEMP	TE-3108	DEG C		3-01		TE	7	2	7	C8-B8			JKPNL-Mezz-3	1	8	
COMPBUSTER PORT 1 TEMP	TE-3130	DEG C		3-01		TE	7	3	0	C1-B1			JKPNL-Mezz-3	2	9	
COMPBUSTER PORT 2 TEMP	TE-3131	DEG C		3-01		TE	7	3	1	C2-B2			JKPNL-Mezz-3	2	10	
COMPBUSTER PORT 3 TEMP	TE-3132	DEG C		3-01		TE	7	3	2	C3-B3			JKPNL-Mezz-3	2	11	
COMPBUSTER PORT 4 TEMP	TE-3133	DEG C		3-01		TE	7	3	3	C4-B4			JKPNL-Mezz-3	2	12	
REACTOR TOP HEAD SURFACE TEMP	TE-3134	DEG C		3-01		TE	7	3	4	C5-B5			JKPNL-Mezz-3	2	13	
REACTOR TOP HEAD SURFACE TEMP 1	TE-3135	DEG C		3-01		TE	7	3	5	C6-B6			JKPNL-Mezz-3	2	14	
REACTOR TOP HEAD SURFACE TEMP 2	TE-3136	DEG C		3-01		TE	7	3	6	C7-B7			JKPNL-Mezz-3	2	15	
REACTOR TOP HEAD SURFACE TEMP 3	TE-3137	DEG C		3-01		TE	7	3	7	C8-B8			JKPNL-Mezz-3	2	16	



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											CAB TB	TO TB				
REACTOR TOP HEAD SURFACE TEMP 4	TE-3138	DEG C		3-01		TE	7	4	0	C1-B1			JKPNL-Mezz-3	3	17	
REACTOR TOP HEAD SURFACE TEMP 5	TE-3139	DEG C		3-01		TE	7	4	1	C2-B2			JKPNL-Mezz-3	3	18	
REACTOR TOP HEAD SURFACE TEMP 6	TE-3140	DEG C		3-01		TE	7	4	2	C3-B3			JKPNL-Mezz-3	3	19	
REACTOR TOP HEAD SURFACE TEMP 7	TE-3141	DEG C		3-01		TE	7	4	3	C4-B4			JKPNL-Mezz-3	3	20	
REACTOR TOP HEAD SURFACE TEMP 8	TE-3142	DEG C		3-01		TE	7	4	4	C5-B5			JKPNL-Mezz-3	3	21	
REACTOR TOP HEAD SURFACE TEMP 9	TE-3143	DEG C		3-01		TE	7	4	5	C6-B6			JKPNL-Mezz-3	3	22	
REACTOR TOP HEAD SURFACE TEMP 10	TE-3144	DEG C		3-01		TE	7	4	6	C7-B7			JKPNL-Mezz-3	3	23	
REACTOR TOP HEAD SURFACE TEMP 11	TE-3145	DEG C		3-01		TE	7	4	7	C8-B8			JKPNL-Mezz-3	3	24	
REACTOR SURFACE TEMP 1	TE-3146	DEG C		3-01		TE	7	5	0	C1-B1			JKPNL-Mezz-4	1	1	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 2	TE-3147	DEG C		3-01		TE	7	5	1	C2-B2			JKPNL-Mezz-4	1	2	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 3	TE-3148	DEG C		3-01		TE	7	5	2	C3-B3			JKPNL-Mezz-4	1	3	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 4	TE-3149	DEG C		3-01		TE	7	5	3	C4-B4			JKPNL-Mezz-4	1	4	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 5	TE-3150	DEG C		3-01		TE	7	5	4	C5-B5			JKPNL-Mezz-4	1	5	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 6	TE-3151	DEG C		3-01		TE	7	5	5	C6-B6			JKPNL-Mezz-4	1	6	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 7	TE-3152	DEG C		3-01		TE	7	5	6	C7-B7			JKPNL-Mezz-4	1	7	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 8	TE-3153	DEG C		3-01		TE	7	5	7	C8-B8			JKPNL-Mezz-4	1	8	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 9	TE-3154	DEG C		3-01		TE	7	6	0	C1-B1			JKPNL-Mezz-4	2	9	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 10	TE-3155	DEG C		3-01		TE	7	6	1	C2-B2			JKPNL-Mezz-4	2	10	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 11	TE-3156	DEG C		3-01		TE	7	6	2	C3-B3			JKPNL-Mezz-4	2	11	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 12	TE-3157	DEG C		3-01		TE	7	6	3	C4-B4			JKPNL-Mezz-4	2	12	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 13	TE-3158	DEG C		3-01		TE	7	6	4	C5-B5			JKPNL-Mezz-4	2	13	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 14	TE-3159	DEG C		3-01		TE	7	6	5	C6-B6			JKPNL-Mezz-4	2	14	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 15	TE-3160	DEG C		3-01		TE	7	6	6	C7-B7			JKPNL-Mezz-4	2	15	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 16	TE-3161	DEG C		3-01		TE	7	6	7	C8-B8			JKPNL-Mezz-4	2	16	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 17	TE-3162	DEG C		3-01		TE	7	7	0	C1-B1			JKPNL-Mezz-4	3	17	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 18	TE-3163	DEG C		3-01		TE	7	7	1	C2-B2			JKPNL-Mezz-4	3	18	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 19	TE-3164	DEG C		3-01		TE	7	7	2	C3-B3			JKPNL-Mezz-4	3	19	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 20	TE-3165	DEG C		3-01		TE	7	7	3	C4-B4			JKPNL-Mezz-4	3	20	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 21	TE-3166	DEG C		3-01		TE	7	7	4	C5-B5			JKPNL-Mezz-4	3	21	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 22	TE-3167	DEG C		3-01		TE	7	7	5	C6-B6			JKPNL-Mezz-4	3	22	TC Juntion Box, 24 pt
REACTOR SURFACE TEMP 23	TE-3168	DEG C		3-01		TE	7	7	6	C7-B7			JKPNL-Mezz-4	3	23	TC Juntion Box, 24 pt
						TE	7	7	7	C8-B8					24	

INSTRUMENT DESCRIPTION	TAG NO.	UNITS	RANGE/ TYPE	P&ID SHEET NO	TRANS. TYPE	I/O TYPE	NODE	MODULE	I/O CARD CHANNEL	I/O CARD TERM	CTRL CAB CABLE		JCT BOX	JB TERM STRIP		TERM NO	REFERENCE DWG
											CAB TB	TO TB					
						TE	7	8	0	C1-B1							
						TE	7	8	1	C2-B2							
						TE	7	8	2	C3-B3							
						TE	7	8	3	C4-B4							
						TE	7	8	4	C5-B5							
						TE	7	8	5	C6-B6							
						TE	7	8	6	C7-B7							
						TE	7	8	7	C8-B8							
TOTAL TE	152				TOTAL I/O	663											