

10 MWe Solar Thermal
Central Receiver Pilot Plant

SOLAR FACILITIES DESIGN INTEGRATION

MASTER EQUIPMENT LIST
(RADL ITEM 2-19)

July 1982

WORK PERFORMED UNDER CONTRACT
DE-AC03-79SF10489

MCDONNELL DOUGLAS ASTRONAUTICS COMPANY
5301 BOLSA AVENUE
HUNTINGTON BEACH, CA 92647



U.S. Department of Energy



Rockwell International
RockelDyne Division

Stearns-Roger



Solar Energy

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Central Receiver Pilot Plant
Solar Facilities Design Integration**

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**MCDONNELL DOUGLAS ASTRONAUTICS COMPANY
5301 BOLSA AVENUE
HUNTINGTON BEACH, CA 92647**

**PREPARED FOR THE
U.S. DEPARTMENT OF ENERGY
SOLAR ENERGY
UNDER CONTRACT DE-AC03-79SF10499**

PREFACE

This document is provided by the McDonnell Douglas Astronautics Company (MDAC) in accordance with Department of Energy Contract Number DE-AC03-79SF10499, Reports and Deliverables List Item 2-19. The material presented here is intended for training and maintenance usage by Southern California Edison Operations Personnel.

Specific notes on the organization of the document are as follows:

1. This document is organized in major sections as follows:

1. Rotating Apparatus
2. Stationary Apparatus
3. Electrical Apparatus
4. Valves
5. Instrumentation
6. Control and Data Systems
7. Collector System
8. Special Instrumented Heliostats and Meteorological Measurements Subsystem
9. Heating Ventilating and Air Conditioning
10. Facilities

This is in contrast to the subsystem approach used in designing the plant.

2. Assignments to categories are made on the basis of the lowest level tag numbers. For example, information for the thermal storage extraction pump skid (SA-309) is not listed in the stationary apparatus section, but broken down to the generic categories as defined by the tag number; i.e., pumps (Section 1), air operated stop valves (Section 4), pressure transmitter (Section 5), etc.

3. The Process Instrumentation Section (Section 5) is organized on the basis of sensor type as defined by the first letter of the designating tag number. It contains sensor-related information only. Signal conditioning equipment is treated in Section 6.

Technical questions concerning this RADL Item should be directed to Mr. R. G. Riedesel at (714) 896-3357.

MASTER EQUIPMENT LIST SUMMARY

1. Rotating Apparatus List: (73 Items Listed)
 - Air Compressors
 - Blowers
 - Centrifuges
 - Fans
 - Gear Motors
 - Pumps
 - Turbine-Generator

2. Stationary Apparatus List: (133 Items Listed)
 - Air Dryers
 - Aftercoolers
 - Afterfilters
 - Boiler Panels
 - Boilers
 - Chillers
 - Condensers
 - Coolers
 - Cooling Towers
 - Deaerators
 - Demineralizers
 - Desuperheaters
 - Heat Exchangers
 - Heaters
 - Prefilters
 - Preheaters
 - Receivers
 - Reservoirs
 - Separators
 - Strainers
 - Subcoolers
 - Superheaters
 - Tanks
 - Traps
 - Vessels

3. Electrical Apparatus List: (30 Items Listed)
 - Switch Gears
 - Motor Control Centers
 - Transformers

4. Valve List: (314 Items Listed)
 - Air Operated
 - Level Control
 - Modulating Control
 - Non-Return
 - Pressure Control
 - Pressure Safety-Relief
 - Solenoid Operated
 - Stop Control
 - Temperature Control

MASTER EQUIPMENT LIST SUMMARY (Continued)

5. Instrumentation List:
(1832 Items Listed)
- Alarms
 - Ampmeters
 - Breakers
 - Conductivity Meters
 - Eccentricity Indicators
 - Flux Sensors
 - Kilowatt-Hour Meters
 - Level Gages
 - Orifice Plates & Flanges
 - Oxygen Analyzers
 - PH Meters
 - Position Indicators
 - Pressure Gage
 - Pressure Indicators
 - Pressure Regulators
 - Resistance Temperature Detectors (RTD's)
 - Rotational Speed Indicators
 - Solar Pyrheliometers
 - Strain Gages
 - Switches
 - Thermistors
 - Thermocouples
 - Totalizers
 - Vibration Detectors
 - Voltmeters
 - Watt-Hour Meters
 - Wattmeters
6. Control and Data Systems List:
(414 Items Listed)
- BCS (Beam Characterization System)
 - CON (Control Console)
 - CS (Collector Subsystem-HAC)
 - DARM (Data Acquisition Remote Multiplexer)
 - DAS (Data Acquisition Subsystem)
 - ILS (Inter-Lock Logic Subsystem)
 - OCS (Operational Control Subsystem)
 - SCU (Signal Conditioning Unit)
 - RLU (Red Line Unit)
 - SDP (Subsystem Distributed Process Control)
7. Collector Subsystem List:
(17 Items Listed)
- Bar Joists
 - Drive Mechanism
 - Encoders
 - Heliostat Assembly
 - Heliostat Controllers (HC)
 - Heliostat Drive Assembly
 - Heliostat Field Controllers (HFC)
 - Heliostat Rack Assembly
 - Mirror Assembly
 - Motors/Gearheads
 - Mounting Hardware

MASTER EQUIPMENT LIST SUMMARY (Continued)

- | | |
|--|---|
| | Pedestal Assembly
Support Arms
Support Base
Torque Tubes |
| 8. Special Heliostat Instrumentat
Instrumentation and
Meteorological Measurements
Subsystem List:
(199 Items Listed) | Active Cavity Radiometer
Barometer
Circumsolar Telescope
Cup Anemometers
Dew Point Sensors
Load Cells
Nephelometer
Normal Incidence Pyrheliometers (NIP)
Precision Spectral Pyranometers (PSP)
Pyranometers
Rainfall Gage
Resistance Temperature Detectors (RTD)
Wind Vanes |
| 9. Heating, Ventilating and
Air Conditioning List:
(43 Items Listed) | Air Conditioners
Fan
Heat Pumps
Heaters |
| 10. Facilities List:
(16 Items Listed) | Buildings
Electronics Rooms
Elevators
Guard House
Hoists
Pipe Racks
Sewage Treatment Plant Package
Support Structures
Towers
Warehouses |

ROTATING APPARATUS (RAL)

1

1 ROTATING
APPARATUS (RAL)



ROTATING APPARATUS LIST

EQUIP. NO.	DESCRIPTION	OPERATING CHARACTERISTICS				DRIVER		SPEC. NO.	P.O. NO.	P&ID DWG NO.	BUS NO.	REMARKS
		GPM	HD(FT)	OTHER	RPM	HP	VOLTS					
P 201	BCS FLUID RECEIVER PUMP	1.6/ 2.0	70/50	22PSIG 13.7 PSIA	1750	1/2	230/ 460 60HZ 3PH	40M7006S		5133152 5163163		CONT. (S-R)
FA 301	UMU ULLAGE BLOWER HB-3314-1/2			3600 CFH		1/2				5132196 5163147	MCC- B	GFE (R)
P 301	THERMAL STORAGE CHARGING OIL PUMP ASTM A106 GRADE B	148 TO 1700	350 MAX		1750	200	480 60HZ 3PH	GA000 -90907 -T10	R02CAA 454144	5132192 5163142	LOAD CTR A	SEE SA-304, GFE (R) 8 IN.-150 LB RF FLANGE INLET 6IN-300 LB RF FLANGE OUTLET MEDIA:CALORIA HT43 130 PSIA,600 DEG F
FA 302	UMU ULLAGE BLOWER		4 IN. SP	1500 CFM	2050	1.79				5132196 5163147	MCC- B	GFE (R)
P 302	THERMAL STORAGE CHARGING OIL PUMP ASTM A106 GRADE B	148 TO 1700	350 MAX		1750	200	480 60HZ 3PH	GA000 -90907 -T10	R02CAA 454144	5132192 5163142	LOAD CTR A	SEE SA-304, GFE (R) 8IN-150LB RF FLANGE INLET 6IN-300 LB RF FLANGE OUTLET MEDIA:CALORIA HT 43 130 PSIA,600 DEG F
P 303	THERMAL STORAGE EXTRACTION OIL PUMP ASTM A106 GRADE B	177 TO 2030	350 MAX		1750	200	480 60HZ 3PH	GA000 -90907 -T10	R02CAA 454144	5132194 5163145	LOAD CTR A	SEE SA-309, GFE (R) 8IN-150LB RF FLANGE INLET 6IN-300 LB RF FLANGE OUTLET MEDIA:CALORIA HT 43 130 PSIA,600 DEG F
P 304	THERMAL STORAGE EXTRACTION OIL PUMP ASTM A106 GRADE B	177 TO 2030	350 MAX		1750	200	480 60HZ 3PH	GA000 -90907 -T10	R02CAA 454144	5132194 5163145	LOAD CTR A	SEE SA-309, GFE (R) 8IN-150LB RF FLANGE INLET 6IN-300 LB RF FLANGE OUTLET MEDIA:CALORIA HT 43 130 PSIA,600 DEG F
P 305	THERMAL STORAGE AUXILIARY EXTRACTION OIL PUMP ASTM A106 GRADE B	300				10		NONE		5132194 5163145	MCC- B	SEE SA-309,GFE (R) 4IN-150 LB RF FLANGE INLET 3IN-300LB RF FLANGE OUTLET 130 PSIA,600 DEG F
P 306	THERMAL STORAGE FLUID MAKE UP PUMP (CALORIA)	100	30 PSIG		880	15 HP	460 60HZ 3PH	40M7006S		5133152 5163163	MCC- B	CONT (S-R) CONST PKG 9 ROTARY PUMP
P 307	TSS FLASH TANK DRAIN PUMP	265	40	165 PSIG	1760	(1)	460 60 HZ 3 PH	40M7006S		5132193 SH 1 5163143	MCC- B	CONT (S-R) CONST PKG 9 VERTICAL TURBINE CAN TYPE
P 308	UMU ULLAGE PUMP MODEL 134,SIZE C04									5132196 5163147	MCC- B	GFE (R)

ROTATING APPARATUS LIST

EQUIP. NO.	DESCRIPTION	OPERATING CHARACTERISTICS				DRIVER		SPEC. NO.	F.O. NO.	P&ID DWG NO.	BUS NO.	REMARKS
		GPM	HD(FT)	OTHER	RPM	HP	VOLTS					
CP 901	SERVICE & INSTRUMENT AIR COMPRESSOR	250 SCFM	125 PSIG	250 SCFM	870	75	480	40-4216	740 42161	5133305 5133147 5163162	MCC-BOA	AIR COOLED, SINGLE ACTING 2 STAGE (SCE) DENVER GARDNER COMP. SERVICE CO.
FA 901	COOLING TOWER FAN				269	60 ZSP. MTR	480	40-0445	740 04451	5133302 5163154	MCC-BOL	SUPPLIED W/TOWER BAC PRICHARD (SCE)
ME 901	TURNING GEAR MOTOR					1.5	480			5133309	BOA	SUPPLIED W/T.G.
P 901	COOLING WATER PUMP	700	100		1750	30	480	40-0420	740 04201	5133303 5163153	MCC-BOA	SCE PEERLESS
PR 901	TURBINE LUBE OIL CENTRIFUGE	225 GPH				2	480	40-0520		5133330	BOA	(2-1 HP MOTORS) ALFA-LAVAL
TG 901	STEAM TURBINE GENERATOR AND ACCESSORIES	12.5 MIN	1425 PSIA 380 PSIA	2.5 HGA	3600			40-0520		5133306 5133309 5163149		GENERAL ELECTRIC SCE
CP 902	SERVICE & INSTRUMENT AIR COMPRESSOR	250 SCFM	125 PSIG	250 SCFM	870	75	480	40-4216	740 42161	5133305 5133147	MCC-BOA	AIR COOLED, SINGLE ACTING 2 STAGE (SCE) DENVER GARDNER COMP. SERVICE CO.
FA 902	COOLING TOWER FAN				269	60 ZSP. MTR	480	40-0445	740 04451	5133302 5163154	MCC-BOL	SUPPLIED W/TOWER BAC PRICHARD (SCE)
FA 903	COOLING TOWER FAN				269	60 ZSP. MTR	480	40-0445	740 04451	5133302	MCC-BOL	SUPPLIED W/TOWER BAC PRICHARD (SCE)
P 903	THERMAL STORAGE FEEDWATER PUMP	236	1137		3600	125	480	40-4304	740 43041	5133301 5133141 5163151	STA SERV BO1	SCE BINGHAM-WILLAMETTE HORIZ CENTRIFUGAL
FA 904	TURBINE LAGGING BLOWER					1/4	480					SUPPLIED W/T.G.
P 904	AUX. BOILER/TSS FEEDWATER PUMP	21	260		1800	7.5	480		740 00006	5133301 5133141 5163151	BOA	SCE AURORA
P 905	CIRCULATING WATER PUMP	4130	57		1800	100	480	40-0434	740 04341	5133302 5163154	SWTGR BO2	SCE PEERLESS PUMP
FA 905A	TURBINE LAGGING BLOWER					1/2	480					SUPPLIED W/T.G.

ROTATING APPARATUS LIST

EQUIP. NO.	DESCRIPTION	OPERATING CHARACTERISTICS				DRIVER		SPEC. NO.	P.O. NO.	P&ID DWG NO.	BUS NO.	REMARKS
		GPM	HD(FT)	OTHER	RPM	HP	VOLTS					
P 926	TURBINE LUBE OIL PUMP (A.C.)				3600	10	480	40-0520		5133330	MCC-BOA	SUPPLIED W/ TURBINE (SCE) GE LUBE OIL
P 927	TURBINE LUBE OIL PUMP (A.C.)				3600	10	480	40-0520		5133330	MCC-BOA	SUPPLIED W/ TURBINE (SCE) GE LUBE OIL
P 928	TURBINE LUBE OIL EMERG. PUMP (D.C.)				3600	7.5	125 D.C.	40-0520		5133330	DC BUS	SUPPLIED W/ TURBINE (SCE) GE LUBE OIL
P 930	SODIUM HYPOCHLORITE PUMP		230 MAX	0-7 GPH	1725	1/4 HP	115 1 PH. 60 HZ TEFC			5133302 5163154	MCC-BOL	WALLACE & TIERNAN #44-113 DIAPHRAGM TYPE CHEMICAL METERING PUMP
P 931	ACID FEED PUMP	.646			3600	FRAC HP	115	40-0413	Z40 04131	5133304 5163158		PART OF DEMIN. PACKAGE (SCE)
P 932	ACID FEED PUMP	.646			3600	FRAC HP	115	40-0413	Z40 04131	5133304 5163158		PART OF DEMIN. PACKAGE (SCE)
P 933	HYDRAZINE FEED PUMP		PSIG MAX 1100	0-5.3 GPH	VAR	FRAC HP	115	BM 033618	Z40 00010	5133304 5163158		BIF MOD.1711-12-9310 (CROWLEY CO.) (SCE)
P 934	AMMONIA FEED PUMP		PSIG MAX 1100	0-5.3 GPH	VAR	FRAC HP	115	BM 033618	Z40 00010	5133304 5163158		BIF MOD.1711-12-9310 (CROWLEY CO.) (SCE)
P 935	ACID TRANSFER PUMP	10	30		1800	1	115	B/M X7824	Z40 00014	5133304 5163158	MCC-BOA	(SCE) MULTI-DUTY MFG MOD SEQUENCE 1000 (THRU GREGORY PUMP)
P 936	POLISHING DEMIN. SUMP PUMP	50	90		1750	3	480	B/M X7823	Z40 00016	5133308 5163158	MCC-BOA	(SCE) DUPLEX W/P-937 AURORA
P 937	POLISHING DEMIN. SUMP PUMP	50	90		1750	3	480	B/M X7823	Z40 00016	5133308 5163158	MCC-BOA	(SCE) DUPLEX W/P-936, AURORA
P 938A	TURBINE HYDRAULIC OIL PUMP					15	480	40-0520		5133330	MCC-BOA	SUPPLIED W/T-G (SCE) GE HYDR. OIL
P 938B	TURBINE HYDRAULIC OIL PUMP					15	480	40-0520		5133330	MCC-BOA	SUPPLIED W/T-G (SCE) GE HYDR. OIL

STATIONARY APPARATUS (SAL) **2**

STATIONARY
2 APPARATUS (SAL)

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY		FLOWRATE (#/HR) OR OTHER	POWER		SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO.	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR		EXCH. DUTY (TONS)	KW/V (HP)					
UGFA	TU ULLAGE GAS FLAME ARRESTER								5163147		
THSST-1	TS HEATER STEAM LINE STRAINER										
THSST-2	TS HEATER STEAM LINE STRAINER										
E 201	BCS TARGET HEAT EXCHANGER	15	4600 BTU/HR	1.6 GPM	1/8	40M7006S			5133152 5163163		CONT (S-R)
RP 201	RECEIVER PREHEAT PANEL	25.4 (FULL)	2.13	45,000 WATER					5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
V 201	RECEIVER FLASH TANK	244 (FULL)		40,000 STEAM & WATER		ESR 31080			5131767 5163150	PPA RSP-3	GFE (R) 615 PSIA, 1010 DEG F ASTM A335 GRADE P22
E 202	BCS TARGET HEAT EXCHANGER	15	4600 BTU/HR	1.6 GPM	1/8	40M7006S			5133152 5163163		CONT (S-R)
RP 202	RECEIVER PREHEAT PANEL	25.4 (FULL)	2.85	45,000 WATER					5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
RP 203	RECEIVER PREHEAT PANEL	25.4 (FULL)	3.88	45,000 WATER					5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 204	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001			5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 204	RECEIVER BOILER PANEL	25.4 (FULL)	4.43	3988 STEAM & WATER					5131764 S1 5163134	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 205	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001			5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 205	RECEIVER BOILER PANEL	25.4 (FULL)	5.40	4909 STEAM & WATER					5131764 S1 5163134	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY		FLOWRATE (#/HR) OR OTHER	POWER KW/V (HP)	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR							
MS 206	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 206	RECEIVER BOILER PANEL	25.4 (FULL)	6.26	6034 STEAM & WATER				5131764 S1 5163134	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 207	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 207	RECEIVER BOILER PANEL	25.4 (FULL)	7.27	7261 STEAM & WATER				5131764 S2 5163135	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 208	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 208	RECEIVER BOILER PANEL	25.4 (FULL)	8.5	8284 STEAM & WATER				5131764 S2 5163135	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 209	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 209	RECEIVER BOILER PANEL	25.4 (FULL)	9.39	9051 STEAM & WATER				5131764 S2 5163135	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 210	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 210	RECEIVER BOILER PANEL	25.4 (FULL)	10.11	9051 STEAM & WATER				5131765 S1 5163136	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY			POWER	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR	EXCH. DUTY (TONS)	FLOWRATE (#/HR) OR OTHER					
MS 211	MOISTURE TRAP SEPARATOR				10,000 STEAM & WATER	SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 211	RECEIVER BOILER PANEL	25.4 (FULL)	10.14		9460 STEAM & WATER			5131765 S1 5163136	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 212	MOISTURE TRAP SEPARATOR				10,000 STEAM & WATER	SP42-001		1563134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 212	RECEIVER BOILER PANEL	25.4 (FULL)	9.92		9460 STEAM & WATER			5131765 S1 5163136	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 213	MOISTURE TRAP SEPARATOR				10,000 STEAM & WATER	SP42-001		1563134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 213	RECEIVER BOILER PANEL	25.4 (FULL)	9.92		9460 STEAM & WATER			5131765 S2 5163137	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 214	MOISTURE TRAP SEPARATOR				10,000 STEAM & WATER	SP42-001		5163135 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 214	RECEIVER BOILER PANEL	25.4 (FULL)	10.14		9460 STEAM & WATER			5131765 S2 5163137	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD
MS 215	MOISTURE TRAP SEPARATOR				10,000 STEAM & WATER	SP42-001		5163135 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1"X2" SCHED 80
RB 215	RECEIVER BOILER PANEL	25.4 (FULL)	10.11		9051 STEAM & WATER			5131765 S2 5163137	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2"X3" BUTT WELD

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY		FLOWRATE (#/HR) OR OTHER	POWER KW/V (HP)	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR							
MS 216	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 216	RECEIVER BOILER PANEL	25.4 (FULL)	9.39	9051 STEAM & WATER				5131766 S1 5163138	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
MS 217	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 217	RECEIVER BOILER PANEL	25.4 (FULL)	8.50	8284 STEAM & WATER				5131766 S1 5163138	PP-1 RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
MS 218	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 218	RECEIVER BOILER PANEL	25.4 (FULL)	7.27	7261 STEAM & WATER				5131766 S1 5163138	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
MS 219	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 219	RECEIVER BOILER PANEL	25.4 (FULL)	6.26	6034 STEAM & WATER				5131766 S2 5163139	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
MS 220	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 220	RECEIVER BOILER PANEL	25.4 (FULL)	5.40	4909 STEAM & WATER				5131766 S2 5163139	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY		FLOWRATE (#/HR) OR OTHER	POWER KW/V (HP)	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR							
MS 221	MOISTURE TRAP SEPARATOR			10,000 STEAM & WATER		SP42-001		5163134 THRU 5163139		1790PSIA, 1050 DEG F INCOLOY 800 PER ASME SB-407 BUTT WELD, 3" SCHED 160 1" & 2" SCHED 80
RB 221	RECEIVER BOILER PANEL	25.4 (FULL)	4.43	3988 STEAM & WATER				5131766 S2 5163139	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
RP 222	RECEIVER PREHEATER PANEL	25.4 (FULL)	3.88	45000 WATER				5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
RP 223	RECEIVER PREHEATER PANEL	25.4 (FULL)	2.85	45000 WATER				5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
RP 224	RECEIVER PREHEATER PANEL	25.4 (FULL)	2.13	45000 WATER				5131763 5163133	PP-A RSP-3	GFE (R) 600 DEG F, 2000 PSIA INCOLOY 800 PER ASME SB-407 2-1/2" & 3" BUTT WELD
DS 301	THERMAL STORAGE DESUPERHEATER STEAM//WATER ASTM A335 GRADE P22 //ASTM A106 GRADE B			105000 TO 130000// 1275 TO 25000		GA000-90907 -T7		5132193 S1 5163143		SEE SA-301, GFE (R) 1790//2200 PSIA 985//600 DEG F SEE SPEC. FOR CONN.
E 301	THERMAL STORAGE CONDENSER OIL//(STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B		42.705	544500// 65500		GA000-90907 -T2		5132193 5132192 5163144 5163142	R05P AA48 3026	SEE SA-302, GFE (R) 130//1650 PSIA 650//650 DEG F SEE SPEC. FOR CONN.
TK 301	CALORIA MAKE UP TANK	10000	N/A	N/A 100 GPM THRU PUMP	N/A	40M700-31S		5133152 5163163		CONT (S-R) CONST PKG 10
E 302	THERMAL STORAGE CONDENSER OIL//(STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B		42.705	544500// 65500		GA000-90907 -T2		5132193 5132192 5163144 5163142	R05P AA48 3026	SEE SA-303, GFE (R) 130//1650 PSIA 650//650 DEG F SEE SPEC. FOR CONN.
TK 302	ULLAGE STORAGE TANK									GFE (R) SEE SA-311
E 303	STEAM GENERATOR PREHEATER OIL//WATER ASTM A106 GRADE B// ASTM A106 GRADE B		11.46	594500// 55000		GA000-90907 -T5		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-305, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
V 303	THERMAL STORAGE TANK (OIL-CALORIA) ASTM A106 GRADE B	295650 6860TN ROCK				GA000-90907- T1		5132196 5163147		CONT (R) CONST. PKG. 10 20 IN. W.C. (PSIA) 600 DEG F SEE SPEC. FOR CONN.

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY			POWER		SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO.	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR	EXCH. DUTY (TONS)	FLOWRATE (#/HR) OR OTHER	KW/V (HP)					
E 304	STEAM GENERATION PREHEATER OIL//WATER ASTM A106 GRADE B// ASTM A106 GRADE B		11.46		594500//55000		GA000-90907-T5		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-306, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
V 304	THERMAL STORAGE FLASH TANK STEAM//WATER ASTM A106 GRADE B// ASTM A106 GRADE B				15600//117500		GA000-90907-T8		5132193 S1 5163143		SEE SA-301, GFE (R) 180//180 PSIA 650//650 DEG F SEE SPEC. FOR CONN.
E 305	STEAM GENERATION KETTLE BOILER OIL//(STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B	8500 APPROX	42.850		594500//55000		GA000-90907-T3		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-307, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
V 305	THERMAL STORAGE HEATER DRAIN TANKS ASTM A106 GRADE B				65000		GA000-90907-M38		5132193 S2 5163144		SEE SA-302, GFE (R) 1515 PSIA 650 DEG F SEE SPEC. FOR CONN.
E 306	STEAM GENERATION KETTLE BOILER OIL//(STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B	8500 APPROX	42.850		594500//55000		GA000-90907-T3		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-308, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
V 306	THERMAL STORAGE STEAM TRAP				65000		GA000-90907-M38		5132193 S2 5163144		SEE SA-303, GFE (R) 1515 PSIA 650 DEG F SEE SPEC. FOR CONN.
E 307	STEAM GENERATION SUPERHEATER OIL//STEAM ASTM A106 GRADE B// ASTM A106 GRADE B		3.25		144500//55000		GA000-90907-T6		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-307, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
E 308	STEAM GENERATION SUPERHEATER OIL//STEAM ASTM A106 GRADE B// ASTM A106 GRADE B		3.25		144500//55000		GA000-90907-T6		5132194 5132195 5163145 5163146	R05P AA48 3026	SEE SA-308, GFE (R) 130//465 PSIA 650//600 DEG F SEE SPEC. FOR CONN.
V 308	THERMAL STORAGE BLOWDOWN TANK	752	N/A	N/A	1100	N/A	40M7006S		5132195 5163146		CONT (S-R) CONST PKG 9
V 309	TSS SURGE TANK STEAM AND WATER ASTM A106 GRADE B				65500		GA000-90907-M39		5132193 S2 5163144		SEE SA-302, GFE (R) 1650 PSIA, 650 DEG F SEE SPEC. FOR CONN.
V 310	TSS SURGE TANK STEAM AND WATER ASTM A106 GRADE B				65500		GA000-90907-M39		5132193 S2 5163144		SEE SA-303, GFE (R) 1650 PSIA, 650 DEG F SEE SPEC. FOR CONN.
E 311	THERMAL STORAGE SUBCOOLER OIL//(STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B		12.3		544500//65500		GA000-90907-T4		5132193 5132192 5163144 5163142	R05P AA48 3026	SEE SA-302, GFE (R) 130//1650 PSIA 600//650 DEG F SEE SPEC. FOR CONN.

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY				POWER	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. MM	DUTY BTU/HR	EXCH. DUTY (TONS)	FLOWRATE (#/HR) OR OTHER					
SA 311	ULLAGE MAINTENANCE UNIT GASEOUS H2, N2 AND HYDROCARBONS ASTM A106 GRADE B					DNA	GA000-90907-T9	5132196 5163147		25 IN. W.C. (PSIA) 113 DEG F SEE SPEC. FOR CONN.	
E 312	THERMAL STORAGE SUBCOOLER OIL// (STEAM&WATER) ASTM A106 GRADE B// ASTM A106 GRADE B		12.3			544500// 65500	GA000-90907-T4	5132193 5132192 5163144 5163142	R05P AA48 3026	SEE SA-303, GFE (R) 130//1650 PSIA 600//650 DEG F SEE SPEC. FOR CONN.	
D 701	MAKEUP PACKAGE DEMINERALIZER (MOBIL UNIT)	N/A	N/A	N/A	30 GPM		40M700-33S	5133145 5163160		GFE (S-R) DOE RENTAL	
SA 701	NITROGEN VAPORIZER SUPPLY UNIT							5133152 5163163		RENTAL EQUIPMENT	
SE 701	OIL WATER SEPARATOR	3770	N/A	N/A	350 GPM		SEG P711, 712, 716, 714 40M7006S	5133149 5163155		CONT (S-R) CONST PKG 9	
TK 701	RAW WATER STORAGE TANK	151000					40M7007S	5133150 5163159		CONT (S-R) CONST PKG 10A	
TK 702	DEMINERALIZED WATER STORAGE TANK	18000					40M7007S	5133145 5163160		CONT (S-R) CONST PKG 10A	
V 704	FIRE PROTECTION FOAM TANK	600						5133148 5163161		CONT (S-R) CONST PKG 9	
B 901	AUX. BOILER	300	5.6	-	5610	1650/ 8 480		5133306 5163149	A01-8	SCE HYDRO STEAM-THERMAL ENGRG.	
CR 901	COOLING TOWER (3 CELLS)	45000	103	103.25	8260 GPM		40-0445 740 04451	5133302 5163154		SCE 62 DEG F DESIGN WETBULB, 78 DEG F COLDWATER, 103 DEG F HOTWATER BAC PRITCHARD INC.	
DA 901	DEAERATOR, 3RD PT. HTR.	3100	18.8		238.625		40-0407 740 04071	5133301 5163151 5163152 5163149		SCE CHICAGO HEATER CO.	
DR 901	INSTRUMENT AIR DRYER				200SCFM			740 42161 5133147 5163162	MCC- BOA	SCE PART OF AIR COMPRESSOR PKG OF GARDENER DENVER (C.M.KEMP MODEL PS75)	
DS 901	MAIN STEAM DUMP DESUPERHEATER	N/A	N/A	N/A	112300 (MAX)		40M7006S	5133140 5163149		CONT (S-R) CONST PKG 9	
E 901	CONDENSER	2210	95.3		7625 GPM		40-4101 740 41011	5163151 5163154 5163152 5163149		108.7 DEG.F CON- DENSATE, FERRITIC S.S TUBES 78 DEG.F CIRC. WTR 103 DEG.F OUTLET (SCE)	

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY			FLOWRATE (#/HR) OR OTHER	POWER KW/V (HP)	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR	EXCH. DUTY (TONS)							
F 901	INSTRUMENT AIR AFTERFILTER				200 SCFM		40-4216	Z40 42161	5133305 5133147 5163162		SCE PURCHASED W/AIR COMPRESSOR GARDENER DENVER (DOLLINGER TYPE)
SP 901	SEWAGE TREATMENT PLANT PACKAGE								5133443		BY CIVIL (SCE)
TK 901	COOLING WATER SURGE TANK	1500					B/M X7658	Z40 00008	5133903 5163150		SCE JOCR MFG.
V 901	IN-LINE DEMINERALIZER VESSEL				440 GPM				5133304 5163158		P110 DEMIN PKG L.A. WTR TRTMT CRANE PERMUTIT INFILCO U.S. FILTER (SCE)
H 901A	TURBINE LUBE OIL HEATER					24/ 460			5133330 5163156	BOA	SUPPLIED W/TURBINE
H 901B	TURBINE LUBE OIL HEATER					24/ 460			5133330 5163156	BOA	SUPPLIED W/TURBINE
H 901C	TURBINE LUBE OIL HEATER					24/ 460			5133330 5163156	BOA	SUPPLIED W/TURBINE
H 901D	TURBINE LUBE OIL HEATER					24/ 460			5133330 5163156	BOA	SUPPLIED W/TURBINE
H 901E	TURBINE LUBE OIL HEATER					24/ 460			5133330 5163156	BOA	SUPPLIED W/TURBINE
H 901F	TURBINE LUBE OIL HEATER					24/ 460			5133330	BOA	SUPPLIED W/TURBINE
CR 902	INSTRUMENT AIR AFTERCOOLER								5133305 5163162		SCE PART OF AIR COMPRESSOR PKG GARDENER DENVER (C.M. KEMP MODEL PS75)
DR 902	INSTRUMENT AIR DRYER				200 SCFM			Z40 42161	5133305 5133147 5163162	MCC- BOA	SCE PART OF AIR COMPRESSOR PKG OF GARDENER DENVER (CM KEMP MODEL PS75)
DS 902	AUXILIARY STEAM DESUPERHEATER	N/A	N/A	N/A	13354 (MAX)		40M7006S		5133140 5163149		CONT (S-R) CONST PKG 9
E 902	HIGH PRESSURE HEATER (1ST POINT)		7.8		112300 (TUBESIDE) 7688 (SHELLSIDE)		40-0419		5163151 5163154 5163152 5163149		SCE STRUTHERS WELLS
F 902	INSTRUMENT AIR AFTERFILTER				200 SCFM		40-4216	Z40 42161	5133305 5133147 5163162		SCE PURCHASED W/AIR COMPRESSOR GARDENER DENVER (DOLLINGER TYPE)
H 902	DEMINERALIZER HEATER										

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY			POWER	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR	EXCH. DUTY (TONS)	FLOWRATE (#/HR) OR OTHER					
TK 902	CONDENSATE STORAGE TANK	24,000				40-0447		5133301 5163151		SCE ATLAS TANK
V 902	IN-LINE DEMIN. VESSEL				440 GPM			5133304 5163158		P110 DEMIN PKG L.A. WTR TRTMT CRANE PERMUTIT INFILCO U.S. FILTER (SCE)
CR 903	INSTRUMENT AIR AFTERCOOLER							5133305 5163162		SCE
DR 903	TURBINE HYDRAULIC OIL AIR DRYER							5163156		SUPPLIED W/TURBINE
E 903	HIGH PRESSURE HEATER (2ND POINT)	7.41			112300 (TUBESIDE) 13498 (SHELLSIDE)	40-0419		5163151 5163154 5163152 5163149		SCE STRUTHERS WELLS
F 903	INSTRUMENT AIR PREFILTER				200 SCFM	40-4216	740 42161	5133305 5133147 5163162		PURCHASED W/AIR COMPRESSOR (SCE) GARDENER DENEVER (DELTEC TYPE)
H 903	TURBINE HYDRAULIC OIL HEATER							2/ 120	5133330 5163156	SUPPLIED W/T.G.
V 903	REGENERATION VESSEL							5133304 5163158		P110 DEMIN PKG L.A. WTR TRTMT CRANE PERMUTIT INFILCO U.S. FILTER (SCE)
E 904	LOW PRESSURE HEATER 4TH POINT	8.11			92213 (TUBESIDE) 7912 (SHELLSIDE)	40-0419		5163151 5163154 5163152 5163149		SCE STRUTHERS WELLS
F 904	INSTRUMENT AIR PREFILTER				200 SCFM	40-4216	740 42161	5133305 5133147 5163162		SCE PURCHASED W/AIR COMPRESSOR GARDENER DENVER (DELTEC TYPE)
H 904	CAUSTIC STORAGE TANK HEATER							6/ 460	5133304 5163156	BOA CHROME ALLOY
TK 904	COOLING TOWER ACID TANK	3800			8FT DIA. 9FT T TOT	B.M.	740 00011	5133302 5163154		SCE JOOR MFG
V 904	AIR RECEIVER	200 CU.FT.				40-4216	740 42161	5133305 5133147 5163167		SCE 54"DIA., 13FT HIGH GARDENER DENVER (COMPRESSOR SERVICE CO.)
E 905	COOLING WATER HEAT EXCHANGER	7.0			700 GPM (SHELLSIDE) 560 GPM (TUBESIDE)	40-0411	740 04111	5133302 5133303 5163154 5163153		SCE SOUTHWEST ENG. CO.

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY		FLOWRATE (#/HR) OR OTHER	POWER KW/V (HP)	SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR							
H 905	CAUSTIC DAY TK.				4/			5133304 5163156	BOA	PART OF DEMIN. PACKAGE
TK 905	COOLING TOWER POLYACRYLATE FEED DAY TANK	30				B.M.	740 00013	5133302 5163154		SCE SUPPLIED WITH CHEMICALS CALGON
TK 906	TURBINE LUBE OIL RESERVOIR	1100						5133330 5163156		SUPPLIED W/ TURBINE (SCE)
CR 907	SAMPLE CHILLER UNIT	2	TYP					5133303 5163153		SCE SCE BY CONTROLS
E 908	TURBINE LUBE OIL COOLER			145 GPM C.W.				5133303 5163153		SUPPLIED W/TURBINE (SCE)
TK 908	ACID DAY TANK	100						5133304 5163158		PART OF DEMIN. PKG
E 909	TURBINE LUBE OIL COOLER			145 GPM C.W.				5133303 5163153		SUPPLIED W/TURBINE (SCE)
TK 909	CAUSTIC DAY TANK	100						5133304 5163158		PART OF DEMIN. PKG (SCE)
E 910	DEMINEALIZER CAUSTIC DILUTION WATER HEAT EXCHANGER							5133304 5163158		SCE PART OF DEMIN. PACKAGE
E 911A	TURBINE HYDRAULIC OIL COOLER			COOLING WATER 15 GPM				5133303 5163151		SCE SUPPLIED W/TURBINE
E 911B	TURBINE HYDRAULIC OIL COOLER			COOLING WATER 15GPM				5133303 5163151		SCE SUPPLIED W/TURBINE
E 912A	GENERATOR AIR COOLER	0.8 TOTAL		392GPM TOTAL				5133303 5163151		SUPPLIED W/TURBINE
E 912B	GENERATOR AIR COOLER	0.8 TOTAL		392GPM TOTAL				5133303 5163151		SUPPLIED W/TURBINE
E 912C	GENERATOR AIR COOLER	0.8 TOTAL		392GPM TOTAL				5133303 5163151		SUPPLIED W/TURBINE
E 912D	GENERATOR AIR COOLER	0.8 TOTAL		392GPM TOTAL				5133303 5163151		SUPPLIED W/TURBINE
TK 913	HYDRAZINE TANK	100				B.M.	740 00010	5133304 5163158		CROWLEY (SCE)
TK 914	AMMONIA TANK	100				B.M.	740 00010	5133304 5163158		CROWLEY (SCE)
TK 915	CONDENSATE POLISHER ACID STORAGE TANK	3800		8FT DIA. 9FT T TOT		B.M.	740 00011	5133304 5163158		JOOR MFG. (SCE)
TK 916	CAUSTIC STORAGE TANK	6000		9FT DIA. 12.5IN HIGH		B.M.		5133304 5163158		SCE TANKINETICS

STATIONARY APPARATUS LIST

EQUIP. NO.	DESCRIPTION	CAPACITY			POWER		SPEC. NO.	P.O. NO.	P&ID DWG. NO.	BUS NO	REMARKS
		STORAGE (GAL.)	EXCH. DUTY MM BTU/HR	EXCH. DUTY (TONS)	FLOWRATE (#/HR) OR OTHER	KW/V (HP)					
TK 922	SODIUM HYPO-CHLORITE STORAGE TANK (12-15% SODIUM HYPOCHLORITE)	318			3FT. DIA. BY 6FT. HIGH		33831 NO.2		5133302 5163154		FLAT BOTTOM VERTICAL TANK, OPEN TOP WITH COVER, FIBERGLASS REINFORCED PLASTIC MFR: TANKINETICS
TK 923	HYDRAULIC OIL RESERVOIR					120V			5133330 5163156		SUPPLIED W/TG (SCE)
TK 924	SAFETY RELIEF BLOWDOWN TANK										

ELECTRICAL APPARATUS LIST

EQUIP. NO.	DESCRIPTION	VOLTS	AMPS	DWG.NO.	SPEC. NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
MCC 0001	MOTOR CONTROL CENTER (MCC-1)	480 60HZ 3PH	100KVA	40E700 5133121	S.R. F235.1	S-R P.O. 4004	WESTINGHOUSE	SFDI (S-R)
PSS 0001	LOAD CENTER A TRANSFORMER	4160- 480	1000KVA	40E300 5132029 (E2-5)	S-R F235.1	S-R		SFDI (S-R)
SCE 0001	MOTOR CONTROL CENTER -A							SCE
CFS 0001A	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.5KVA	40E700 5133106 (E2-2A)	S-R F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
SCE 0001A	LOAD CENTER A01							SCE
CFS 0001B	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.5KVA	40E700 5133106 (E2-2A)	S-R F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
SCE 0001B	LOAD CENTER B01							SCE
CFS 0001C	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
SCE 0001C	LOAD CENTER MCC B0A							SCE
CFS 0001D	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001E	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001F	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160- 208Y/ 120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)

ELECTRICAL APPARATUS LIST

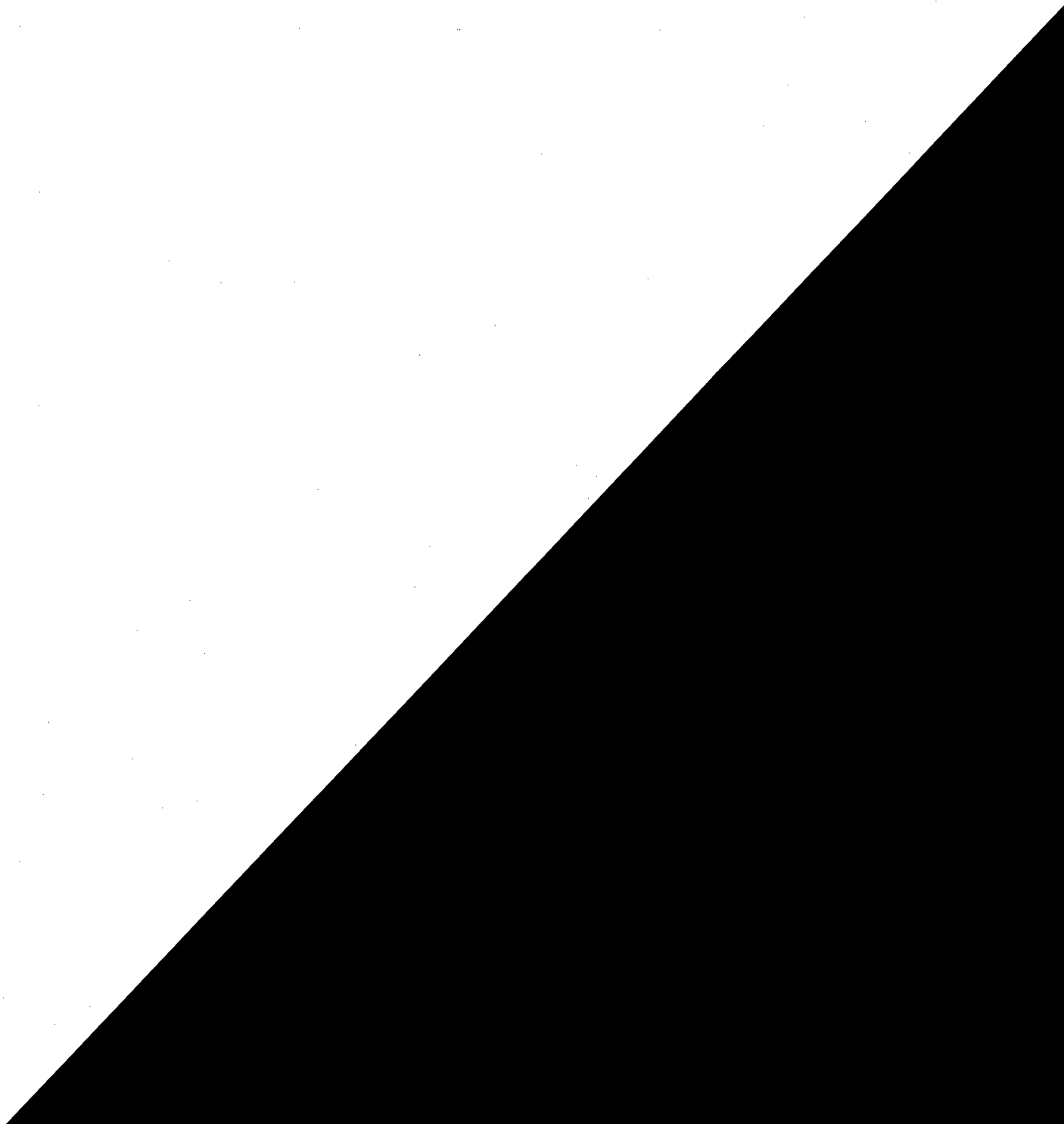
EQUIP. NO.	DESCRIPTION	VOLTS	AMPS	DWG. NO.	SPEC. NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
CFS 0001G	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001H	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001J	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001K	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001L	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0001M	HELIOSTAT POWER CTRS OIL FILLED DISTRIB. TRANSFORMER WITH 120/208 VOLT DISTRIB PANELBOARDS.	4160-208Y/120	112.5KVA	40E700 5133106 (E2-2A)	S.R. F230.6	S.R. P.O. 4003	WESTINGHOUSE ELECTRIC SUPPLY	SFDI (S-R)
CFS 0002	HELIOSTAT INTERFACE LOAD INTERRUPTER SWITCHGEAR (SWITCH 1 AND 2)	4160V	600	40E700 5133106 (E2-2A)	S-R F233.3 DOE.40 E500-35	S.R. P.O. 4001	POWELL ELECTRIC	SFDI (S-R)
MCC 0002	MOTOR CONTROL CENTER (MCC-2)	480 60HZ 3PH	100KVA	40E700 5133121	S.R. F235.1	S.R. P.O. 4004	WESTINGHOUSE	SFDI (S-R)
PSS 0002	480 VOLT MOTOR CONTROL CENTER B	480 60HZ 3PH.	500	40E700 5133192	S-R F235.1	S.R. P.O. 4004	GENERAL ELECTRIC ERIE, PENN. PART NO. AF-400	SFDI (S-R) INST.MANUAL GEK 82003
SCE 0002	MOTOR CONTROL CENTER -L							
MCC 0003	MOTOR CONTROL CENTER (MCC-3)	480 60HZ 3PH	100KVA	40E700 5133121	S.R. F235.1	S-R P.O. 4004	WESTINGHOUSE	SFDI (S-R)

ELECTRICAL APPARATUS LIST

EQUIP. NO.	DESCRIPTION	VOLTS	AMPS	DWG. NO.	SPEC. NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
PSS 0003	480 VOLT MOTOR CONTROL CENTER C	480 60HZ 3PH	500	40E700 5133193	S-R F235.1	S.R. P.O. 4004	GENERAL ELECTRIC	SFDI (S-R)
SCE 0003	MAIN TRANSFORMER 1-3PHASE-10/12.5 MVA 55 DEG C RISE 34.4-13.8KV OA/FA 60HZ, Z=6%							SCE
MXI								
CFS 0003A	COLLECTOR FIELD INTERFACE CABINET A	N/A	N/A	40E700 5133106 (E2-2A)	S-R F233.3 DOE.40E 500-3S	S.R. P.O. 4001	POWELL ELECTRIC	SFDI (S-R)
CFS 0003B	COLLECTOR FIELD INTERFACE CABINET B	N/A	N/A	40E700 5133106	S-R F233.3 DOE.40E 500-3S	S.R. P.O. 4001	POWELL ELECTRIC	SFDI (S-R)
MCC 0004	MOTOR CONTROL CENTER (MCC-4)	480 60HZ 3PH	100KVA	40E700 5133121	S.R. F235.1	S.R. P.O. 4004	WESTINGHOUSE	SFDI (S-R)
SCE 0004	AUX. TRANSFORMER 1-3PHASE-18MVA 55 DEG C RISE 13.8-4.36KV OA/FA 60HZ, Z=6.5%							BY SCE
AXI								
SCE 0006	COOLING TWR. TRANS. 1-3PHASE-750/862KVA 55 DEG C RISE 4160-480V OA/FA 60HZ, Z=5.75%							BY SCE
CTXI								

VALVES (VAL) 4

4 VALVES (VAL)



VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
LV	1 AUX BOILER/ THERMAL STORAGE PUMP DISCHARGE TO TSS.	GLOB	1"	SOCKET WELD 600# SCH40	CARBON STL	WTR	185 (MAX)	N/A	N/A	5133301 F2 5163151				BY SFDI
SOV	1 W/LV1	3WAY	.25"	300# FNPT	BRASS	AIR	1150 (MAX)	AS REQD	N/A	5133301 5163151 5133301	401700-2171			BY SFDI
PSV	5 HIGH PRESSURE HEATER 1ST POINT(E-902) RELIEF									5133301 B2 5163151				
LV	8 1ST.PT.HEATER DRAIN TO 2ND. PT.HEATER	GLOB	1"	300# R.F.	CARBON STEEL	WATER	220	13287	9.86	5133301 D3 5163151	33816 NO.1		FISHER EZ TYPE	
PSV	21 2ND.PT.HEATER (E-903)PRESS. RELIEF									5133301 D2 5163151				
LV	24A 2ND.PT.HEATER DRAIN FLOW TO DEAERATOR CONTROL	BALL	2"	150# R.F.	STAINLES STEEL	WATER	105	102123	128	5133301 D3 5163151	33816 NO.2		FISHER	
LV	24B 2ND.PT.HEATER DRAIN FLOW TO CONDENSER CONTROL	BALL	2"	150# R.F.	STAINLES STEEL	WATER	116	130800	128	5133301 D3 5163151	33816 NO.3		FISHER	
LV	31	GLOB	1"	SOCKET WELD SCH. 80	CARBON STEEL	FEED- WATER	215 PSIG	11 GPM	3.22	5133301	33816 NO.36		FISHER ES TYPE	
PCV	31 FEEDWATER TO AUX BOILER/ TSS CROSSOVER									5133301 E2 5163151				
MOV	33 RECEIVER FEED WATER PUMP (P-917) DISCHARGE	GATE	4"	BUTT WELD	CARBON STEEL	FEED WATER	2585			5133301 F1 5163151	33816 NO.29		EDWARDS/VALVE SERVICES INC.	
FV	37 RECEIVER FEEDWATER MIN.RECIRC. TO DEAERATOR									5133301 E2 5163151				BY SFDI
FY	44 SEAL WTR TO RCVR FDWTR PMP	2-WAY	1.5"	1.5" NPT.	BRASS BODY	WATER	250 PSIG			5133301 5163152	33829 NO.2		ASCO 8211D32	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
FV	56 TSS FEEDWATER MIN. RECIRC. TO DEAERATOR (DA-901)									5133301 D4 5163151				
LCV	64 RECEIVER PUMP DRAIN TRAP TO CONDENSER		1"	SOCKT WELD	CHROME STEEL	WATER	13.7	3500		5133301 G4 5163151	33816 NO.31		ARMSTRONG TYPE 33 LD	
LV	74A COND. FROM RECEIVER FLASH TANK TO 2ND. PT. HEATER	GLOB	1.5"	SOCKT WELD 600#	CARBON STEEL	WTR	666 (MAX)	40000	.928	5133301 CALC C4 5163151		5002	COPEES VULCAN DENVER, CO	
LV	74B COND. FROM THERM. STORAGE FLASH TANK TO 2ND. PT. HEATER	GLOB	4"	BW SCH40 150#	CARBON STEEL	WTR	192 (MAX)	117,500	3.49	5133301 CALC C5 5163151		5002	COPEES VULCAN DENVER, CO	
LV	74C COND. FROM RECEIVER FLSH TK. TO CONDENSER	GLOB	2"	SOCKT WELD 600#	CARBON STEEL	WTR	673 (MAX)	40,000	9.9	5133301 C8 5163151		5002	COPEES VULCAN DENVER CO	
LV	83A CONDENSATE DUMP FROM DEAERATOR TO CONDENSER	BALL	3"	150# R.F.	STAINLES STEEL	WATER	34	117030	372	5133301 D6 5163151	33816 NO.5		FISHER	
LV	83B DEAERATOR INLET LEVEL CONTROL VALVE	GLOB	4"	300# R.F.	316SS/ ALLOY 6	WATER	140	27558	224	5133301 C6 5163151	33816 NO.6		FISHER ED TYPE	
PSV	101 4TH. PT. HEATER (E-904) SAFETY RELIEF									5133301 B7 5163151				
LV	104 L.P. 4TH. PT HEATER(E-904) DUMP TO CONDENSER	GLOB	1.5"	300# R.F.	CARBON STEEL	WATER	5.6	14597	35.8	5133301 C8 5163151	33816 NO.7		FISHER ET TYPE	
MOV	110 FINAL FEEDWATER BYPASS TO CONDENSER	GATE	2"	BUTT WELD	CARBON STEEL	FEED WATER	2585			5133301 C9 5163151	33816 NO.30		CRANE TYPE 787 VALVE SERVICES INC.	
FV	112 CONDENSATE FLOW FROM COND. POLISHER TO CONDENSER	3- WAY	4"	300# R.F.	CARBON STEEL	WATER	215	219618	14	5133301 B10 5163151	33816 NO.8		YARWAY LARC TYPE	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
MOV 140	CONDENSER (E-901) VENT	GATE	2"	SOCKT WELD	CARBON STEEL	AIR/ WATER	13.7			5133301 D9 5163151	33816 NO.32		PACIFIC TYPE 150-2 VALVE SERVICES INC.	
SOV 1413	EAST TARGET SHUTTER	3WAY	.25"	300# FNPT	BRASS	AIR	125	1 SCFM	.15		401700-2171		AUTO. SWITCH CO.	CP-9
LV 146A	CONDENSER (E-901) HOTWELL CONDENSATE MAKE-UP VALVE	BALL	2"	150# R.F.	STN STL	WATER	150	84660	128	5133301 E10 5163151	33816 NO.9		FISHER	
LV 146B	CONDENSER (E-901) HOTWELL DRAWOFF VALVE	GLOB	3"	300# R.F.	CARBON STEEL	WATER	150	84660	136	5133301 B10 5163151	33816 NO.10		FISHER ED TYPE	
LV 162	CONDENSATE STORAGE TK. (TK-902) MAKE-UP CONTROL	GLOB	2"	SCREW	BRONZE	WATER	89	37350	53	5133301 D12 5163151	33816 NO.11		FISHER GS TYPE	
LV 210	SERVICE WATER MAKE-UP TO CIRC. WATER SYSTEM									5133302 E10 5163154				
MOV 222	CIRC. WATER PUMP(P-905) DISCHARGE	BUT-TER-FLY	16"	125# FF	CAST IRON	WATER	40	2056740		5133302 C9 5163154	33816 NO.25		FISHER 9100 TYPE	
MOV 229	CIRC. WATER TO COOLING TOWER BASIN	BUT-TER-FLY	16"	125# FF	CAST IRON	WATER	40	2056740		5133302 D8 5163154	33816 NO.25		FISHER 9100 TYPE	
CV 241	CIRC. WATER BLOWDOWN TO EVAPORATION POND									533302 D9 5163154				
CY 241	AIR SUPPLY TO CV-241	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133302 5163152	33829 NO.4		ASCO 8320 A173	
MOV 243	CIRC. WATER PUMP(P-906) DISCHARGE	BUT-TER-FLY	16"	125# FF	CAST IRON	WATER	40	2056740		5133302 C10 5163154	33816 NO.25		FISHER 9100 TYPE	
FV 264	WATER FOR ACID DILUTION SOLENOID VALVE	2-WAY	1"	1"NPT	BRASS BODY	WATER	100			5133302 5163154	33829 NO.3		ASCO 8211B27	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
LV 307	MAKE-UP FROM COND. PUMP TO SURGE TANK (TK-901)	GLOB	3/4"	SCREW	CARBON STEEL	WATER	150		3.18	5133303 C4 5163153	33816 NO.14		FISHER EZ TYPE	
TV 308		GLOB	1.5"	SCREW	CAST IRON	WATER	45 PSIG	145GPM	35.8	5133303	33816 NO.15		FISHER ED TYPE	
TCV 341	TEMPERATURE CONTROL VALVE	GATE	3/4"	SCREW	BRONZE	COOL WATER	43 PSIG	15 GPM	4.4	5133303	33839 NO.1		JORDAN VALVE MARK 85 FAIL SAFE TEMP REGULATOR	
TCV 342	TEMPERATURE CONTROL VALVE	GATE	3/4"	SCREW	BRONZE	COOL WATER	43 PSIG	15 GPM	4.4	5133303	33839 NO.1		JORDAN VALVE MARK 85 FAIL SAFE TEMP REGULATOR	
PSV 343	COOLING WATER RELF	3/4"			BRONZE	DEMIN WATER	33 PSIG	15 GPM		5133303	35590 NO.2		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA. 91706 213-443-9301	
PSV 344	COOLING WATER RELF	3/4"			BRONZE	DEMIN WATER	33 PSIG	15 GPM		5133303	35590 NO.2		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA. 91706 213-443-9301	
PSV 352	COOLING WATER RELF	3/4"			BRONZE	DEMIN WATER	33 PSIG	15 GPM		5133303	35590 NO.2		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA. 91706 213-443-9301	
PSV 353	COOLING WATER RELF	3/4"			BRONZE	DEMIN WATER	33 PSIG	15 GPM		5133303	35590 NO.2		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA. 91706 213-443-9301	
TV 354		BUT- TER- FLY	4"	150LB FF	CAST STEEL	COOL WATER	45 PSIG	420 GPM	102	5133303	33816 NO.33		FISHER 9500 TYPE	
PSV 358	COOLING WATER RELF	3/4"			BRONZE	DEMIN WATER	35 PSIG	15 GPM		5133303	35590 NO.3		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA. 91706 213-443-9301	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 359	COOLING WATER RELF		3/4"		BRONZE	DEMIN WATER	35 PSIG	15 GPM		5133303	35590 NO.3		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA.91706 213-443-9301	
PSV 360	COOLING WATER RELF		3/4"		BRONZE	DEMIN WATER	35 PSIG	15 GPM		5133303	35590 NO.3		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA.91706 213-443-9301	
PSV 361	COOLING WATER RELF		3/4"		BRONZE	DEMIN WATER	35 PSIG	15 GPM		5133303	35590 NO.3		CROSBY VALVE & GAGE CO. 3715 PUENTE BALDWIN PARK CA.91706 213-443-9301	
PSV 421	REGEN VESSEL (V-903) RELIEF									5133304 B8 5163158				
PCV 443	PRESSURE CONTROL VALVE	GLOB 2"		125# FF	BRONZE		96PSIG	0-150 GPM	125	5133304	33824 NO.5		CLA-VAL CO. TYPE 90G-01	
PSV 509	SERVICE & INSTR. AIR COMP. (CP-901) OUTLET-RELIEF									5133305 C5 5163162				
PSV 510	SERVICE & INSTR. AIR COMPRESSOR I.C. RELIEF									5163162				
PSV 519	SERVICE & INSTR. AIR COMP. (CP-902) OUTLET-RELIEF									5133305 F4 5163162				
PSV 520	SERVICE & INSTR. AIR COMPRESSOR I.C. RELIEF									5163162				
PSV 522	SERVICE & INSTR. AIR RECEIVER (V-904) RELIEF									5133305 C6 5163162				

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PCV 531	SERVICE AIR HDR. PRES. FROM AIR RECEIVER (V-904)	GLOB	2"	2" FPT	CAST STEEL	SVC AIR	125	50SCFM		5133305 E9 5163162	33824 NO.6		FISHER TYPE 667ET	
PSV 542	SERVICE & INSTR. AIR DRYER RELIEF									5163162				
PSV 544	SERVICE & INSTR. AIR DRYER RELIEF									5163162				
PSV 546	SERVICE & INSTR. AIR DRYER RELIEF									5163162				
PSV 548	SERVICE & INSTR. AIR DRYER RELIEF									5163162				
PCV 605			20				33824 NO.3			5133306			FISHER TYPE 621	
PV 605	N2 BLANKETING SUPPLY TO HEATERS									5133306 C3 5163152				
MOV 609	1ST POINT EXTRACTION DRAIN TO HDR DH-2	GLOB	3/4"	SOCKT WELD	ALLOY STL A182 GRF22	STEAM /COND	365			5133306 E2 5163152	33816 NO.24		ROCKWELL-EDWDS #36124F22-M W/ LIM. TORQUE ACTUATOR BY VALVE SERVICES	
PSV 610	1ST POINT HEATER(E-902) SHELL SIDE-RELIEF									5133306 F3 5163149				
PSV 612	AUX. STEAM RELIEF VALVE		1.5"	150LB RF	CARBON STEEL	STEAM	9 PSIG	2034		5163149	35590 NO.1		CONSOLIDATED 1905HT DRESSER IND. 213-595-4691	
MOV 615	2ND POINT EXTRACTION DRAIN TO HEADER DH-3	GLOB	3/4"	SOCKT WELD	ALLOY STL A182 GRF22	STEAM /COND	174			5133306 E3 5163152	33816 NO.24		ROCKWELL-EDWDS #36124F22-M W/LIM. TORQUE ACTUATOR BY VALVE SERVICES	
MOV 616	ADMISSION STEAM DRAIN TO CONDENSER LINE	GLOB	1"	SOCKT WELD	CARBON STEEL	STEAM	465			5133306 A5 5163152	33816 NO.27		VOGT SW12141 WITH RCS MOTOR OPERATOR	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
MOV 617	INLET STEAM DRAIN TO CONDENSER LINE	GLOB	1"	SOCKET WELD	ALLOY STL ASTM A182 GRF22	STEAM	1790			5133306 B5 5163152	33816 NO.28		VOGT SW6793 WITH RCS MOTOR OPERATOR	
MOV 623		GLOB	3/4"	SOCKET WELD	ALLOY STL ASTM A182 GRF22	STEAM /COND	174			5133306 E2 5163152	33816 NO.24		ROCKWELL-EDWDS #36124F22-M W/ LIM. TORQUE ACTUATOR BY VALVE SERVICES	
MOV 624	(TG-901) EXTRACTION TO 1ST POINT HEATER (E-902)	GATE	3"	BUTT WELD	CAST CHROME MOLY	STEAM	415	13287		5133306 E4 5163152	33816 NO.18		WALLWORTH VALVE SERVICES INC.	
NV 625	EXTRACTION LINE NON-RETURN VALVE 1ST POINT	3-WAY	3"	BUTT WELD	CAST CHROME MOLY	STEAM	415	7688		5133306 E4	33816 NO.19		ATWOOD & MORRILL	
NY 625	AIR SUPPLY TO NV-625	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133306 5163152	33829 NO.5		ASCO 8320 A173	
MOV 626	(TG-901) EXTRACTION TO 2ND. POINT HEATER (E-903)	GATE	3"	BUTT WELD	CAST CHROME MOLY	STEAM	165	5811		5133306 E5	33816 NO.18		WALLWORTH VALVE SERVICES INC.	
NV 627	EXTRACTION LINE NON-RETURN VALVE 2ND. POINT	3-WAY	3"	BUTT WELD	CAST CHROME MOLY	STEAM	155	5811		5133306 E5	33816 NO.19		ATWOOD & MORRILL	
NY 627	AIR SUPPLY TO NV-627	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133306 5163152	33829 NO.5		ASCO 8320 A173	
MOV 628	(TG-901) EXTRACTION TO DEAERATOR (DA-901)	GATE	4"	BUTT WELD	CARBON STEEL	STEAM	70	8214		5133306 E6 5163152	33816 NO.20		LUNKENHEIMER #1512 WITH LIMIT TORQUE ACTUATOR	
NV 629A	EXTRACTION LINE NON-RETURN VALVE-3RD POINT	SWNG CHCK	4"	150# R.F.	CARBON STEEL	STEAM	70	8214		5133306 E6	33816 NO.21		ATWOOD & MORRILL	
NY 629A	AIR SUPPLY TO NV-629A	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133306 5163152	33829 NO.5		ASCO 8320 A173	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
NV	629B EXTRACTION LINE NON-RETURN VALVE-3RD POINT	SWNG CHCK	4"	150# R.F.	CARBON STEEL	STEAM	70	8214		5133306 E6	33816 NO.21		ATWOOD & MORRILL	
NY	629B AIR SUPPLY TO NV-629B	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133306 5163152	33829 NO.5		ASCO 8320 A173	
MOV	630 (TG-901) EXTRACTION TO 4TH POINT HEATER (E-904)	GATE	10"	150# R.F.	CARBON STEEL	STEAM	95	7912		5133306 E7	33816 NO.26		LUNKENHEIMER #1512	
NV	631 EXTRACTION LINE NON-RETURN VALVE-4TH POINT	SWNG CHCK	10"	150# R.F.	CARBON STEEL	STEAM	22	7912		5133306 E7	33816 NO.23		ATWOOD & MORRILL	
NY	631 AIR SUPPLY TO NV-631	3-WAY	1/4"	1/4" NPT.	BRASS	INSTR AIR	300 PSIG			5133306 5163152	33829 NO.5		ASCO 8320 A173	
PSV	634 2ND POINT HEATER (E-903)SHELL SIDE-RELIEF									5133306 F6				
MOV	637 4TH POINT EXTRACTION DRAIN TO CONDENSER	FTW	3/4"	SOCKT WELD	CARBON STEEL	STEAM /COND	22.2			5133306 D7	33816 NO.26		HANCOCK #950-W W/RCS ACTUATOR	
PV	640 THERMAL STORAGE FLASH TANK TO CONDENSER	GLOB	12"	BUTT WELD 300#	CARBON STEEL	STEAM	180 (MAX)	6285	125 MAX	5133306 D9	401700-13S	5002	COPE'S VULCAN DENVER, CO.	
PSV	645 DEAERATOR (DA-901) RELIEF		8"	150LB RF	CARBON STEEL	SAT. STEAM	28 PSIG	86583		5133306 F8	35590 NO.1		CONSOLIDATED 1905T DRESSER IND. 213-595-4691	
PSV	646 DEAERATOR		1.5"	150LB RF	CARBON STEEL	SAT. STEAM	28 PSIG	2801		5133306 F8	35590 NO.1		CONSOLIDATED 1905HC DRESSER IND. 213-595-4691	
PV	647A FEEDWATER HEATERS N2/ AUX STEAM SUPPLY	BALL	3"	150# R.F.	STN STL	STEAM	75	11200	306	5133306 E3	33816 NO.17		FISHER	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PV	647B STEAM FROM RECEIVER FLASH TANK TO DEAERATOR	GLOB	2.5"	BUTT WELD 900#	CHROME MOLY WC9	STEAM	600 (MAX)	6285	17.4	5133306 F9 5163152	401700-13S	5002	COPEES VULCAN DENVER, CO.	
PV	647C STEAM FROM TSS FLASH TANK TO DEAERATOR (DA-901)	GLOB	4" X 6"	BUTT WELD 300#	CARBON STEEL	STEAM	180 (MAX)	6285	48.5 MAX	5133306 F9 5163152	401700-13S	5002	COPEES VULCAN DENVER, CO	
MOV	650 3RD POINT EXTRACTION STEAM DRAIN TO CONDENSER	GATE	3/4"	SOCKET WELD	CARBON STEEL	STEAM	54 /COND			5133306 E10 5163152	33816 NO.26		HANCOCK #950-W W/RCS ACTUATOR	
MOV	652	GATE	3/4"	SOCKET WELD		STEAM	22.2 /COND			5133306	33816 NO.26		HANCOCK #950-W WITH RCS ACTUATOR	
MOV	653 DEAERATOR ATMOSPHERIC VENT VALVE	BALL	2"	150# R.F.	CARBON STEEL	SAT. STEAM	75	80	177	5133306 E11 5163152	33816 NO.34		FISHER, BFC OR EQUAL	MAX. TEMP=293F
MOV	654 DEAERATOR ATMOSPHERIC VENT VALVE									5133306 E11 5163152				
PSV	654 4TH POINT HEATER(E-904) RELIEF SHELL SIDE									5133306 F11 5163149				
FV	659	GLOB	1"	300LB FLANG	CARBON STEEL	SAT. STEAM	60 PSIG	150	3.3	5133306	33816 NO.35		FISHER BFC	
MOV	660 BLOCK VALVE FOR N2 CONDENSER BLANKET	BALL	1"	1"NPT	STEEL	N2	150 PSIG	100-400 SCFM			33816 NO.38		RCS	
PCV	660B	SELF OP	2"	2" NPT	CAST STEEL	N2	150 PSIG	10-50 SCFM		5133306	33824 NO.7		FISHER TYPE 730	
MOV	675 2ND POINT EXTRACTION STEAM DRAIN TO CONDENSER	GLOB	3/4"	SOCKET WELD	ALLOY STEEL ASTM A182 GRF22	STEAM	174 /COND			5133306 E5 5163152	33816 NO.24		ROCKWELL-EDWDS #36124F22-M W/LIMIT TORQUE ACTUATOR BY VALVE SERVICES	
MOV	676 3RD POINT EXTRACTION STEAM DRAIN TO CONDENSER	GATE	3/4"	SOCKET WELD	CARBON STEEL	STEAM	54 /COND			5133306 E6 5163152	33816 NO.26		HANCOCK #950-W WITH RCS ACTUATOR	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 684	AUXILIARY BOILER(B-901)									5133306 C2				
PSV 685	AUXILIARY BOILER(B-901)									5133306 C2 5163149				
PCV 701	1ST&2ND POINT HEATERS FEEDWATER TO SAMPLE SYSTEM									5133307 E2 5163157				
PSV 702	1ST&2ND POINT HEATERS FEEDWATER TO SAMPLE SYSTEM									5133307 E3 5163157				
PCV 709	CONDENSATE TO SAMPLE COOLER									5133307 E8 5163157				
PSV 710	CONDENSATE TO SAMPLE COOLER RELIEF									5133307 E8 5163157				
PCV 711	FEEDWATER FROM DEAERATOR TO SAMPLING SYSTEM									5133307 E4				
PSV 712	FEEDWATER FROM DEAERATOR TO SAMPLING SYSTEM RELIEF									5133307 E5 5163157				
PCV 721	CONDENSATE FROM SAMPLE COOLER (3C-904)									5133307 E6 5163157				
PSV 722	4TH POINT HEATER CONDENSER TO SAMPLE SYSTEM RELIEF									5133307 E7 5163157				
PSV 731	CONDENSATE FROM CONDENSER TO SAMPLE SYSTEM									5133307 E9				

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 732	CONDENSATE FROM CONDENSER TO SAMPLE SYSTEM RELIEF									513307 E10 5163157				
PCV 814	LUBE OIL PRESSURE CONTROL VALVE													
AOV 901	ADMISSION STEAM STOP VALVE													
AOV 902	MAIN STEAM STOP VALVE													
MOV 903	ADMISSION STEAM DRAIN LINE TO CONDENSER													
MOV 904	ADMISSION STEAM DRAIN LINE TO CONDENSER													
MOV 905	MAIN STEAM DRAIN VALVE UPSTREAM OF AOV 902													
MOV 906	MAIN STEAM DRAIN VALVE DOWNSTREAM OF AOV 902													
PSV 930	ADMISSION STEAM LINE SAFETY VALVE									5163157				
PSV 931	ADMISSION STEAM LINE SAFETY VALVE									5163157				
PSV 932	SEAL STEAM PRESSURE SAFETY VALVE									5163157				
MOV 935	SEAL STEAM DRAIN LINE													

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PV	939A SEAL STEAM PRESS CONTROL VALVE									5163152				
PV	939B SEAL STEAM PRESS CONTROL VALVE									5163152				
MOV	941 TURBINE COOLING STEAM DRAIN VALVE	GLOB	3/4"	3/4" SW	WC9 OR F22	STEAM	1448	5000		5133309	33816 NO.3			
MOV	942 ADMISSION STEAM COOLING BYPASS VALVE													
FV	958 SEAL STEAM SPRAY SOLENOID VALVE	2-WAY	1"	1"NPT	BRASS BODY	WATER	100			5133309	33829 NO.6		ASCO 8211B27	
MOV	960 PRESS. REG. EXHAUST VALVE													
MOV	982 AUXILIARY STEAM TO TURBINE PRES. REGULATOR													
MOV	990 MAIN STEAM DRAIN VALVE													
MOV	991 SEAL STEAM DRAIN VALVE													
MOV	999	GLOB	3/4"	3/4" SW	STELLITE	STEAM	489	3000		5133309	33816 NO.3			
PV	1000 RS FLASH TANK VENT TO COND.	GLOB	8"	BUTT WELD	CHROME MOLY 600# WC9 SCH40	STEAM	600 (MAX)	40000	121	5133140 G12 5163149		5002	COPEES-VULCAN DENVER, CO	
PV	1001 STEAM DUMP VALVE	ANGL	6"X 10"	BUTT WELD	ASTM A182 2500# GRF22 SCH 160IN 400UT	STEAM	1780 (MAX)	130,000	50.5	5133140 CALC K15 5163149	4017 0012S	5001	BARCOCK WILCOX DRAG TYPE DENVER, CO. (CCI)	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
TV 1002	STEAM DUMP DESUPERHEATER COND. CONTROL VALVE (TO DS.901)	GLOB	1.5"	BUTT WELD 300#	CHROME MOLY WC9	COND-ENSAT	160 (MAX)	27281	30	5133140 J13 5163149		5002	COPES-VULCAN DENVER, CO.	
PV 1003	AUX DESUPHTR CONTROL VALVE MS TO AS	GLOB	2"	BUTT WELD 2500# SCH 160	CHROME MOLY C9	STM	1780 (MAX)	13544	7.3 MAX	5133140 B15 5163149	4017 0012S	5001	COPES-VULCAN DENVER, CO.	DRAG TYPE
TV 1004	AUX DESUPHTR CONDENSER CONTROL VALVE (TO DS902)	GLOB	1.5"	SOCKET WELD 150#	CS	COND-ENSAT	160 (MAX)	2292	2.9	5133140 B10		5002	COPES-VULCAN DENVER, CO.	
PV 1005	AUX STEAM CONTROL VALVE	GLOB	2"	BUTT WELD 300# SCH40	CS	STEAM	465 (MAX)	270	7.3 MAX	5133140 D8 5163149	4017 0012S	5001	COPES-VULCAN DENVER, CO.	DRAG TYPE
FV 1006	STEAM DUMP ATOM STEAM CONTROL VALVE (TO DS-901)	GLOB	2"	SOCKET WELD 2500# SCH 160	CHROME MOLY WC9	STEAM	1780 (MAX)	130000	2.9	5133140 I15 5163149		5002	COPES-VULCAN DENVER, CO.	
FV 1007	STEAM DUMP ATOM STEAM CONTROL VALVE (TO DS 901)	GLOB	1.5"	SOCKET WELD 1500# SCH80	CHROME MOLY WC9	STEAM	600 (MAX)	40000	4.1	5133140 F15 5163149	401700-2171	5002	COPES-VULCAN DENVER, CO.	
AOV 1008	AUX STEAM DESUPERHEATER ISOL VALVE	GLOB	4"	BUTT WELD 300# SCH40	CHROME MOLY WC9	STEAM	90 (MAX)	3765	121	5133140 D11 5163149		5002	COPES-VULCAN DENVER, CO.	
AOV 1009	AUX STEAM BYPASS VALVE (BLANKET TS)	GLOB	1.5"	SOCKET WELD 600# SCH80	CARBON STEEL	STEAM	90 (MAX)	800	30	5133140 D9 5163149		5002	COPES-VULCAN DENVER, CO.	
LV 1010	REC FLASH TK VENT DRAIN POT CONTROL VALVE	GLOB	1"	SOCKET WELD 1500# SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	600 (MAX)	1200	N/A	5133140 H13 5163149	401700-2171		COPES-VULCAN DENVER, CO.	CP-9
SOV 1010	DRN POT LVL CONTR MTD ON LV1010	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)			5163149	401700-2171		COPES-VULCAN DENVER, CO.	CP-9
LV 1011	STEAM DUMP DRAIN POT CONTROL VALVE	GLOB	1"	SOCKET WELD 2500# SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	1790 (MAX)	7000	N/A	5133140 L17 5163149	401700-2171		COPES-VULCAN DENVER, CO.	CP-9

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
LV 1012	STEAM DUMP DRAIN POT CONTROL VALVE	GLOB	1"	SOCKT WELD SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	125 (MAX)	8000	N/A	5133140 L11 5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
SOV 1012	DRN POT LVL CONTR ON LV-1012	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	8000	N/A	5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
LV 1013	TSS MS DRAIN POT CONTROL VALVE	GLOB	1"	SOCKET WELD SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	1790 (MAX)	7400	N/A	5133140 B5 5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
SOV 1013	DRN POT LVL CONTR ON LV-1013	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	7400	N/A	5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
LV 1015	AUX STEAM DRAIN POT CONTROL VALVE	GLOB	1"	SW 2500# SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	1790 (MAX)	140	N/A	5133140 C17 5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
SOV 1015	DRN POT LVL CONTR ON LV-1015	3WAY	1/4"	300# FNPT	BRASS	AIR	115 (MAX)	140	N/A	5103149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
LV 1016	MAIN STEAM DRAIN POT CONTROL VALVE	GLOB	1"	SOCKT WELD SCH80	CHROME MOLY WC9	COND-ENSAT AND STEAM	1790 (MAX)	7400	N/A	5133140 D5 5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
SOV 1016	DRN POT LVL CONTR ON LV-1016	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	7400	N/A	5163149	401700-2171		COPEES-VULCAN DENVER, CO.	CP-9
MOV 1030	MS TO TSS BLOCK VALVE	GATE	6"	BW 2500	CS	STEAM		130000 (MAX)		5133140 A3 5163149		3000	WESTERN SUPPLY CO.	PSS GFE (E-3)
MOV 1031	MS TO TURBINE BLOCK VALVE	GATE	6"	BW 2500	CS	STEAM		135141 (MAX)		5133140 E5 5163149		3000	WESTERN SUPPLY CO.	PSS GFE (E-3)
PSV 1032	RELIEF VA PV-1005	ANGL		1" & 2" 300# RFFLG	ASTM A216 GR WOB	STEAM		960	N/A	5163149	401700-2171		DECO ENGR CONSOLIDATED VA	CP-9
PSV 1033	DS-902 RELIEF VA	ANGL		2" & 3" 150# RF	ASTM217 GRWCL	STEAM	90	4518		5163149	401700-101		CONSOLIDATED	

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG. NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 1033A	RELIEF VA PV1003	ANGL		2" & 3" 150# RF	A217 WCL ALLOY	STEAM	90 (MAX)	5196 (MAX)			401700- 2171		DECO ENGR (CONSOLIDATED VA)	CP-9
PV 1105	SEAL WTR TO RECVR FEED PUMP CONTROLS	GLOB		150# SCRD SCH80	BRONZE	COND- ENSAT	185 (MAX)				401700- 2171		DECO ENGR (CASHCO)	CP-9
MOV 1132	TSS FEED PUMP ISOLATION VALVE	GATE	4"	BW 300	CS	WATER		80GPM		5133141 K6 5163151		3000	WESTERN SUPPLY CO.	EPGS GFE (E-3)
LV 1203	DEMIN TANK LEVEL CONTROL VALVE	GLOB	2"	SW 150# SCH40	SS	WTR	95 (MAX)	50GPM	7.45	5133145 CALC D9 5163160	401700- 2171			
SOV 1203	DRN POT LVL CONTR ON LV- 1203	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	50GPM	N/A	5163160	401700- 2171			
PV 1409	BCS SHUTTER AIR REGULATOR	GLOB	.75"	SCRD 125# SCH80	CS	AIR	140 (MAX)	10 SCFM	.048	5133147 .015 D9 CALC 5163162	401700- 2171			
SOV 1410	SOUTH TARGET SHUTTER	3WAY	.25"	300# FNPT	BRASS	AIR	125 (MAX)	1 SCFM	.15		401700- 2171		AUTO.SWITCH CO.	CP-9
SOV 1411	WEST TARGET SHUTTER	3WAY	.25"	300# FNPT	BRASS	AIR	125 (MAX)	1 SCFM	.15		401700- 2171		AUTO.SWITCH CO.	CP-9
SOV 1412	NORTH TARGET SHUTTER	3WAY	.25"	300# FNPT	BRASS	AIR	125 (MAX)	1 SCFM	.15		401700- 2171		AUTO.SWITCH CO.	CP-9
SOV 1413	EAST TARGET SHUTTER	3WAY	.25"	300# FNPT	BRASS	AIR	125 (MAX)	1 SCFM	.15		401700- 2171		AUTO.SWITCH CO.	CP-9
SOV 1418	W/7V1418	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	AS RQD	N/A	5133152 5163163	401700- 2171		AUTO.SWITCH CO.	CP-9
TV 1418	BCS FLUID CONTROL VA	GATE	.5"	NPT	SS	GLYCL	36	1.6 GPM		5163163			JORDAN VA	CP-9
TV 1420	TS BLOWDOWN TANK	GLOB	2.5"	SCRD 600#	CS	WATER	115 (MAX)	700GPM	14.3	5132195 CALC 5163146	401700- 2171		DECO ENGR (CASHCO)	CP-9
PSV 1502	P-706 RELIEF VALVE									5133148 J9 5163161				PSS

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	F&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 1511	P-705 RELIEF VALVE									5133148 E7 5163161				PSS
PSV 1513	P-707 RELIEF VALVE									5133148 D7 5163161				PSS
SOV 1602	TO SEP WST WTR PPS P-711 P-712	2WAY	2"		SS	WTR	95 (MAX)	50GPM	.45	5133149 5163155	401700-2171		AUTO.SWITCH CO.	CP-9
LV 1702	RAW WATER TK LEVEL VALVE	GLOB	6"	FLG 125 SCH40	CARBON STL	WTR	265 (MAX)	1000GPM	83.3	5133150 CALC C4 5163159	401700-2171			
SOV 1702	RAIN WTR TK W/LV1702	3WAY	1/4"	300# FNPT	BRASS	AIR	115 (MAX)	AS REQD	N/A	5133150 5163159	401700-2171			
PV 1703	RAW WATER PUMP RECIRC CONTROL VALVE	GLOB	3"	FLNG SCH40 150#	CS	WATER	115 (MAX)	700 GPM		5133150 C9 5163159	401700-2171		DECO ENGR (CASHCO)	CP-9
SOV 1703	W/PV1703	3WAY	.25"	300# FNPT	BRASS	AIR	115 (MAX)	AS REQD	N/A	5133150 5163159	401700-2171			
PV 1704	WATER TO PACKAGE MAKE-UP DEMINERALIZER		2"	FLNG SCH80 150#	CS	WATER	165 (MAX)	20 GPM		5133145 5133150	401700-2171		DECO ENGR (CASHCO)	CP-9
PV 2002	FEED WATER BYPASS VALVE	GLOB		1" BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		10 TO 14	5131767 L13 5163140	SP42-003			MAX.TEMP=600F
AOV 2004	PREHTR PANEL WATER INLET VALVE	ANGL	4"	4" BUTT WELD SCHED 160	ASTM A106 GRADE B	WATER	2200		195 MIN	5131763 L12 5163133	SP42-044		VALTEK, INC 1 MTN SPR PKWY P.O.BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX.TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2007	PREHTR PANEL WATER VENT VALVE	ANGL	1/2"	1/2" BUTT WELD SCHED 80	ASTM A335 GRADE P22	WATER	2200		4 MIN	5131767 B2 5163140	SP42-038		VALTEK, INC 1 MTN SPR PKWY P.O.BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX.TEMP=600F MARK II BODY MARK I ACTUATOR

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PV 2009	N2 PRESSURE REGULATOR-1	PRES RED.	1"	NPT FE-MALE	ASTM A106 GRADE B	GN2	615	300 SCFM		5131767 A15 5163140	SP42-009		FISHER CNTRLS MARSHALLTOWN, IOWA, 50158 P/N 630-8038	MAX. TEMP=113F 300 SCFM @ 600 PSIG INLET AND 400 PSIG OUTLET BODY: CARBON ST.
PV 2013	N2 PRESSURE REGULATOR-2	PRES RED.	1"	NPT FE-MALE	ASTM A106 GRADE B	GN2	600	75 SCFM		5131767 B10 5163140	SP42-010		FISHER CNTRLS MARSHALLTOWN, IOWA, 50158 P/N 630-8005	MAX. TEMP=113F 300 SCFM @ 400 PSIG INLET AND 10 PSIG OUTLET BODY: CARBON ST.
SOV 2016A	NITROGEN CONTROL VALVE	GLOB IN-LINE	1"	NPT FE-MALE 2 WAY	ASTM A106 GRADE B	GN2	615		8MIN	5163140	SP42-043		ATKOMATIC-VALVE CO., INDIANAPOLIS, IND.	MAX. TEMP=113F TOSCO 6000 SERIES BODY: NAVY-M-BRONZE
SOV 2016B	NITROGEN CONTROL VALVE	GLOB IN-LINE	1"	NPT FE-MALE 2 WAY	ASTM A106 GRADE B	GN2	615		8MIN	5163140	SP42-043		ATKOMATIC-VALVE CO., INDIANAPOLIS, IND.	MAX. TEMP=113F TOSCO 6000 SERIES BODY: NAVY-M-BRONZE
SOV 2019A	NITROGEN CONTROL VALVE	GLOB IN-LINE	1"	NPT FE-MALE 2-WAY	ASTM A106 GRADE B	GN2	615		8MIN	5163140	SP42-043		ATKOMATIC-VALVE CO., INDIANAPOLIS, IND.	MAX. TEMP=113F TOSCO 6000 SERIES BODY: NAVY-M-BRONZE
SOV 2019B	NITROGEN CONTROL VALVE	GLOB IN-LINE	1"	NPT FE-MALE 2-WAY	ASTM A106 GRADE B	GN2	615		8MIN	5163140	SP42-043		ATKOMATIC-VALVE CO., INDIANAPOLIS, IND.	MAX. TEMP=113F TOSCO 6000 SERIES BODY: NAVY-M-BRONZE
PSV 2021	PREHEAT PANEL WATER RELIEF VALVE-1	ANGL	1.5"	BUTT WELD INLT	ASTM A106 GRADE B	STEAM	2015	.307 SQ. IN ORIFICE AREA		5131763 D8 5163133 3HC-75W	SP42-004		CROSBY WRENTHAM, MASS. P/N 1-1/2-F-3HC-75W	RECEIVER (R) MAX. TEMP=637F 3"-300LB RF FLANGE OUTL BODY: CARBON STEEL
PSV 2022	PREHEAT PANEL WATER RELIEF VALVE-2	ANGL	1.5"	BUTT WELD INLT	ASTM A106 GRADE B	STEAM	2015	.307 SQ. IN ORIFICE AREA		5131763 C6 5163133	SP42-004		CROSBY WRENTHAM, MASS. P/N 1-1/2-F-3HC-75W	RECEIVER (R) MAX. TEMP=637F 3"-300LB RF FLANGE OUTL BODY: CARBON STEEL
PSV 2023	PREHEAT PANEL WATER RELIEF VALVE-3	ANGL	1.5"	BUTT WELD INLT	ASTM A106 GRADE B	STEAM	2015	.307 SQ. IN ORIFICE AREA		5131763 B3 5163133	SP42-004		CROSBY WRENTHAM, MASS. P/N 1-1/2-F-3HC-75W	RECEIVER (R) MAX. TEMP=637F RF FLANGE OUTL BODY: CARBON STEEL

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 2101	PREHEAT PANEL WATER DRAIN VALVE-22	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 113 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2102	PREHEAT PANEL WATER DRAIN VALVE-23	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 111 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2103	PREHEAT PANEL WATER DRAIN VALVE-24	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 110 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2201	PREHEAT PANEL WATER DRAIN VALVE-1	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 16 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2202	PREHEAT PANEL WATER DRAIN VALVE-2	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 14 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2203	PREHEAT PANEL WATER DRAIN VALVE-3	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131763 12 5163133	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
TV 2301	BOILER WATER TEMP CONT VALVE-4			1"	ASTM A106 GRADE B	H2O	2200		.78 +/- 3%	5131764 L4 5163134	SP42-002			MAX. TEMP=600F
TV 2302	BOILER WATER TEMP CONT VALVE-5			1"	ASTM A106 GRADE B	H2O	2200		.96 +/- 3%	5131764 L10 5163134	SP42-002			MAX. TEMP=600F

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
TV 2303	BOILER WATER TEMP CONT VALVE-6			1"	ASTM A106 GRADE B	H2O	2200		1.18 +/- 3%	5131764	SP42-002			MAX. TEMP=600F
				BUTT WELD SCHED 80						L16 5163134				
AOV 2313	BOILER PANEL WATER DRAIN VALVE-4	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
				BUTT WELD SCHED 80						H2 5163135				
AOV 2314	BOILER PANEL WATER DRAIN VALVE-5	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
				BUTT WELD SCHED 80						H8 5163135				
AOV 2315	BOILER PANEL WATER DRAIN VALVE-6	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
				BUTT WELD SCHED 80						H15 5163135				
TV 2401	BOILER WATER TEMP CONTROL VALVE-7			1"	ASTM A106 GRADE B	H2O	2200		1.42 +/- 3%	5131764	SP42-008			MAX. TEMP=600F
				BUTT WELD SCHED 80						L23 5163134				
TV 2402	BOILER WATER TEMP CONTROL VALVE-8			1"	ASTM A106 GRADE B	H2O	2200		1.62 +/- 3%	5131764	SP42-008			MAX. TEMP=600F
				BUTT WELD SCHED 80						L29 5163134				
TV 2403	BOILER WATER TEMP CONTROL VALVE-9			1"	ASTM A106 GRADE B	H2O	2200		1.77 +/- 3%	5131764	SP42-002			MAX. TEMP=600F
				BUTT WELD SCHED 80						L35 5163134				
AOV 2413	BOILER PANEL WATER DRAIN VALVE-7	GLOB IN-LINE	1"	1"	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
				BUTT WELD SCHED 80						H21 5163135				

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 2414	BOILER PANEL WATER DRAIN VALVE-8	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764 H27 5163135	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2415	BOILER PANEL WATER DRAIN VALVE-9	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131764 H33 5163135	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
TV 2501	BOILER WATER TEMP CONTROL VALVE-10		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		1.85 +/- 3%	5131765 L4 5163134	SP42-002			MAX. TEMP=600F
TV 2502	BOILER WATER TEMP CONTROL VALVE-11		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		1.85 +/- 3%	5131765 L10 5163134	SP42-002			MAX. TEMP=600F
TV 2503	BOILER WATER TEMP CONTROL VALVE-12		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		1.77 +/- 3%	5131765 L16 5163134	SP42-002			MAX. TEMP=600F
AOV 2513	BOILER PANEL WATER DRAIN VALVE-10	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131765 H2 5163136	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2514	BOILER PANEL WATER DRAIN VALVE-11	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131765 H8 5163136	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
AOV 2515	BOILER PANEL WATER DRAIN VALVE-12	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131765 H14 5163136	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
TV 2601	BOILER WATER TEMP CONTROL VALVE-13		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		1.77 +/- 3%	5131765 L23 5163134	SP42-002			MAX. TEMP=600F

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
TV 2602	BOILER WATER TEMP CONTROL VALVE-14			1"	ASTM A106 WELD GRADE B SCHED 80	H2O	2200	1.85 +/- 3%	5131765	SP42-002				MAX. TEMP=600F
TV 2603	BOILER WATER TEMP CONTROL VALVE-15			1"	ASTM A106 WELD GRADE B SCHED 80	H2O	2200	1.85 +/- 3%	5131765	SP42-002				MAX. TEMP=600F
ADV 2613	BOILER PANEL WATER DRAIN VALVE-13	GLOB IN-LINE	1"	1"	ASTM A106 WELD GRADE B SCHED 80	WATER	2200	12 MIN	5131765	SP42-008			VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
ADV 2614	BOILER PANEL WATER DRAIN VALVE-14	GLOB IN-LINE	1"	1"	ASTM A106 WELD GRADE B SCHED 80	WATER	2200	12 MIN	5131765	SP42-002			VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
ADV 2615	BOILER PANEL WATER DRAIN VALVE-15	GLOB IN-LINE	1"	1"	ASTM A106 WELD GRADE B SCHED 80	WATER	2200	12 MIN	5131765	SP42-008			VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
TV 2701	BOILER WATER TEMP CONTROL VALVE-16			1"	ASTM A106 WELD GRADE B SCHED 80	H2O	2200	1.77 +/- 3%	5131766	SP42-002				MAX. TEMP=600F
TV 2702	BOILER WATER TEMP CONTROL VALVE-17			1"	ASTM A106 WELD GRADE B SCHED 80	H2O	2200	1.62 +/- 3%	5131766	SP42-002				MAX. TEMP=600F
TV 2703	BOILER WATER TEMP CONTROL VALVE-18			1"	ASTM A106 WELD GRADE B SCHED 80	H2O	2200	1.42 +/- 3%	5131766	SP42-002				MAX. TEMP=600F
ADV 2713	BOILER PANEL WATER DRAIN VALVE-16	GLOB IN-LINE	1"	1"	ASTM A106 WELD GRADE B SCHED 80	WATER	2200	12 MIN	5131766	SP42-002			VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
ADV 2714	BOILER PANEL WATER DRAIN VALVE-17	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131766 -1 H8 5163138	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
ADV 2715	BOILER PANEL WATER DRAIN VALVE-18	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131766 -1 H14 5163138	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
TV 2801	BOILER WATER TEMP CONTROL VALVE-19		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		1.18 +/- 3%	5131766 -2 L23 5163134	SP42-002			MAX. TEMP=600F
TV 2802	BOILER WATER TEMP CONTROL -20		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		.96 +/- 3%	5131766 -2 L29 5163134	SP42-002			MAX. TEMP=600F
TV 2803	BOILER WATER TEMP CONTROL VALVE-21		1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	H2O	2200		.78 +/- 3%	5131766 -2 L35 5163134	SP42-002			MAX. TEMP=600F
ADV 2813	BOILER PANEL WATER DRAIN VALVE-19	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131766 -2 H21 5163138	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
ADV 2814	BOILER PANEL WATER DRAIN VALVE-20	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131766 -2 H27 5163138	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR
ADV 2815	BOILER PANEL WATER DRAIN VALVE-21	GLOB IN-LINE	1"	BUTT WELD SCHED 80	ASTM A106 GRADE B	WATER	2200		12 MIN	5131766 -2 H34 5163138	SP42-008		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 2901	MOISTURE ACCUMULATOR WATER DRAIN CONTROL VALVE	GLOB IN-LINE	1"	1"	ASTM A335 WELD GRADE P22	WATER AND STEAM	2200		8 MIN	5131767 F11 5163140	SP42-039		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MA. TEMP=1010F MARK I BODY MARK I ACTUATOR
AOV 2902	DOWNCOMER MANIFOLD STEAM VENT VALVE-1	ANGL	3"	3"	ASTM A335 WELD GRADE P22	STEAM	1780		65 MIN	5131767 C4 5163140	SP42-041		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=1010F MARK II BODY MARK I ACTUATOR BODY: CHROME MOLY
AOV 2903	DOWNCOMER MANIFOLD STEAM VENT VALVE-2	ANGL	1/2"	1/2"	ASTM A335 WELD GRADE P22	STEAM	1780		2 MIN	5131767 A3 5163140	SP42-042		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=1010F MARK II BODY MARK I ACTUATOR BODY: CHROME MOLY
UV 2905	DOWNCOMER MANIF STEAM INLET VALVE	GLOB		6"	ASTM A335 WELD GRADE P22	STEAM	1780		220 TO 260	5131767 L3 5163140	SP42-013			MAX. TEMP=1010F
PV 2906	FLASH TK STEAM PRESS CONTROL VALVE	GLOB		4"	ASTM A335 WELD GRADE P22	STEAM	615		180 TO 210	5131767 I15 5163140	SP42-012			MAX. TEMP: 960
PSV 2909	DOWNCOMER MANIFOLD STEAM RELIEF VALVE-1	ANGL		2"	ASTM A335 WELD INLT P22	STEAM	1780	67,500 @ SET PRESS. OF 1765PSIG		5163133	SP42-005		CROSBY WRENTHAM, MASS P/N HCA-78W-2J6	MAX. TEMP=1010F 6"-300 LB RF FLANGE OUTLT BODY: CARBON STEEL
PSV 2910	DOWNCOMER MANIFOLD STEAM RELIEF VALVE-2	ANGL		2"	ASTM A335 WELD INLT P22	STEAM	1780	67,500 @ SET PRESS. OF 1818PSIG		5163133	SP42-005		CROSBY WRENTHAM, MASS P/N HCA-78W-2J6	MAX. TEMP=1010F 6"-300 LB RF FLANGE OUTLT BODY: CARBON STEEL
AOV 2911	FLASH TANK STEAM INLET CONTROL VALVE	GLOB IN-LINE	4"	4"	ASTM A335 WELD GRADE P22	STEAM AND H2O	1780		46	5131767 G8 5163140	SP42-040		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=1010F MARK I BODY MARK I ACTUATOR BODY: CHROME MOLY
PSV 2912	FLASH TANK STEAM RELIEF VALVE	ANGL		4"	ASTM A335 WELD INLT P22	STEAM	615	135,000 @ SET PRESS. OF 600PSIG		5163133	SP42-006		CROSBY WRENTHAM, MASS HCAU-48W	MAX. TEMP. 960F 6"-300 LB RF FLANGE OUTLT BODY: CARBON STEEL

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 2914	FLASH TANK STEAM OUTLET VALVE	GLOB IN-LINE	1"	1" BUTT WELD SCHED 80	ASTM A335 GRADE P22	STEAM AND WATER	615		8 MIN	5131767 H14 5163140	SP42-122		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=960F MARK II BODY MARK I ACTUATOR BODY: CHROME MOLY
AOV 2915	FLASH TANK STEAM ISOLATION VALVE	GLOB IN-LINE	1"	1" BUTT WELD SCHED 80	ASTM A335 GRADE P22	STEAM AND WATER	1780		8 MIN	5131767 F8 5163140	SP42-123		VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=1010F MARK II BODY MARK I ACTUATOR BODY: CHROME MOLY
AOV 3001	TU CHARGING CONTROL VALVE	BUT- TER-FLY	10"	10"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	110,000 1100000	2700	5132196 F3 5163147	SP42-025	R02CA A4541 29	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F BODY: CARBON STEEL
AOV 3002	TU UPPER MANIFOLD CONTROL VALVE	BUT- TER-FLY	10"	10"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	126,500 1265000	2700	5132196 E5 5163147	SP42-025	R02CA A4541 29	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F BODY: CARBON STEEL
AOV 3003	TU BYPASS UPPER/LOWER MANIFOLD CONTROL VALVE	BUT- TER-FLY	10"	10"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	110,000 1100000	2700	5132196 H3 5163147	SP42-025	R02CA A4541 29	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F BODY: CARBON STEEL
AOV 3004	TU LOWER MANIFOLD CONTROL VALVE	BUT- TER-FLY	10"	10"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	126,500 1265000	2700	5132196 J5 5163147	SP42-025	R02CA A4541 29	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F BODY: CARBON STEEL
AOV 3005	TU BYPASS UPPER/AUXILIARY MANIFOLD CONTROL VALVE	GLOB IN-LINE	4"	4" BUTT WELD SCHED 40	ASTM A106 GRADE B	OIL	130	9,700 97,000	144	5132196 G4 5163147	SP42-028	R02CA A4541 28	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
PS 3099	INSTRUMENT AIR PRESSURE SWITCH			1/4" NPT FEMAL	ASTM A106 GRADE B	INSTR AIR	165	DNA	60 PSIG ON DECR PRES	5133147 G17	SP42-022			113 DEG F

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
UV 3102	DESUPERHEATER INLET STEAM PRESSURE CONTROL VALVE	GLOB IN-LINE	6"	6 IN. BUTT WELD SCH. XYS	ASTM A335 GRADE P22	STEAM	1790	5,025 130,000	240 272 REQ	5132193 -1 G7 5163144	SP42-065	R02CA A4541 54	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	SA 301 PNEUMATIC 985 DEG F
TV 3105	DESUPERHEATER WATER CONTROL VALVE	GLOB IN-LINE	1.5"	1.5 INCH SOCK WELD SCH. 160	ASTM A106 GRADE B	WATER	2200	1,275 25,000	2.5 2.75 +/- 10% REQ	5132193 -1 D7 5163144	SP42-067	R02CA A4541 53	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA301) PNEUMATIC 600 DEG F
PV 3110	STEAM TRAP WATER PRESSURE CONTROL VALVE	GLOB IN-LINE	4"	4 IN BUTT WELD SCH. 80	ASTM A106 GRADE B	WATER	1,580	6,300 65,000	4.7 -1 E15 5163144	5132193 -1 E15 5163144	SP42-064	R02CA A4541 52	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA301) PNEUMATIC 675 DEG F
PV 3111	STEAM TRAP WATER PRESSURE CONTROL VALVE	GLOB IN-LINE	4"	4 IN BUTT WELD SCH. 80	ASTM A106 GRADE B	WATER	1565	6,300 65,000	4.7 -1 D15 5163144	5132193 -1 D15 5163144	SP42-064	R02CA A4541 52	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA301) PNEUMATIC 675 DEG F
PSV 3115	FLASH TANK STEAM RELIEF VALVE	ANGL		2.5 IN AND 4 IN 150LB RF FLANG	ASTM A106 GRADE B	STEAM	180	15,600 AT 165 PSIG	-1 H12 5163144	5132193 -1 H12 5163144	SP42-021	CROSBY WRENTHAM, MASS HSU-15-2-1/2-K4	SA301 373 DEG F BODY: CARBON STEEL	
LV 3116	BOOTLEG LEVEL CONTROL VALVE	GLOB IN-LINE	1"	1" BUTT WELD SCHED 80	ASTM A335 GRADE P22	WATER	1780	1,040	8 MIN. -1 H8 5163144	5132193 -1 H8 5163144	SP42-120	VALTEK P.O. BOX 2000 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=985F MARK II BODY MARK I ACTUATOR BODY: CHROME MOLY	
AOV 3117	SUPERHEATER STEAM BYPASS CONTROL VALVE	GLOB IN-LINE	2"	2" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	465	5,500	7+/- 20% -1 J16 5163144	5132193 -1 J16 5163144	SP42-036	FISHER CONTROLS CO. MARSHALLTOWN IOWA, 50158	MAX. TEMP=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL	
AOV 3118	SUPERHEATER STEAM BYPASS CONTROL VALVE	GLOB IN-LINE	2"	2" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	465	5,500	7+/- 20% -1 J16 5163144	5132193 -1 J16 5163144	SP42-036	FISHER CONTROLS CO. MARSHALLTOWN IOWA, 50158	MAX. TEMP=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL	
AOV 3206	CONDENSER STEAM INLET CONTROL VALVE	GLOB IN-LINE	6"	6" BUTT WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	6,300 65,000	400 -2 D25 5163144	5132193 -2 D25 5163144	SP42-032	R02CA A4541 61	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=675F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PCV 3207	HEATER STEAM WARMUP PRESS REG-1	PRES RED.	1"	1" SOCKET WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	281 AT 1465PSIA 650DEG F INLET		5132193 -2 E34 5163144	SP42-011		MASONEILAN INT MONTEBELLO CALIF. 90640 P/N 2911	675DEG F 800PSIA OUTLET BODY: 304SS.
SOV 3209	THERMAL STORAGE HEATR STEAM VENT SOLENOID VALVE	3-WAY	1/4"	1/4" FLARE LESS MALE UNION FIT	ASTM A106 GRADE B	WATER	1565		0.1 EQIV SHRP EDGE ORIF DIAM	5132193 -2 D31 5163144	SP42-026		MAROTTA SCI CNTLS INC 17671 IRVINE TUSTIN 92680 MODEL MV174C P/N281141-0004	113 DEG F BODY: 316CRES
AOV 3218	CONDENSER BLANKET STEAM CONTROL VALVE	GLOB IN-LINE	1.5"	1.5" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	900	28	5132193 -2 B33 5163144	SP42-034	R02CA A4541 56	VALTEK, INC 1 MTN SPR PKWY P.O. BOX 2000 SPRINGVILLE UT 84663 (801)489-8611	MAX. TEMP=675F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
AOV 3220	STEAM TRAP VENT CONTROL VALVE	GLOB IN-LINE	1"	1" BUTT WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	325 650	7.5 +/- 10%	5132193 -2 132 5163144	SP42-033		FISHER CONROLS CO. MARSHALLTOWN IOWA, 50158	MAX. TEMP=675F DBG VALVE BODY 6-67 ACTUATOR BODY: CARBON STEEL
PSV 3221	CONDENSER STEAM RELIEF VALVE	ANGL		SEE RE-MARKS	ASTM A106 GRADE B	STEAM	1565	66,000 AT 1550 PSIG		5132193 -2 D37 5163143	SP42-019		CROSBY WRENTHAM, MASS. HCU-66-2J4	SA302 675 DEG F 2IN-1500LB RF FLANGE, AND 4IN-150LB RF FLANG BODY: CARBON ST
PSV 3222	CONDENSER OIL RELIEF VALVE	ANGL		3IN- AND 4" 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	399 GPM AT 115 PSIG		5132192 H16 5163142	SP42-017		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-171	SA302 600 DEG F BODY: CARBON STEEL
AOV 3306	CONDENSER STEAM INLET CONTROL VALVE	GLOB IN-LINE	6"	6" BUTT WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	6,300 65,000	400	5132193 -2 D25 5163144	SP42-032	R02CA A4541 61	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=675F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
PCV 3307	HEATER STEAM WARMUP PRESS REG-2	PRES RED.	1"	1" SOCKET WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	281 AT 1465PSIA 650DEG F INLET		5132193 -2 E25 5163144	SP42-011		MASONEILAN INT MONTEBELLO CALIF. 90640 P/N 2911	675DEG F 800PSIA OUTLET BODY: 304SS.
SOV 3309	THERMAL STORAGE HEATR STEAM VENT SOLENOID VALVE	3-WAY	1/4"	1/4" FLARE LESS MALE UNION FIT	ASTM A106 GRADE B	WATER	1565		0.1 EQIV SHRP EDGE ORIF DIAM	5132193 -2 D22 5163144	SP42-026		MAROTTA SCI CNTLS INC 17671 IRVINE TUSTIN MODEL MV174C P/N281141-0004	113 DEG F BODY: 316CRES

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 3318	CONDENSER BLANKET STEAM CONTROL VALVE	GLOB IN-LINE	1.5"	1.5" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	900	28	5132193 -2 B24 5163144	SP42-034	R02CA A4541 56	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=675F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
AOV 3320	STEAM TRAP VENT CONTROL VALVE	GLOB IN-LINE	1"	1" BUTT WELD SCHED 80	ASTM A106 GRADE B	STEAM	1565	325 650	7.5 +/- 10%	5132193 123 5163144	SP42-033		FISHER CONTROLS CO. MARSHALLTOWN IOWA, 50158	MAX. TEMP=675F DBQ VALVE BODY 667 ACTUATOR BODY: CARBON STEEL
PSV 3321	CONDENSER STEAM RELIEF VALVE	ANGL		SEE RE-MARKS	ASTM A106 GRADE B	STEAM	1565	66,000 AT 1550 PSIG		5132193 -2 D28 5163143	SP42-019		CROSBY WRENTHAN, MASS. HCU-66-2J4	SA303 675 DEG F 2IN-1500LB RF FLANGE AND 4IN 150LB RF FLANGI BODY: CARBON ST
PSV 3322	CONDENSER OIL RELIEF VALVE	ANGL		3IN- AND 4IN- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	399 GPM AT 115 PSIG		5132192 B16 5163142	SP42-017		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-171	SA303 600 DEG F BODY: CARBON ST
TV 3410	CONDENSER TEMPERATURE CONTROL VALVE	OIL GLOB IN-LINE	8"	8 IN BUTT WELD SCH. 40	ASTM A106 GRADE B	OIL	130	55,000 550,000	400	5132192 E10 5163142	SP42-063	R02CA A4541 51	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA 304) PNEUMATIC
TV 3411	CONDENSER TEMPERATURE CONTROL VALVE	OIL GLOB IN-LINE	8"	8 IN BUTT WELD SCH. 40	ASTM A106 GRADE B	OIL	130	55,000 550,000	400	5132192 K10 5163142	SP42-063	R02CA A4541 51	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA 304) PNEUMATIC 600 DEG F
LV 3505	BOILER WATER LEVEL CONTROL VALVE	GLOB IN-LINE	1.5"	2.5" 300LB RF FLANG	ASTM A106 GRADE B	WATER	595	5,500 55,000	16	5132195 L6 5163146	SP42-066	R02CA A4541 55	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	540 DEG F
PSV 3506	PREHEATER RELIEF VALVE	OIL ANGL		3IN- AND 4IN- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	386 GPM AT 115 PSIG		5132194 K4 5163145	SP42-017		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-171	SA305 600 DEG F BODY: CARBON ST
LV 3605	BOILER WATER LEVEL CONTROL VALVE	GLOB IN-LINE	1.5"	2.5" 300LB RF FLANG	ASTM A106 GRADE B	WATER	595	5,500 55,000	16	5132195 L17 5163146	SP42-066	R02CA A4541 55	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=540F

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PSV 3606	PREHEATER OIL RELIEF VALVE	ANGL		3IN- AND 4IN- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	386 GPM AT 115 PSIG		5132194 L14 5163145	SP42-017		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-171	SA306 600 DEG F BODY: CARBON ST.
LY 37	AIR TO LV-31	3-WAY	1/4"	1/4" NPT.	BRASS BODY	INSTR AIR	300 PSIG			5133301 5163152	33829 NO.2		ASCO 8320 A173	
PV 3702	BOILER OIL CONTROL VALVE	GLOB IN-LINE	8"	8 IN BUTT WELD SCH. 40	ASTM A106 GRADE B	OIL	130	43,650 436,500	323	5132194 I3 5163145	SP42-063	R02CA A4541 51	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	(SA 307) PNEUMATIC 600 DEG F
AOV 3707	SUPERHEATER BLANKET STEAM CONTROL VALVE	GLOB IN-LINE	1.5"	1.5" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	465	DNA	28 MIN.	5132195 C5 5163146	SP42-035		FISHER CONTROLS CO. MARSHAL TOWN IOWA, 50158	MAX. TEMP=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL
AOV 3708	BOILER WATER BLOWDOWN VALVE	GLOB IN-LINE	1"	1" SOCK WELD SCHED 80	ASTM A106 GRADE B	WATER AND STEAM	465	550	12 MIN.	5132195 15 5163146	SP42-037		FISHER CONTROLS CO. MARSHAL TOWN IOWA, 50158	MAX. TEM=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL
TV 3710	SUPERHEATER OIL CONTROL VALVE	GLOB IN-LINE	8"	8"- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	29,100 291,000	110	5132194 G2 5163145	SP42-068	R02CA A4541 76	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	600 DEG F
AOV 3717	SUPERHEATER STEAM OUTLET CONTROL VALVE	GATE	6"	6" BUTT WELD SCHED 40	ASTM A106 GRADE B	STEAM	465	5,500 550,000	976 MIN.	5132195 B5 5163146	SP42-121		WM. POWELL CO. 2503 SPRING GROVE CINCINNATI, OH, 45214	MAX. TEMP=580F MANUAL WEDGE GATE VALVE BODY: CARBON STEEL
PSV 3719	BOILER STEAM RELIEF VALVE	ANGL		SEE RE-MARKS	ASTM A106 GRADE B	STEAM	487	55,000 AT 472 PSIG		5132195 H8 5163146	SP42-020		CROSBY WRENTHAM, MASS. 3L6-HSU-35	SA307 600 DEG F 3IN-600LB RF FLANGE, AND 6IN-150LB RF FLANGE BODY: CARBON ST.
PSV 3720	SUPERHEATER OIL RELIEF VALVE	ANGL		3IN- AND 4IN- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	279 GPM AT 115 PSIG		5132194 F6 5163145	SP42-018		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-121	SA307 BODY: CARBON STEEL

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PV 3802	BOILER OIL CONTROL VALVE	GLOB IN-LINE	8"	8" BUTT WELD, SCHDL 40	ASTM A106 GRADE B	OIL	130	43,650 436,500	323	5132194 J13 5163145	SP42-063	R02CA A4541 51	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	600 DEG F
AOV 3807	SUPERHEATER BLANKET STEAM CONTROL VALVE	GLOB IN-LINE	1.5"	1.5" SOCK WELD SCHED 80	ASTM A106 GRADE B	STEAM	465	DNA	28 MIN.	5132195 C14 5163146	SP42-035		FISHER CONTROLS CO. MARSHAL TOWN IOWA, 5015	MAX. TEMP=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL
AOV 3808	BOILER WATER BLOWDOWN VALVE	GLOB IN-LINE	1"	1" SOCK WELD SCHED 80	ASTM A106 GRADE B	WATER AND STEAM	465	550	12 MIN.	5132195 I14 5163146	SP42-037		FISHER CONTROLS CO. MARSHAL TOWN IOWA, 50158	MAX. TEMP=580F EZ BODY 667 ACTUATOR BODY: CARBON STEEL
TV 3810	SUPERHEATER OIL CONTROL VALVE	GLOB IN-LINE	8"	8"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	29,100 291,000	110	5132194 H12 5163145	SP42-068	R02CA A4541 76	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	600 DEG F
AOV 3817	SUPERHEATER STEAM OUTLET CONTROL VALVE	GATE	6"	6" BUTT WELD SCHED 40	ASTM A106 GRADE B	STEAM	465	5,500 550,000	976 MIN.	5132195 B14 5163146	SP42-121		WM. POWELL CO. 2503 SPRING GROVE CINCINNATI OH, 45214	MAX. TEMP=580F MANUAL WEDGE GATE VALVE BODY: CARBON STEEL
PSV 3819	BOILER STEAM RELIEF VALVE	ANGL		SEE RE-MARKS	ASTM A106 GRADE B	STEAM	487	55,000 AT 472 PSIG		5132195 G17 5163146	SP42-020		CROSBY WRENTHAN, MASS. 3L6-HSU-35	SA308 600 DEG F 3IN-600LB RF FLANGE AND 6IN 150LB RF FLANG BODY: CARBON ST
PSV 3820	SUPERHEATER OIL RELIEF VALVE-2	ANGL		3IN- AND 4IN- 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	279 GPM AT 115 PSIG		5132194 G16 5163145	SP42-018		TELEDYNE -FARRIS 400 COMMERCIAL PALISADES PARK N.J. 26KA20-121	SA308 600 DEG F BODY: CARBON STEEL
AOV 3905	EXTRACTION PUMP INTERCONNECT OIL CONTROL VALVE	BUT- TER- FLY	8"	8"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	9,700 97,000	1700	5132194 C12 5163145	SP42-030	R02CA A4541 33	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEP=600F VALDISK BODY: CARBON STEEL
AOV 3906	EXTRACTION PUMP INTERCONNECT OIL CONTROL VALVE	BUT- TER- FLY	8"	8"-150LB RF FLANG	ASTM A106 GRADE B	OIL	130	9,700 97,000	1700	5132194 B12 5163145	SP42-030	R02CA A4541 33	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=600F VALDISK BODY: CARBON STEEL

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
AOV 3907	AUXILIARY OIL CONTROL VALVE	3-WAY IN-LINE	4"	4" BUTT WELD SCHED 40	ASTM A106 GRADE B	OIL	130	9,700 97,000	195	5132194 E17 5163145	SP42-029	R02CA A4541 30	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
PV 3910	AUXILIARY PUMP OIL CONTROL VALVE	GLOB IN-LINE	4"	4" 150LB RF FLANG	ASTM A106 GRADE B	OIL	130	9,700 97,000	110	5132194 E13 5163145	SP42-069	R02CA A4541 77	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	600 DEG F
PCV 4004	ULLAGE N2 PRESS REG	PRES RED.	1"	NPT FE-MALE	CS	N2	40 +/-5	10 SCFM		5132196 B16 5163147	SP42-125		FISHER CNTRLS MARSHALLTOWN, IOWA, 50158 P/N Y-600	OUTLET (SENSED) FLUID: CALORIA VAPORS, HEPTANE, N2. REGULATED PRESS: 3.0 +/- .5 IN. W.C.
PCV 4006	PRESSURE REGULATOR		1"	NPT FEMAL	CS	N2				5132196 5163147	08-25-80		FISHER CNTRLS MARSHALLTOWN IOWA 50158	SET OUTLET AT 4" H2O
PCV 4007	UMU		.5"											ROCKETDYNE
PCV 4009	UMU		.5"											ROCKETDYNE
PCV 4012	UMU		.5"											ROCKETDYNE
AOV 4014	TU ULLAGE CONTROL VALVE	GLOB IN-LINE	6"	6"-150LB RF FLANG 40	ASTM A106 GRADE B	GASES H2, N2 AND HC	155		400	5132196 E10 5163147	SP42-117	R02CA A4542 65	VALTEK P.O. BOX 2200 SPRINGVILLE UTAH 84663 (801)489-8611	MAX. TEMP=600F MARK I BODY MARK I ACTUATOR BODY: CARBON STEEL
SOV 4014	UMU		.5"											ROCKETDYNE
AOV 4015	ULLAGE GAS VENT GAS									5132196 E15 5163147				
SOV 4016	UMU													ROCKETDYNE
PSV 4018	TU PRIMARY ULLAGE GAS RELIEF VALVE			8IN-150LB RF FLANG	ASTM A106 GRADE B	H2, N2 AND HC GASES	17	45.3CFM AT 18" W.C.		5132196 F9 5163147	40-M300 -35			TSU 600 DEG F
PSV 4019	TU SECONDARY ULLAGE GAS RELIEF VALVE			12IN-125LB RF FLANG	ASTM A106 GRADE B	STEAM OR H2 N2, HC GASES	17	4770 CFM AT 20" WC		5132196 E8 5163147	40-M300 -35			TSU 600 DEG F

VALVE LIST

EQUIP. NO.	DESCRIPTION	TYPE	SIZE	END CONN	MATERIAL	FLUID	PRESS. RATING (PSIA)	FLOWRATE (LB/HR)	CV	P&ID DWG NO.	SPEC. NO.	P.O. NO.	MANUFACTURER	REMARKS
PCV 4023	UMU													ROCKETDYNE
PCV 4044	UMU													ROCKETDYNE
LV 74D-1	TSS FLASH TNK DR TO COND	GLOB	4"	BW 150#	CARBON STEEL	WTR	200 (MAX)	117,500	75	5133301		5002	COPEES-VULCAN DENVER, CO.	
LV 74D-2	TSS FLASH TNK DR TO COND	GLOB	2"	SW 150#	CARBON STEEL	WTR	200 (MAX)	117,500	2.9	5133301		5002	COPEES-VULCAN DENVER, CO.	

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**5 INSTRUMENTATION
(INS)**

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TEX	2 1ST POINT HEATER FEEDWATER OUTLET TEMP	450 F	4 F	1811	410	33827 NO.2					
LIT	7 1ST POINT HEATER WATER LEVEL	0-10" /50"WC	2%FS	276	353	33817 NO. 17		5133301	BECKMAN 8611-1311-1200	SET RANGE=0-18" WC	
LIT	8 1ST POINT HEATER WATER LEVEL	0-10" /50"WC	2%FS	276	353	33817 NO. 17		5133301	BECKMAN 8611-1131-1200	SET RANGE=0-18" WC	
PI	9 FEEDWATER FROM 2ND PT. HEATER	0-5000 PSIG		2200		33822 NO.1		5133301	ASHCROFT 1279S	PSS	
TW	10 FEED WATER TO 1ST PT. NTR			366		33833 NO.1		5133301	ROSEMOUNT 79-0424-10-40		
TE	13 FEEDWATER FROM 2ND POINT HEATER	375 F	4 F	1830	345	160K# 33827 NO.1		5133301			
TI	14 FEEDWATER TO 1ST. POINT HEATER FROM 2ND POINT HEATER	100-800F		336		33815 NO.1			ASHCROFT 50A160E		
PI	16 1 ST. POINT HEATER DRAIN	0-600 PSIG		270		33822 NO.1		5133301	ASHCROFT 1279S	PSS	
TW	17 1ST PT. NTR DRAIN			353-436		33833 NO.1		5133301	ROSEMOUNT 79-0409-10-12		
TI	18 1ST POINT HEATER DRAIN TO 2ND POINT HEATER	100-800F		346		33815 NO.1			ASHCROFT 50A160E		
LIT	23 2ND POINT HEATER WATER LEVEL	0-10" /50"WC	2%FS	106	334	33817 NO. 18		5133301	BECKMAN 8611-1131-1200	SET RANGE=0-20" WC	
LIT	24 2ND POINT HEATER WATER LEVEL	0-10" /50"WC	2%FS	106	334	33817 NO. 18		5133301	BECKMAN 8611-1131-1200	SET RANGE=0-20" WC	
TI	27 2ND POINT HEATER DRAIN	50-400F		282		33815 NO.1			ASHCROFT 50A160E		
PI	28 2ND POINT HEATER DRAIN	0-300 PSIG		120		33822 NO.1		5133301	ASHCROFT 1279S	PSS	
PI	29 FEEDWATER TO 2ND PT. HEATER	0-5000 PSIG		2200		33822 NO.1		5133301	ASHCROFT 1279S	PSS	
TI	30 RECEIVER FEEDWATER PUMP DISCHARGE	50-400F		281		33815 NO.1			ASHCROFT 50A160E		
ISH	33 MOV-33 TRIP										
ZS	33A MOV 33 POSITION										
ZS	33B MOV 33 POSITION										
PIT	34 TS FEEDPUMP OUTLET PRESS.	700 PSIG		500	285	110K# PIT P69		5133301	ROSEMOUNT 11S1 GPI0		
FE	35A P-917 DISCHARGE			2200	287	345 33821 NO.1		5133301	DANIEL IND		
FIT	35A RECEIVER FEEDWATER PUMP DISCHARGE	0-100" /600" WC	2%FS	2200	281	160K# 33817 NO. 1		5133301	BECKMAN 8613-1431-2100	SET RANGE=0-200" WC	
FE	35B P-903 DISCHARGE			517	287	235 33821 NO.1		5133301	DANIEL IND		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
FIT	35B THERMAL STORAGE FEEDWATER PUMP DISCHARGE	0-30"/180"WC	2%FS	500	285	110K#	33817 NO. 2			5133301	BECKMAN 8612-1131-2100	SET RANGE=0-100" WC
PDI	36 RECEIVER FEEDWATER PUMP SUCTION	0-100 PSI	.01" HG	20-50	281		33817 NO.12			5133301	AMETEK U.S. GAUGE MODEL NO.1685	
FIT	37 RCVR FEEDPUMP FLOW											
ZS	37A FV-37 POSITION											
ZS	37B FV-37 POSITION											
PI	38 RECR. FEEDWATER PUMP DISCHARGE	0-5000 PSIG		2200			33822 NO.1			5133301	ASHCROFT 1279S	PSS
TE	40 RCVR FEEDWATER PUMP DISCHARGE	300 DEG F	3 F	2200	281	160K#	33827 NO.1			5133301		
TW	41 FEEDWATER PUMP DISCHARGE				286		33833 NO.1			5133301	ROSEMOUNT 79-0424-10-40	
ISH	44 4160 V SWITCHGEAR BREAKER TRIP (3)											
ISX	44 RCVR FEED PUMP OVERCURRENT (P919)											
IT	44 RECEIVER FEED PUMP CURRENT P917											
JT	44 RECEIVER FEED PUMP POWER P917											
JTX	44 RECEIVER FEED PUMP POWER P917											
ZS	44A 4160 V SWITCHGEAR BREAKER STATUS (4)-											
ZS	44B 4160 V SWITCHGEAR BREAKER STATUS (4)-											
ZS	44E RCVR FEED PUMP P-917											
ZS	44F RECEIVER FEED PUMP P-917											
PI	45 CONDENSATE TO RECEIVER FEEDWATER PUMP SEALS	0-300 PSIG		170			33822 NO.1			5133301	ASHCROFT 1279S	PSS
FI	46 RECEIVER F.W. PUMP SEAL COOLING			170 PSIG	135	15GPM	33832 NO.1			5133301	BROOKS 3604D	
PDI	47 THERMAL STORAGE FEEDWATER PUMP SUCTION	0-100 PSI	.01" HG	20-50	281		33817 NO.13			5133301	AMETEK U.S. GAUGE MODEL NO.1685	
PDI	48 AUX. BOILER/TS FEEDWATER PUMP SUCTION	0-100 PSI	.01" HG	20-50	281		33817 NO.14			5133301	AMETEK U.S. GAUGE MODEL NO.1685	
ISH	50 TS FEED PUMP TRIP											
IT	50 TS FEED PUMP CURRENT											
JT	50 TS FEED PUMP POWER											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. COORD.	P&ID AND MODEL NO.	REMARKS
			ACCY. (+/-)	PSI	DEG.F					
JTX	50 TS FEED PUMP POWER									
ZS	50A 480V SWITCHGEAR BREAKER STATUS (4)-OPEN									
ZS	50B 480V SWITCHGEAR BREAKER STATUS (4)-CLOSED									
PI	55 TSS FDWTR DISCHRG PRESS	0-700 PSIG		485					PULSATION DAMPER	
FO	57 P-904 DISCHARGE		180 PSIG	281	0	33821 NO.3		5133301 DANIEL IND		
TW	59 TSS FDWTR									
TE	60 TS FEEDPUMP OUTLET TEMP. (P-903)	320 F 3 F	500	285	110K#	33827 NO.2				
TI	68 AUX BOILER/THERMAL STORAGE FEEDWATER PUMP DISCHARGE	50-400 DEG F		281		33815 NO.1		ASHCROFT 50A160E		
PI	69 AUX BOILER/THERMAL STORAGE FEEDWATER PUMP DISCHARGE	0-300 PSIG		174		33822 NO.1		5133301 ASHCROFT 1279S	PSS	
ZT	74A VALVE POSITION - RS FLASH CONDENSATE TO #2 HEATER	0-100% 2%FS								
ZT	74B VALVE POSITION - TS FLASH CONDENSATE TO #2 HEATER	0-100% 2%FS								
ZT	74C VALVE POSITION - RS FLASH CONDENSATE TO CONDENSER	0-100% 2%FS								
PIT	77 DEAERATOR PRESSURE	0-75 PSIA	2%FS	140	108	218	33823 NO.1		BECKMAN 8642-1111-1000 0-75 PSIA	
LIT	79 DEAERATOR WATER LEVEL	0-30" /180" WC	2%FS	49	281		33817 NO. 19	5133301	BECKMAN 8611-1131-1200 SET RANGE=0-78" WC	
PI	80 DEAERATOR PRESSURE	0-100 PSIG		50			33822 NO.1	5133301	ASHCROFT 1279S PSS	
TI	81 DEAERATOR (DA-901)	50-400 DEG F		281			33815 NO.1		ASHCROFT 50A160E	
LG	82 SEE P&ID FOR DESCRIPTION		.01" HG	65	301		33818 NO.1	5133301	PENBERTHY 320	
LIT	83 DEARATOR WATER LEVEL	0-30" /180" WC	2%FS	49	281		33817 NO. 19	5133301	BECKMAN 8611-1131-1200 SET RANGE=0-78" WC	
PDIT	86 RECEIVER & TS FEEDWATER PUMPS SUCTION HEADER NPSH	0-200" /850" WC	2%FS	20-50	281	250K#	33817 NO. 16	5133301	FOXBORO E12VA-1-HS-2 SET RANGE=0-300" WC	
PDITX	86 RECEIVER & TS FEEDWATER PUMPS SECTION HEADER NPSH	0-200" /850" WC	2%FS	20-50	281	250K#		5133301	FOXBORO E13VA-1-HS-2 SET RANGE=0-300" WC	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
PI 87	DEAERATOR FEEDWATER TO PUMPS	0-100 PSIG		50			33822 NO.1		5133301		ASHCROFT 1279S	PSS
TW 88	DEAERATOR OUTLET				281-301		33833 NO.1		5133301		ROSEMOUNT 79-0409-10-24	
TI 89	DEAERATOR OUTLET	50-400 DEG F			281		33815 NO.1				ASHCROFT 50AI60E	
TE 90	DEAERATOR FEEDWATER OUTLET TEMP	300 DEG F		50	281	160K#	33827 NO.2					
PI 95	CONDENSATE TO DEAERATOR	0-300 PSIG		150			33822 NO.1		5133301		ASHCROFT 1279S	PSS
TI 96	FEEDWATER FROM 4TH POINT HEATER TO DEAERATOR	50-400 DEG F			197		33815 NO.1				ASHCROFT 50AI60E	
TE 97	DEAERATOR CONDENSATE INLET TEMP(P-907)	250 F		80	205	160K#	33827 NO.2					
TW 98	CONDENSATE TO DEAERATOR				198-202		33833 NO.1		5133301		ROSEMOUNT 79-0409-10-24	
LIT 103	4TH POINT HEATER WATER LEVEL	0-10" /50"WC	2%FS	320	640	9K#	33817 NO. 20				BECKMAN 8611-1131-1200	SET RANGE=0-22"WC INSTALLATION NOTE
LIT 104	4TH POINT HEATER WATER LEVEL	0-10" /50"WC		320	640	9	33817 NO. 20				BECKMAN 8611-1131-1200	SET RANGE=0-22"WC INSTALLATION NOTE
TI 105	4TH POINT HEATER DRAIN TO CONDENSER	0-200 DEG F			119		33815 NO.1				ASHCROFT 50AI60E	
PI 106	4TH POINT HEATER DRAIN	-10-30 PSIG		11			33822 NO.1		5133301		ASHCROFT 1279S	PSS
TW 107	4TH PT. HTR. OUTLET				119-199		33833 NO.2		5133306		ROSEMOUNT 79-0413-10-10	
ISH 110	MOV 110 TRIP											
ZS 110A	MOV 110 POSITION											
ZS 110B	MOV 110 POSITION											
FO 111	F.W. TO E-901			2054 PSIA	410	60	33821 NO.3		5133301		DANIEL IND	
FIT 113A	#4 HEATER CONDENSATE INLET FLOW RATE	0-30" /180"WC	2%FS	140	108	186 GPM	33817 NO. 5		5133301		BECKMAN 8612-1131-2100	SET RANGE=0-100" WC
FE 113B	COND. FR. E-902			120 PSIA	282		33821 NO.2		5133301		DANIEL IND	
FIT 113B	#2 HEATER CONDENSATE DRAIN TO DA FLOW RATE (E-903)	0-100" /600" WC	2%FS	140	282	218	33817 NO.221		5133301		BECKMAN 8613-1431-2100	SET RANGE=0-200" WC
FE 113a	COND. TO E-904			170 PSIA	109		33821 NO.2		5133301		DANIEL IND	
TW 114	CONDENSATE TO 4TH PT. HTR.				109-121		33833 NO.2		5133306		ROSEMOUNT 79-0409-10-16	
TE 115	CONDENSATE TO DEAERATOR TEMP.	150 F 2 F		125			33827 NO.2					

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
TI 116	CONDENSATE TO 4TH POINT HEATER FROM POLISHERS	0-200 DEG F		109			33815 NO.1				ASHCROFT 50A160E	
PI 117	CONDENSATE FROM POLISHER	0-300 PSIG		170			33822 NO.1		5133301		ASHCROFT 1279S	PSS
PDI 125	CONDENSATE HOTWELL PUMP SUCTION	0-80" H2O	.01" HG	1.25 PSIA	109		33817 NO.15		5133301		DWYER SERIES 4000	
TW 126	CONDENSATE PUMP DISCHARGE			114-121			33833 NO.2		5133306		ROSEMOUNT 79-0409-10-24	
PIT 127	CONDENSATE PUMP DISCHARGE PRESSURE	0-200 PSIG	2%FS	140	108	218	33823 NO. 2				BECKMAN 8643-1111-1000	0-200 PSIG
TE 128	CONDEN PUMP SUCTION TEMP.	130 F	2 F	2.5H	108	218K#						
PI 129	CONDENSATE PUMP DISCHARGE	0-300 PSIG		170			33822 NO.1		5133301		ASHCROFT 1279S	PSS
TI 130	CONDENSATE PUMP DISCHARGE	0-200 DEG F		109			33815 NO.1				ASHCROFT 50A160E	
ISH 131	CONDENSATE PUMP TRIP											
ZS 131A	BREAKER STATUS OPEN											
ZS 131B	BREAKER STATUS CLOSED											
TW 133	CONDENSATE FM. COND. HOTWELL			109-121			33833 NO.2		5133306		ROSEMOUNT 79-0409-10-24	
TI 134	CONDENSATE PUMP SUCTION	0-200 DEG F		109			33815 NO.1				ASHCROFT 50A160E	
ISH 140	MOV 140 TRIP											
ZS 140A	MOV 140 POSITION											
ZS 140B	MOV 140 POSITION											
LG 141	SEE P&ID FOR DESCRIPTION		.01" HG	1.2 PSIA	109		33818 NO.2		5133301		PENBERTHY K3B	
LIT 142	CONDENSER HOTWELL LEVEL	0-36" WC	2%FS	2.5H	108	218	33817 NO. 6				BECKMAN 8612-1131-1200	0-36"WC INSTALL NOTE CAL NOTE
TI 143A	CONDENSER (E-901) HOTWELL	0-200 DEG F		110			33815 NO.1				ASHCROFT 50A160E	
TI 143B	CONDENSER SHELL	0-150 DEG F		90			33815 NO.3		513309		JENSEN	
LIT 146	CONDENSER HOTWELL LEVEL	0-36" WC	2%FS	2.5H	108	218	33817 NO. 6				BECKMAN 8612-1131-1200	0-36"WC INSTALL NOTE CAL NOTE
ISH 155	CONDENSER VACUUM PUMP TRIP											
ZS 155A	CONDENSER VACUUM PUMP OFF											
ZS 155B	CONDENSER VACUUM PUMP ON											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
LIT 160	CONDENSATE STORAGE TANK LEVEL (TK-902)	0-100" /500" WC	2%FS	AMB	AMB		33817 NO. 21		5133301	BECKMAN 8613-1131-1100	SET RANGE=0-250" WC	
LC 162	CONDENSER STORAGE TANK (TK-902)	3-15 PSI	4 F	AMB	80-115	7K#	33819 NO.1		5133301	FISHER 2500RS-249B		
TI 165	RCVR. F.W. PUMP CASING	0-300 DEG F					33826 NO.3A		5133301	ASHCROFT 6140		
TSHL 165	RCVR. F.W.P.P. CASING	100-220 DEG F			160		33825 NO.3		5133301	ASCO SC11A/QU11A4D		
TW 165	DEAERATOR OUTLET				281-301		33833 NO.3		5133306	THERMTRICS		
TI 166	T.S.S. F.W. PUMP CASING	0-300 DEG F					33826 NO.3A		5133301	ASHCROFT 6140		
TSHL 166	T.S.S.F.W.P.P. CASING	100-220 DEG F			160		33825 NO.3		5133301	ASCO SC11A/QU11A4D		
PI 167	CONDENSER DRAIN HEADER	PSIG					33822 NO.1		5133301	ASHCROFT 1279S	PSS	
LI 200	LEVEL GAGE FOR TANK TK-904	0-8'		AMB	AMB		33819 NO.3		5133302	BROOKS 5310-GT-1-C		
PSL 201	SERVICE WATER	1-75 PSIG		70	80		33825 NO.2		5133302	SOR INC. 4L-K5		
FE 206	CIRC. WATER WASTE DUMP	50-500 GPM		40 PSIA	78	75GPM	33838 NO.1		5133302	BROOKS 3312-03A31A		
AIT 207	CIR WTR PH TO COOLING TOWERS	6-10 PH					33828 NO. 1		5133302	LEEDS AND NORTHROP	6-10 PH	
ISH 208	COOLING TWR FAN 901 TRIP											
LSL 208	COOLING TWR FAN 901 LOW OIL LEVEL	180#	2%FS	140	108	218						
XS 208	COOLING TWR FAN 901 VIBRATION											
ZS 208B	COOLING TWR FAN 901 STATUS OFF											
ZS 208H	COOLING TWR FAN 901 STATUS HIGH											
ZS 208L	COOLING TWR FAN 901 STATUS LOW											
LIT 210	COOLING TOWER BASIN LEVEL	0-20" WC		AMB	AMB		33826 NO. 1		5133302	FISHER 2340-249BP	0-20"?	
TI 211	CIR. WATER FROM VACUUM PUMP HEAT EXCHANGER (P-910)	0-200 DEG F			80		33815 NO.1			ASHCROFT 50A160E		
PI 212	VACUUM PUMP HEAT EXCHANGER OUTLET (P-910)	0-60 PSIG			35		33822 NO.2		5133302	ASHCROFT 1279S	PSS	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON			INSTR. DATA SHEET	ELECT. ELEM. DIAG. NO.	INSTALL. DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F	K#/HR						
LSL 213	COOLING TWR FAN 902 LOW OIL LEVEL	180#	2%FS	140	108	218						
XS 213	COOLING TOWER FAN (FA 902) TOWER FAN VIBRATION	DISC	2%FS	140	108	218						
ZS 213B	COOLING TWR FAN 902 STATUS OFF											
ZS 213H	COOLING TWR FAN 902 STATUS HIGH											
ZS 213L	COOLING TWR FAN 902 STATUS LOW											
TE 216	CIRC H2O TEMP TO CONDENSER	90 F	2%FS	50	75	4M#	33827 NO.2					
TE 217	CIRC H2O TEMP FROM CONDENSER	110 F	2%FS	45	90	4M#	33827 NO.2					
TI 219	CONDENSER (E-901) CIRC. WATER OUTLET	0-200 DEG F			103		33815 NO.1				ASHCROFT 50A160E	
PI 221	VACUUM PUMP HEAT EXCHANGER INLETT (P-910)	0-60 PSIG		40			33822 NO.2	5133302			ASHCROFT 1279S	PSS
ISH 222	MOV 222 TRIP											
ZS 222A	MOV 222 POSITION OPEN											
ZS 222B	MOV 222 POSITION CLOSED											
PI 224	CONDENSER CIRC. WATER OUTLET	0-60 PSIG		35			33822 NO.2	5133302			ASHCROFT 1279S	PSS
PDIT 225	CONDENSER COOLING WATER PRESSURE DIFFERENTIAL	0-100" /600" WC	2%FS	140	108	218	33817 NO. 7				BECKMAN 8613-1131-1100	SET RANGE=0-400" WC
PI 226	CONDENSER CIRC. WATER INLET	0-60 PSIG		45			33822 NO.2	5133302			ASHCROFT 1279S	PSS
TI 227	CONDENSER (E-901) CIRC. WATER INLET	0-200 DEG F			78		33815 NO.1				ASHCROFT 50A160E	
ISH 229	MOV 229 TRIP											
ZS 229A	MOV 229 POSITION											
ZS 229B	MOV 229 POSITION											
PI 230	CIRC WATER PUMP (P-903) DISCHARGE	0-60 PSIG		45			33822 NO.2	5133302			ASHCROFT 1279S	PSS
PI 231	CIRC WATER PUMP (P-906) DISCHARGE	0-60 PSIG		45			33822 NO.2	5133302			ASHCROFT 1279S	PSS
ISH 232	COOLING TWR FAN 903 TRIP (CURRENT OVERLOAD)	180#	2%FS	140	108	218						

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. COORD. NO.	P&ID	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
LSL 232	COOLING TWR FAN 903 LOW OIL LEVEL	180#	2%FS	140	108	218						
XS 232	COOLING TWR FAN 903 VIBRATION	180#	2%FS	140	108	218						
ZS 232B	COOLING TWR FAN 903 STATUS OFF											
ZS 232H	COOLING TWR FAN 903 STATUS HIGH											
ZS 232L	COOLING TWR FAN 903 STATUS LOW											
PIT 240	CIRC WTR PUMP DISCHARGE PRESS (P-905 & P-906)	0-30 /150 PSIG	2.5%F	25	75	4M#	33823 NO. 3		5133302	BECKMAN 8642-1111-1000	SET RANGE=0-80 PSIG	
CIT 241	CIRC WATER CONDUCTIVITY	0-10K UMHOS/ CM					33828 NO. 2		5133302	BECKMAN	0-10,000 UMHOS/CM CELL CONSTANT=10.0	
ISH 242	CIR WTR PMP P906 TRIP											
JT 242	CIR WTR PMP P906 POWER											
JTX 242	CIR WTR PMP P906 POWER											
ZS 242A	CIR WTR PMP P906 OFF											
ZS 242B	CIR WTR PMP P906 ON											
ISH 243	MOV 243 TRIP											
ZS 243A	MOV 223 POSITION											
ZS 243B	MOV 223 POSITION											
PI 246	COOLING WATER HEAT EXCHANGER OUTLET	0-60 PSIG		35			33822 NO.2		5133302	ASHCROFT 1279S	PSS	
PI 247	COOLING WATER HEAT EXCHANGER INLET	0-60 PSIG		40			33822 NO.2		5133302	ASHCROFT 1279S	PSS	
TI 248	COOLING WATER HEAT EXCH. (E-905) INLET SHELL SIDE	0-200 DEG F		115			33815 NO.1			ASHCROFT 50AI60E		
TI 249	COOLING WATER HEAT EXCH. (E-905) OUTLET SHELL SIDE	0-200 DEG F		95			33815 NO.1			ASHCROFT 50AI60E		
LIT 253	COOLING TOWER BASIN LEVEL	0-20" WC	2.5%F	AMB	AMB		33836 NO.1		5133302	FISHER 2340-249BP	0-20"?	
TS 254	AC. SUBSTN ROOM AIR	50-150 DEG F		85			33825 NO.5			ASCO PB10A/KF11A1		
ISH 260	CIR WTR PMP P905 TRIP											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
			ACCY. (+/-)	PSI	DEG.F						
IT 260	CIR WTR PMP P905 CURRENT										
JT 260	CIR WTR PMP P905 POWER										
JTX 260	CIR WTR PMP P905 POWER										
ZS 260A	CIR WTR PMP P905										
ZS 260B	CIR WTR PMP P905										
FY 264	ROTAMETER	10-25 GPM	30	80	16 GPM	33832 NO.3		513309	BROOKS 1305		
LG 268	SEE P&ID FOR DESCRIPTION (CIR. WATER)		.01" HG	40		33818 NO.4			PENBERTHY 320 MODEL NO.2RL6		
TI 301	CONDENSATE TO COOLING WATER STORAGE TANK	0-200 DEG F				33815 NO.2			ASHCROFT 50A160E		
TI 302	BEARING COOLING WATER TO COOLING WATER STORAGE TANK	0-200 DEG F				33815 NO.2			ASHCROFT 50A160E		
PI 304	BEARING COOLING WATER RETURN FROM T.S.S.	0-100 PSIG				33822 NO.3		5133305	ASHCROFT 1279S	PSS	
PI 305	COOLING WATER RETURN HDR	0-100 PSIG				33822 NO.3		5133305	ASHCROFT 1279S	PSS	
TI 306	BEARING COOLING WATER TO COOLING WATER STORAGE TANK	0-200 DEG F				33815 NO.2			ASHCROFT 50A160E		
LC 307	LEVEL CONTROLLER				ATM	115-130	33819 NO.2	5133303	FISHER 250CRS-249B		
TT 308	BEARING OIL TEMP	70-170 DEG F				120	33826 NO. 1C	5133309	ROSE/MOORE	CAL. RANGE=70-170F CHROMEL ALUMEL	
LIT 310	COOLING WATER SURGE TANK	0-30" /180" WC			AMB	100	33817 NO. 8	5133303	BECKMAN 8612-1131-1100	SET RANGE=0-120" WC	
FG 311A	COOLING WATER TO AIR COOLER					40 95	33837 NO.1	5133303	JACOBY-TARBOX 100-S		
FG 311B	COOLING WATER TO AIR COOLERS					40 95	33837 NO.2	5133303	JACOBY-TARBOX 100-S		
FG 311C	COOLING WATER TO AIR COOLERS					40 95	33837 NO.2	5133303	JACOBY-TARBOX 100-S		
FG 311D	COOLING WATER TO AIR COOLERS					40 95	33837 NO.2	5133303	JACOBY-TARBOX 100-S		
PIT 312	COOLING WTR PUMP (P-901) DISCHARGE PRESSURE	0-30 /150 PSIG	2.5%F	43	120		33823 NO. 4	5133303	BECKMAN 8642-1111-1000	SET RANGE=0-80 PSIG	
ISH 313	COOLING WTR PUMP 901 TRIP										
ZS 313A	COOLING WTR PUMP 901										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZS	313B COOLING WTR PUMP	901 RUN									
PI	315 COOLING WATER PUMP DISCHARGE	0-100 PSIG		50		33822 NO.3		5133305	ASHCROFT 1279S	PSS	
LG	316 SEE P&ID FOR DESCRIPTION (TK-901)		.01" HG	0	115	33818 NO.3		5133303	PENBERTHY 320 MODEL NO.5RL8		
TI	318 COOLING WATER PUMP (P-901) PUMP DISCHARGE	0-200 DEG F			95	33815 NO.2			ASHCROFT 50A160E		
PI	319 COOLING WATER HEAT EXCHANGER INLET	0-100 PSIG		50		33822 NO.3		5133305	ASHCROFT 1279S	PSS	
PI	320 COOLING WATER HEAT EXCHANGER OUTLET	0-100 PSIG		50		33822 NO.3		5133305	ASHCROFT 1279S	PSS	
TI	321 COOLING WATER HEAT EXCHANGER OUTLET-TUBE SIDE	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		
TE	322 COOLING WTR HEAT XGER OUTLET TEMP		5%FS			33827 NO.2					
TI	326A BEARING COOLING WATER FROM (TG-901) AIR COOLERS	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		
TI	326B BEARING COOLING H2O FROM (TG-901) AIR COOLERS	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		
TI	326C BEARING COOLING H2O FROM (TG-901) AIR COOLERS	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		
TI	326D BEARING COOLING H2O FROM (TG-901) AIR COOLERS	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		
TI	327 GENERATOR COOLING WATER INLET	0-200 DEG F			95	33815 NO.5			ASHCROFT 50A160E		
FG	330 COOLWATER FROM HYD. LUBE OIL CLR			40	95	33837 NO.1		5133303	JACOBY-TARBOX 100-S		
FG	331 COOLWATER TO TURB. LUBE OIL CLRS.			40	95	33837 NO.1		5133303	JACOBY-TARBOX 910-F		
FG	332 COOLING WATER TO SAMPLE CHILL.			40	95	33837 NO.1		5133303	JACOBY-TARBOX 100-S		
TI	335 CWS-TURBINE LUBE OIL	0-150 DEG F			90	33815 NO.3			JENSEN		
TI	336 CWS-TURBINE HYDRAULIC OIL	0-150 DEG F			90	33815 NO.3			JENSEN		
FG	337 COOLING WATER TO TURBINE HYDRAULIC OIL COOLER			40	95	33837 NO.2		5133303	JACOBY-TARBOX 100-S		
TI	338 TURBINE HYDRAULIC OIL COOLERS WATER OUT	0-200 DEG F			115	33815 NO.2			ASHCROFT 50A160E		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TI 340	BEARING COOLING WATER FROM TSS FEED PUMP (P-903)	0-200 DEG F			115	33815 NO.2				ASHCROFT 50A160E	
TI 350	BEARING COOLING WATER FROM RECEIVER F.W. PUMP (P-917)	0-200 DEG F			115	33815 NO.2				ASHCROFT 50A160E	
FG 351	COOLWATER FROM HYD. CPL OIL CLR		40	95		33837 NO.1		5133303		JACOBY-TARBOX 100-S	
TE 354A	STATOR WINDING TEMP	40-115 DEG C				33826 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354A	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TE 354B	STATOR WINDING TEMP	40-115 DEG C				33826 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354B	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TE 354C	STATOR WINDING TEMP	40-115 DEG C				33826 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354C	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TE 354D	STATOR WINDING TEMP	40-115 DEG C				33826 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354D	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TE 354E	STATOR WINDING TEMP	40-115 DEG C				33926 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354E	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TE 354F	STATOR WINDING TEMP	40-115 DEG C				33826 NO. 2B				ROSE/MOORE	40-115 DEG C
TT 354F	STATOR WINDING TEMP.	40-115 DEG C				33826 NO. 2A& NO. 2B		5133309		ROSEMOUNT OR MOORE IND.	RTD TRANSMITTERS (CU-RTD) MAX. TEMP.=110C
TI 355	BEARING COOLING H2O TURB. L.O. COOLERS (E-908 & E-909)	0-200 DEG F			115	33815 NO.2				ASHCROFT 50A160E	
TI 365	BEARING COOLING H2O FROM SAMPLE COOLERS	0-200 DEG F			115	33815 NO.2				ASHCROFT 50A160E	
PDIT 405	DEMINEALIZER DIFF PRESSURE		2.5%								
PDSH 407	INLINE DEMIN. V-901 DIFF PRESSURE		2.5%								
PY 426D	H.P. PRESS. IN-OUT CONTROL RAISE					33840 NO.3			NOT SHOWN	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
LIT 438	AMMONIA TANK LEVEL (TK-914)	0-10" /50" WC	2.5%F	AMB	33-103		33817 NO. 9		5133304	BECKMAN 8611-1311-1100	SET RANGE=0-36" WC	
LIT 440	HYDRAZINE TANK LEVEL (TK-913)	0-10" /50" WC	2.5%F	AMB	33-103		33817 NO. 10		5133304	BECKMAN 8611-1241-1100	SET RANGE=0-36" WC	
LI 444	ACID TANK TK-915 LEVEL GAGE		.01" HG	AMB	AMB		33819 NO. 4		5133304	BROOKS 5310-GT-1-B		
LI 445	CAUSTIC TANK TK-916 LEVEL GAGE		.01" HG	AMB	AMB		33819 NO. 4		5133304	BROOKS 5310-GT-1-B		
PDSH 448	INLINE DEMIN. V-902 DIFF. PRESS.											
PSL 451	INST. AIR	13-300 PSI			125		33825 NO. 4		5133304	ASCO 5A11AK/TKDA44		
TSH 506	SERVICE & INSTR AIR COMP (CP-901) DISCHARGE TEMP		2.5%F									
PI 507	SERVICE & INSTR. AIR COMPRESSOR DISCHARGE (cP-901)	0-300 PSIG			125		33822 NO. 3		5133305	ASHCROFT 1279S	PSS	
TSH 516	SERVICE & INSTR AIR COMP (CP-902) DISCHARGE TEMP		2.5%F									
PI 517	SERVICE & INSTR. AIR COMPRESSOR DISCHARGE (CP-902)	0-300 PSIG			125		33822 NO. 3		5133305	ASHCROFT 1279S	PSS	
PSH 521	SERVICE/INSTR AIR RCVER PRESS											
PSL 521	SERVICE/INSTR AIR RCVER PRESS											
PI 523	SERVICE & INSTR. AIR RECEIVER	0-300 PSIG			125		33822 NO. 3		5133305	ASHCROFT 1279S	PSS	
PIT 532	SERVICE AIR HEADER PRESSURE	0-30 /150 PSIG	2.5%F	80	80		33823 NO. 5		5133305	BECKMAN 8642-1111-1000	SET RANGE=0-150 PSIG	
PIT 540	INSTR AIR HEADER PRESSURE	0-30 /150 PSIG	2.5%F	80	80		33823 NO. 6		5133305	BECKMAN 8642-1111-1000	SET RANGE=0-150 PSIG	
FO 603	E-902 OUTLET			271 PSIA	408	15	33821 NO. 4		5133306	DANIEL IND		
FO 604	E-903 OUTLET			121 PSIA	342	30	33821 NO. 4		5133306	DANIEL IND		
FO 606	E-904 OUTLET			13 PSIA	206	30	33821 NO. 4		5133306	DANIEL IND		
ZS 609A	1ST PT DRAIN VALVE POSITION											
ZS 609B	1ST PT DRAIN VALVE POSITION											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
PIT 611	1ST POINT HEATER SHELL PRESSURE	0-100 /500 PSIG	2%FS	275	640	9K#	33823 NO. 7		5133306	BECKMAN 8623-1111-1000	SET RANGE=0-500 PSIG	
TEX 613	1ST PT EXTR TEMP	700 DEG F	6 F	320	640		33827 NO.2					
ZS 615A	2ND PT EXTR DRAIN VALVE POSITION											
ZS 615B	2ND PT EXTR DRAIN VALVE POSITION											
ZS 616A	ADM STEAM DRAIN VALVE POSITION											
ZS 616B	ADM STEAM DRAIN VALVE POSITION											
ZS 617A	MAIN STEAM DRAIN VALVE POSITION											
ZS 617B	MAIN STEAM DRAIN VALVE POSITION											
ZS 623A	1ST PT EXTRACT DRAIN CLOSE TO CONDENSER MOV 623											
ZS 623B	1ST PT EXTRACT DRAIN TO CONDENSER MOV 623											
ISH 624	1ST PT EXTR BLOCK VALVE MOV 624 TRIP											
ZS 624A	1ST PT EXTR BLOCK VALVE MOV 624 POSITION											
ZS 624B	1ST PT EXTR BLOCK VALVE MOV 624 POSITION											
ISH 626	2ND PT EXTR STOP VALVE MOV 626 TRIP											
ZS 626A	2ND PT EXTR STOP VALVE MOV 626 POSITION											
ZS 626B	2ND PT EXTR STOP VALVE MOV 626 POSITION											
ISH 628	3RD PT EXTR BLOCK VALVE MOV 628 TRIP											
ZS 628A	3RD PT EXTR BLOCK VALVE MOV 628 POSITION											
ZS 628B	3RD PT EXTR BLOCK VALVE MOV 628 POSITION											
ISH 630	4TH PT EXTR BLOCK VALVE MOV 630 TRIP											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
ZS	630A 4TH PT EXTR BLOCK VALVE MOV 630 POSITION											
ZS	630B 4TH PT EXTR BLOCK VALVE MOV 630 POSITION											
PITX	632 2ND POINT EXTRACTION LINE PRESSURE	0-100 /500 PSIG	2%FS	121	820	6.5K#	33823 NO. 12		5133306	BECKMAN 8620 SERIES	SET RANGE=0-250 PSIG	
TEX	633 2ND PT EXTR TEMP	500 F	2%FS		475		33827 NO.2					
PIT	635 2ND POINT HEATER SHELL	0-100 /500 PSIG	2%FS	121	345	13K#	33823 NO. 8		5133306	BECKMAN 8620 SERIES	SET RANGE=0-250 PSIG	
PIX	635 #2 HEATER SHELL PRESS.	160#	2%FS	135	300	13K#						
PSH	636C CONDENSER STEAM SIDE VACUUM-PRESSURE	0-30" HG VAC		2.5"	133		33825 NO.1		5133306	SOR INC. 54LL-K41		
PSH	636D CONDENSER STEAM SIDE VACUUM-PRESSURE	0-30" HG VAC		2"	133		33825 NO.1		5133306	SOR INC. 54LL-K41		
LS	637 CONDENSATE LEVEL SWITCH						33820 NO.3			MAGNETROL 155-3 FROST ENGR. P.O. BOX 19700 IRVINE, CA.92713		
ZS	637A 4TH PT DRAIN VALVE MOV 637 POSITION											
ZS	637B 4TH PT DRAIN VALVE MOV 637 POSITION											
TW	638 3RD PT. EXTRAC. STM. TO DEAERATOR				300-518		33833 NO.2		5133306	ROSEMOUNT 79-0409-10-16		
PI	639 3RD POINT EXTRACTION STEAM TO DEAERATOR	0-100 PSIG		40			33822 NO.4		5133306	ASHCROFT 1279S	PSS	
PIT	640 CONDENSER PRESSURE	0-1.08 /6.48 PSIA	2%FS	1.2 PSIA	121	218K#	33823 NO. 9		5133306	BECKMAN 8622-1131-1100	SET RANGE=0-2 PSIA	
ZT	640 VALVE POSITION - TS FLASH STEAM TO CONDENSER	0-100%	2%FS									
TW	641 4TH PT. EXTRAC. STM. TO 4TH PT. HTR.				262-364		33833 NO.3		5133306	THERMTRICS 124401-9101		
TEX	642 4TH PT EXTR ST TEMP	250 F	3 F		205		33827 NO.2					
PI	643 4TH POINT EXTRACTION STEAM	-10-30 PSIG		12			33822 NO.4		5133306	ASHCROFT 1279S	PSS	
PITX	644 4TH POINT EXTRACTION LINE PRESSURE	0-25 PSIA		13 PSIA	151		33823 NO. 13		5133306	BECKMAN 8620 SERIES	SET RANGE=0-25 PSIA	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F	K#/HR						
PIT 647	DEAERATOR SHELL PRESS	0-100 PSIA	2.5%F	36.3 PSIG	330		33823 NO. 10		5133306	BECKMAN 8000	SET RANGE=0-75 PSIA	
ZT 647B	VALVE POSITION - RS FLASH TANK STEAM TO DEAERATOR	0-100%	2%FS									
ZT 647C	VALVE POSITION - TS FLASH STEAM TO DEAERATOR	0-100%	2%FS									
ZS 650A	3RD PT EXTR DRAIN VALVE MOV 650 POSITION											
ZS 650B	3RD PT EXTR DRAIN VALVE MOV 650											
LS 652	CONDENSATE LEVEL SWITCH						33820 NO. 3			MAGNETROL 155-3 FROST ENGR. P.O. BOX 19700 IRVINE, CA. 92713		
ZS 652A	4TH PT EXTR DRAIN VALVE MOV 652 POSITION											
ZS 652B	4TH PT EXTR DRAIN VALVE MOV 652 POSITION											
ISH 653	DEAERATOR VENT VALVE MOV 653 TRIP											
ZT 653	DEAERATOR VENT VALVE MOV 653 POSITION											
PIT 655	4TH POINT HEATER SHELL PRESS.	0-25 PSIA	2%FS	13 PSIA	151	13K#	33823 NO. 11		5133306	BECKMAN 8620 SERIES	SET RANGE=0-25 PSIA	
LS 656	CONDENSATE LEVEL SWITCH		.01" HG				33820 NO. 4			MAGNETROL 291		
TEX 656	3RD PT EXTR TEMP	350 F	4 F	50	315	7K#	33827 NO. 2					
PITX 657	3RD POINT EXTRACTION LINE PRESSURE	0-100 PSIA	2%FS	28	300	7K#	33823 NO. 14		5133306	BECKMAN 8000 SERIES	SET RANGE=0-75 PSIA	
TE 658	AUX BOILER STEAM OUTLET TEMP	350 F	4 F	55	308	4K#						
TEX 658	AUX. BOILER STEAM OUTLET	350 F	4 F	50	315	7K#	33827 NO. 2					
ZT 659	DEAERATOR VENT VALVE MOV 659 POSITION											
FIT 663	AUX. BOILER STEAM OUTLET	0-30" /180" WC		55	287		33817 NO. 11		5133306	BECKMAN 8612-1131-2100		
PI 667	ADMISSION STEAM TO TURBINE GENERATOR (TG-901)	0-800 PSIG		400			33822 NO. 4		5133306	ASHCROFT 1279S	PSS	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
PI 670	N2 BLANKETING SUPPLY HEATERS	0-30 PSIG		25		33822 NO.4			5133306	ASHCROFT 1279S	PSS
TW 671	1ST PT. EXTRAC. STM. TO 1ST PT. HTR.			633-829		33833 NO.3			5133306	THERMTRICS 152301-U4 1/2 -9101	
PI 672	1ST POINT EXTRACTION STEAM	0-600 PSIG		270		33822 NO.4			5133306	ASHCROFT 1279S	PSS
PITX 673	1ST POINT EXTRACTION LINE PRESSURE	0-100 /500 PSIG		276 633		33823 NO. 15			5133306	BECKMAN 8620 SERIES	SET RANGE=0-500 PSIG
ZS 675A	2ND PT EXTR DRAIN BLOCK VALVE MOV 675 POSITION										
ZS 675B	2ND PT EXTR DRAIN BLOCK VALVE MOV 675 POSITION										
ZS 676A	3RD PT EXTR DRAIN VALVE MOV 676 POSITION										
ZS 676B	3RD PT EXTR DRAIN VALVE MOV 676 POSITION										
PI 678	2ND POINT EXTRACTION STEAM	0-200 PSIG		120		33822 NO.4			5133306	ASHCROFT 1279S	PSS
TW 679	2ND PT. EXTRAC. STM. TO 2ND PT. HTR.			820-880		33833 NO.3			5133306	THERMTRICS 152301-U4 1/2 -9101	
PI 681	CONDENSER VACUUM MERCURY MANOMETER (WELL TYPE)	0-35" HG	.01" HG			33822 NO.5			5133306	MERIAN 30EG25WM	
PI 681A	CONDENSER VACUUM MERCURY BAROMETER					33822 NO.5			5133306	MERIAN 31EG10WM	
TSH 689	AUXILIARY BOILER HIGH TEMP.										
TSL 689	AUXILIARY BOILER LOW TEMP.										
LSH 691	AUXILIARY BOILER HIGH LEVEL										
LSL 692	AUXILIARY BOILER LOW LEVEL										
PI 693	1ST POINT HEATER INLET	0-600 PSIG		290		33822 NO.4			5133306	ASHCROFT 1279S	PSS
PI 694	2ND POINT HEATER INLET	0-200 PSIG		125		33822 NO.4			5133306	ASHCROFT 1279S	PSS
PI 695	4TH POINT HEATER INLET	0-30 PSIG		15		33822 NO.4			5133306	ASHCROFT 1279S	PSS
TI 696	1ST PT. HEATER INLET	200-1000 DEG F		630		33815 NO.2				ASHCROFT 50A160E	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TI	697 2ND PT. HEATER INLET	200- 1000 DEG F		820		33815 NO.2				ASHCROFT 50AI60E	
TI	698 4TH PT. HEATER INLET	50-400 DEG F		210		33815 NO.2				ASHCROFT 50AI60E	
FO	704 LET STM TO SC-901			1450	950	1000	33821 NO.5		5133307	DANIEL IND	
AIT	706 PH - #1 HEATER OUTLET	6.0- 11.5									
AIT	707 HYDRAZINE - #1 HEATER OUTLET	10PPM									
CIT	708 CONDUCTIVITY #1 HEATER OUTLET										
FO	714 DM. STM. TO SC-902			370	525	1000	33821 NO.5		5133307	DANIEL IND	
AIT	715 DISSOLVED OXYGEN DEA. OUT OR 1ST PT HTR OUT										
AIT	716 PH, DEAERATOR OUTLET										
CIT	717 CATION CONDUCTIVITY DEAERATOR OUTLET										
CIT	718 CATION CONDUCTIVITY #1 HEATER OUTLET										
AIT	719 PH - COND PUMP OUTLET	6.0- 11.5									
CIT	720 CATION CONDUCTIVITY CONDENSATE PUMP OUTLET										
AIT	725 HYDRAZINE - #4 HEATER OUTLET										
CIT	726 CONDUCTIVITY - #4 HEATER OUTLET										
CIT	727 CATION CONDUCTIVITY CONDENSER POLISHER OUTLET										
CIT	728 CONDUCTIVITY COND. POLISHER OUTLET										
AIT	729 PH - CONDENSATE POLISHER OUTLET	6.0- 11.5									
AIT	733 DISSOLVED NA - CONDENSER POLISHER OUTLET										
AIT	735 DISS O2 - COND PUMP OUTLET	50 PPB									
CIT	736 CONDUCTIVITY CONDENSATE PUMP OUTLET										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZT	74D1 VALVE POSITION - TS FLASH CONDENSATE TO CONDENSER	0-100% 2%FS									
ZT	74D2 VALVE POSITION - TS FLASH CONDENSATE TO CONDENSER	0-100% 2%FS									
LS	767 CONDENSATE LEVEL SWITCH		.01" HG			33820 NO.4				MAGNETROL 291	
PI	800 POLISHING DEMIN.SUMP PUMP DISCHARGE - (P-936)	0-100 PSIG		50		33822 NO.3		5133305		ASHCROFT 1279S	PSS
PI	801 POLISHING DEMIN.SUMP PUMP DISCHARGE - (P-937)	0-100 PSIG		50		33822 NO.3		5133305		ASHCROFT 1279S	PSS
LSH	804 POLISHING DEMINERALIZER SUMP LEVEL HIGH	7"-120"		AMB	AMB	33820 NO.1 & NO.2		5133308		MASONELIAN 12000-40	
LSL	804 POLISHING DEMINERALIZER SUMP LEVEL LOW			AMB	AMB						
PSL	810 BEARING OIL PRESS										
PSLX	811 BEARING OIL TRIP										
PT	812 BEARING OIL PRESSURE										
LSH	834 TURBINE LUBE OIL RESERVOIR HIGH LEVEL										
LSL	834 TURBINE LUBE OIL RESERVOIR LOW LEVEL										
TT	836 LUBE OIL RESERVOIR TEMP.	70-170 DEG F		150		33826 NO.1C		5133309			CAL. RANGE=300-800F CHROMEL ALUMEL
PDIT	837 LUBE OIL FILTER INLET/OUTLET	0-20 PSI		150		33817 NO.23		5133330		BECKMAN 8614-1142-1100	
ES	852 TURBINE LOSS OF 125 VDC EHC POWER										
ESX	852A TURBINE LOSS OF 125 VDC EHC POWER										
PSLL	864 TURBINE HYDRAULIC LOW PRESS. TRIP										
PSLX	864 TURBINE HYDRAULIC LOW PRESS. TRIP										
PSL	866 TURBINE LOW HYDRAULIC PRESSURE										
PT	868 TURBINE HYDRAULIC PRESSURE										
LSL	872 HYD POWER UNIT LOW OIL LEVEL										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
ZI	901	ADMISSION STOP VALVE POSITION								
ZY	901A	L.P. STOP VALVE OPEN				33840 NO.1		513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
ZY	901B	L.P. STOP VALVE CLOSE				33840 NO.1		513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
ZS	903A	BEFORE SEAT ADM STM DRN STOP VLV POS								
ZS	903B	BEFORE SEAT ADM STM DRN STOP VLV POS								
ZS	904A	ADMISSION LINE STOP VALVE MOV 904 AFTER SEAT DRAIN POSITION								
ZS	904B	ADMISSION LINE STOP VALVE MOV 904 AFTER SEAT DRAIN POSITION								
ZS	905A	MOV 905 BEFORE SEAT MAIN STEAM DRAIN STOP								
ZS	905B	MOV 905 BEFORE SEAT MAIN STEAM DRAIN STOP								
ZS	906A	MAIN STEAM STOP VALVE MOV 906 AFTER SEAT DRAIN								
ZS	906B	MAIN STEAM STOP VALVE MOV 906 AFTER SEAT DRAIN								
SI	907	TURBINE SPEED								
SIX	907	TURBINE SPEED								
SSL	907	TURBINE LOSS OF BOTH SPEED SIGNALS TRIP								
SSLX	907	TURBINE LOSS OF BOTH SPEED SIGNALS TRIP								
SY	907A	SPEED/LOAD SET POINT RAISE				33840 NO.1		513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
SY	907B	SPEED/LOAD SET POINT LOWER				33840 NO.1		513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
PSL	908	TURBINE OVERSPEED (TRIP)								
PSLX	908	TURBINE OVERSPEED (TRIP)								
PSL	912	TURBINE TRIP ALARM								
PSLX	912	TURBINE TRIP ALARM								
XSH	915	HIGH COMMON VIBRATIONS THRUST ECCENTRICITY								

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
XSHH 915	HIGH HIGH COMMON VIBRATIONS THRUST ECCENTRICITY										
XSHX 915	HIGH HIGH COMMON VIBRATIONS THRUST ECCENTRICITY										
XSHX 915	HIGH COMMON VIBRATIONS THRUST ECCENTRICITY										
ST 916	TURBINE RPM										
ZSH 917A	TURBINE SHAFT THRUST BEARING VIBRA. INDICAT.	0-800									
ZI 917C	TURBINE SHAFT ECCENTRICITY										
XT 918	RADIAL BRG #1 VIBRATION										
TT 920A	THRUST BRG METAL TEMP	100-300 F		200		33826 NO. 1B		5133309	ROSE/MOORE		100-300 DEG F CHROMEL-ALUMEL
TT 920B	THRUST BRG METAL TEMP	100-300 F		200		33826 NO. 1B		5133309	ROSE/MOORE		100-300 DEG F CHROMEL-ALUMEL
TT 920C	THRUST BRG METAL TEMP	100-300 F		200		33826 NO. 1B		5133309	ROSE/MOORE		100-300 DEG F CHROMEL-ALUMEL
TT 920D	THRUST BRG METAL TEMP	100-300 F		200		33826 NO. 1B		5133309	ROSE/MOORE		100-300 DEG F CHROMEL-ALUMEL
TT 920E	THRUST BRG OIL TEMP	100-200 F		150		33826 NO. 1B		5133309	ROSE/MOORE		100-200 DEG F CHROMEL-ALUMEL
TT 923	RADIAL BRG #1 METAL TEMP	100-300 F		200		33826 NO. 1B		5133309	ROSE/MOORE		100-300 DEG F CHROMEL-ALUMEL
TT 924	RADIAL BRG #1 OIL TEMP	100-200 F		150		33826 NO. 1B		5133309	ROSE/MOORE		100-200 DEG F CHROMEL-ALUMEL
PT 926	PROCESS VARIABLE TSS MAIN STEAM INLET PRIMARY PRESSURE	1500F									
PY 926A	H.P. PRESS. SET POINT RAISE					33840 NO.2		513309	MOORE INDUSTR. OR ROCHESTER		PULSE DURATION TRANSMITTER
PY 926B	H.P. PRESS. SET POINT LOWER					33840 NO.2		513309	MOORE INDUSTR. OR ROCHESTER		PULSE DURATION TRANSMITTER
PY 926C	H.P. PRESS. IN-OUT CONTROL LOWER					33840 NO.3		NOT SHOWN	MOORE INDUSTR. OR ROCHESTER		PULSE DURATION TRANSMITTER
PI 929	INLET STEAM COLLECTOR	0-2500 PSIG		1465		33822 NO.7		5133309			PSS
PI 933	SEAL STEAM SUPPLY	0-15 PSIG		3.		33822 NO.6		5133309	JENSEN		PSS
ZS 935A	SEALING STEAM DRAIN TO CONDENSER MOV 935										
ZS 935B	SEALING STEAM DRAIN TO CONDENSER MOV 935										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PI	936	ADMISSION STEAM	0-600 PSIG		385	33822 NO.7			5133309		PSS
PI	937	ADMISSION STEAM	0-600 PSIG		385	33822 NO.7			5133309		PSS
PT	937	ADMISSION STEAM PRESSURE									
PY	937A	L.P. PRESS. SET POINT RAISE				33840 NO.2			513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
PY	937B	L.P. PRESS. SET POINT LOWER				33840 NO.2			513309	MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
PY	937C	L.P. PRESS. IN-OUT CONTROL LOWER				33840 NO.3		NOT SHOWN		MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
PY	937D	L.P. PRESS. IN-OUT CONTROL RAISE				33840 NO.3		NOT SHOWN		MOORE INDUSTR. OR ROCHESTER	PULSE DURATION TRANSMITTER
ZI	940A	VALVE POSITION - TURBINE MAIN STEAM INLET	0-100% Z%FS								
ZIX	940A	VALVE POSITION - TURBINE MAIN STEAM INLET	0-100% Z%FS								
ZS	941A	COOLING STEAM DRAIN TO CONDENSER VALVE MOV 941									
ZS	941B	COOLING STEAM DRAIN TO CONDENSER VALVE MOV 941									
ISH	942	COOLING STEAM BLOCK VALVE TRIP									
ZS	942A	COOLING STEAM BLOCK VALVE									
ZS	942B	COOLING STEAM BLOCK VALVE									
ZI	943	VALVE POSITION - TURBINE ADMIS. STEAM INLET	0-100% Z%FS								
ZIX	943	VALVE POSITION - TURBINE ADMIS. STEAM INLET	0-100% Z%FS								
TE	945	HP STEAM TEMP AFTER STOP VALVE		4 F		7K# 33827 NO.4A			5133309	THERMETRICS 3641-2612	
TT	945	INLET STEAM TEMP. AFTER STOP VALVE	800-1100 F		950	33826 NO. 1C			5133309	ROSE/MOORE	CAL. RANGE=800-1100F CHROMEL-ALUMEL
TE	946	LP STEAM TEMP AFTER STOP VALVE		4 F		7K# 33827 NO.4A			5133309	THERMETRICS 3641-2612	
TT	946	ADMISSION STEAM TEMP AFTER STOP VALVE	500-700 F		525	33826 NO. 1C			5133309	ROSE/MOORE	CAL. RANGE=500-700F CHROMEL-ALUMEL
TI	947	TURBINE P&ID FOR SERVICE/FUNCTION DESCRIPTION	0-1000 DEG F		525	33815 NO.4			5133309		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI DEG.F K#/HR	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
PI 948	ADMIS. STM-TS.AUST	0-600 PSIG		385	33822 NO.7			5133309		PSS
PI 949	SEAL STEAMBLEED HP. SEAL	0-200 PSIG		165	33822 NO.6			5133309	JENSEN	PSS
PI 950	SEAL STEAMBLEED MP. SEAL	0-200 PSIG		140	33822 NO.6			5133309	JENSEN	PSS
PIT 951	TURBINE L.P. STEAM CHEST PRESSURE	250-450 PSIA			33823 NO. 16			5133309	BECKMAN	SET RANGE=250-450 PSIA
TT 952A	INNER CASE HIGH PRESSURE STEAM CHEST TEMP.	500-1100 F		950	33826 NO. 1B			5133309	ROSE/MOORE	CAL. RANGE=500-700F CHROMEL-ALUMEL
TT 952B	OUTER CASE HIGH PRESSURE STEAM CHEST TEMP.	500-1100 F		950	33826 NO. 1B			5133309	ROSE/MOORE	500-1100 DEG F CHROMEL-ALUMEL
PIT 953	TURBINE H.P. STEAM CHEST PRESSURE	500-1500 PSIA			33823 NO. 17			5133309	BECKMAN	SET RANGE=500-1500 PSIA
TT 954A	INNER CASE HIGH PRESSURE 1ST STAGE TEMP.	500-1100 F		880	33826 NO. 1B			5133309	ROSE/MOORE	500-1100 DEG F CHROMEL-ALUMEL
TT 954B	OUTER CASE HIGH PRESSURE 1ST STAGE TEMP.	500-1100 F		880	33826 NO. 1B			5133309	ROSE/MOORE	500-1100 DEG F CHROMEL-ALUMEL
TSH 955	TURBINE 4TH STAGE HIGH TEMP TRIP									
TSHX 955	TURBINE 4TH STAGE HIGH TEMP TRIP									
TSH 956	TURBINE EXHAUST HIGH TEMP									
TSHH 956	TURBINE EXHAUST HIGH TEMP TRIP									
TSHHX 956	TURBINE EXHAUST HIGH TEMP TRIP									
PSH 957	TURBINE EXHAUST HIGH PRESSURE									
PSHH 957	TURBINE EXHAUST HIGH PRESSURE TRIP									
PSHHX 957	TURBINE EXHAUST HIGH PRESSURE TRIP									
FISHL 958	SERVICE WATER TO SPRAY CHAMBER HIGH OR LOW									
PI 958	SEAL STEAM EXHAUST SPRAY	0-60 PSIG		28.3	33822 NO.6			5133309	JENSEN	PSS
TI 958	GLAND STM. EXHAUST (F-941) PUMP DISCHARGE	0-200 DEG F		150	33815 NO.3				JENSEN	
PSL 959	STEAM SEAL HEADER LOW PRESS.									

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI DEG.F K#/HR	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
ISH 960	SEAL STEAM EXHAUST TO CONDENSER MOV 960 TRIP									
ZS 960A	SEAL STEAM EXHAUST TO CONDENSER MOV 960									
ZS 960B	SEAL STEAM EXHAUST TO CONDENSER MOV 960									
XT 961	RADIAL BRG #2 VIBRATION									
TT 962A	RADIAL BRG #2 METAL TEMP	100-300 F		200	33826 NO. 1B			5133309	ROSE/MOORE	100-300 DEG F CHROMEL-ALUMEL
TT 962C	RADIAL BRG #2 OIL TEMP	100-200 F		150	33826 NO. 1B			5133309	ROSE/MOORE	100-200 DEG F CHROMEL-ALUMEL
ET 965	SHAFT VOLTAGE									
TI 966	TURBINE P&ID FOR SERVICE/FUNCTION DESCRIPTION	0-1000 DEG F		525	33815 NO.4			5133309		
TT 968A	GEN AIR COOLER E-912A TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 968B	GEN AIR COOLER E-912A TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TSH 969	STEAM SEAL HEADER HIGH TEMP									
TT 970A	GEN AIR COOLER E-912B TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 970B	GEN AIR COOLER E-912B TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 972A	GEN AIR COOLER E-912C TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 972B	GEN AIR COOLER E-912C TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 974A	GEN AIR COOLER E-912D TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 974B	GEN AIR COOLER E-912D TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
XT 976	RADIAL BRG #3 VIBRATION									
TT 977A	EXCITER COOLING AIR TEMP	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)
TT 977B	EXCITER COOLING AIR TEMP.	25-100 DEG C			33826 NO. 2B			5133309	ROSE/MOORE	25-100 DEG C RTD TEMP. TRANSMITTER (CU-RTD)

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
			ACCY. (+/-)	PSI	DEG.F						
TT	978 RADIAL BRG #3 METAL TEMP	100- 300 F		200		33826 NO. 1B		5133309	ROSE/MOORE	100-300 DEG F CHROMEL-ALUMEL	
TT	980 RADIAL BRG #3 OIL TEMP	100- 200 F		150		33826 NO. 1B		5133309	ROSE/MOORE	100-200 DEG F CHROMEL-ALUMEL	
ZS	982A MOV 982 OPEN										
ZS	982B MOV 982 CLOSED										
TT	983 LOW PRESS STEAM CHEST TEMP.	300- 800 F		640		33826 NO. 1C		5133309	ROSE/MOORE	CAL. RANGE=300-800F CHROMEL-ALUMEL	
TT	984 H.P. STEAM TEMP. BEFORE STOP VALVE	200- 1100 DEG F		950		33826 NO.1C		5133309		CAL. RANGE=300-800F CHROMEL ALUMEL	
PIT	986 TURBINE EXHAUST PRESSURE	10-0" HG				33823 NO. 1B		5133309	BECKMAN	SET RANGE=10"-0" HG	
TT	988 TURBINE EXHAUST TEMPERATURE	80-230 DEG F		92		33826 NO. 1C		5133309	ROSE/MOORE	CAL. RANGE=80-230F CHROMEL-ALUMEL	
LSH	989 GENERATOR CASING WATER LEVEL (LEAK DETECTOR)										
ZS	990A HIGH PRESS SEAL STEAM DRAIN VALVE MOV 990										
ZS	990B HIGH PRESS SEAL STEAM DRAIN VALVE MOV 990										
PIT	992 TURBINE FIRST STAGE	0-2000 PSIA	1465	940		33823 NO.19		5133309	BECKMAN 8644-1110-1000		
PT	992 1ST STG TURB PRESS	0-200 PSIA	2%FS	1485	950	115K# 33823 NO. 19			BECKMAN 8644-1110-1000	0-2000 PSIA	
TT	993 TURBINE 1ST STAGE HIGH PRESSURE STEAM TEMPERATURE	500- 1100 F		880		33826 NO. 1B		5133309	ROSE/MOORE	500-1100 DEG F CHROMEL-ALUMEL	
TT	995 ADMISSION STEAM (1ST STAGE) TEMP	500- 700 F		630		33826 NO. 1C			ROSE/MOORE	CAL. RANGE=500-700F CHROMEL-ALUMEL	
TT	996A INNER CASE TEMP. L.P. (FIRST STAGE)	300- 800 DEG F		625		33826 NO.1C		5133309		CAL. RANGE=300-800F CHROMEL ALUMEL	
TT	996B OUTER CASE TEMP. L.P. (FIRST STAGE)	300- 800 DEG F		625		33826 NO.1C		5133309		CAL. RANGE=300-800F CHROMEL ALUMEL	
PIT	997 TURBINE ADMISSION STEAM (1ST STAGE) PRESS	0-500 PSIA	2%FS	385	680	110K# 33823 NO. 20		5133309	BECKMAN 8643-1110-1000		
TT	998 H.P. STEAM TEMP. BEFORE STOP VALVE	200- 700 DEG F		525		33826 NO.1C		5133309		CAL. RANGE=300-800F CHROMEL ALUMEL	
TSH	999 CO2 FIRE PROTECTION GENERATOR TEMP TRIP										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. COORD. NO.	P&ID MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR					
TSHX 999	CO2 FIRE PROTECTION HENERATOR TEMP TRIP										
PIT 1000	PROCESS VARIABLE RS FLASH TANK VENT PRESSURE	600 PSIG	2%FS	470	960	4000	PIT PG1		5163149	ROSEMOUNT 1151 GP8	
ZIX 1000	VALVE POSITION - RS FLASH TANK STEAM TO ST. DUMP	0-100%	2%FS						5163149		
ZS 1000	VLV POS - RS FLSH TNK STEAM TO COND. DUMP		2%FS						5163149		
ZT 1000	VALVE POSITION - RS FLASH TANK STEAM TO ST. DUMP	0-100%	2%FS						5163149		
PIT 1001	MAIN STEAM CONT. PRESS	1800 PSIG	2%FS	1451	863	115K#	PIT PG2&3		5163149	ROSEMOUNT 1151 GP9	
TE 1001	ST. DUMP. DRAG VALVE TEMP.	1100F	10F	1465	950	113K#			5163149		
TT 1001	MS TO DS-901	0-1000			1010		TT PG1B		5133140 MOORE 5163149 INDUSTRIES		
ZIX 1001	VALVE POSITION - RS FLASH TANK STEAM TO ST. DUMP	0-100%	2%FS								
ZS 1001	VLV POS - STEAM DUMP VALVE								5163149		
ZT 1001	VLV POSITION STEAM DUMP VALVE	0-100%	2%FS						5163149		
PIT 1002	ST. DUMP DESUPERHEATER OUT PRESS. 175#	100 PSIG	2%FS	98	960 MAX		PIT PG4		5163149	ROSEMOUNT 1151 GP 6	
TE 1002	PROCESS VARIABLE STEAM DUMP SYSTEM DESPRHTR TEMP CONTRL	700F	4 F	150	350				5163149		
TS 1002	DESUPERHEATER DS-901 OUTLET			98 PSIG	338		TS PG1		5133140 ASHCROFT-DURA-5163149 TEMP 600A-03-C02-B01-L09-AS		
TT 1002	CONDENSATE TO DS-901	0-1000			960 MAX		TT PG1B		5133140 MOORE 5163149 INDUSTRIES		
ZT 1002	STEAM DUMP DESUPERHEATER SPRAY WATER VALVE	0-100%	2%FS	130	108						
P11 1003	AUXILIARY STEAM CONTROL PRESS - REC. LINE	100 PSIG	2%FS	66	865 MAX		PIT PG5		5163149	ROSEMOUNT 1151 GP6	
ZT 1003	AUXILIARY STEAM PRESS REDUCING VALVE - REC. LINE	0-100%	2%FS						5163149		
TE 1004	AUX STEAM DESUPERHEATER CONTROL TEMP		2%FS						5163149		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TT 1004	CONDENSATE TOPS -902	0-600			345	TT PG1B			5163150	MOORE 5163149 INDUSTRIES	
ZT 1004	AUX STEAM DESUPERHEATER SPRAY WATER VALVE	0-100% 2%FS							5163149		
PIT 1005	AUX STEAM CONTROL PRESS - ADM.STM. LINE	100 PSIG	2%FS	51	455	PIT PG6			5163149	ROSEMOUNT 1151 GP6	
ZT 1005	AUXILIARY STEAM PRESS REDUCING 5263149	0-100% 2%FS							5163149		
ZS 1006A	STEAM DUMP DESUPERHEATER								5163149		
ZS 1006B	STEAM DUMP DESUPERHEATER								5163149		
ZS 1007A	STEAM DUMP DESUPERHEATER								5163149		
ZS 1007B	STEAM DUMP DESUPERHEATER								4153149		
ZS 1008A	AUX STEAM DESUPHIR INLET ISOLATION VALVE								5163149		
ZS 1008B	AUX STEAM DESUPHIR INLET ISOLATION VALVE								5163149		
ZS 1009A	AUX STEAM BYPASS ISOLATION VALVE								5163149		
ZS 1009B	AUX STEAM BYPASS ISOLATION VALVE								5163149		
LS 1010	STEAM LINE L.PT DRAIN LEVEL (RS FL TK)				470 960				5163149	MAGNETROL 402	
ZS 1010A	STEAM LINE L.PT DRAIN VALVE (RS FL TK)								5163149		
ZS 1010B	STEAM LINE L.PT DRAIN VALVE (RS FL TK)								5163149		
LS 1011	STEAM LINE L.PT DRAIN LEVEL (HP STM DUMP)				1451 650/863				5163149	MSW 208	
ZS 1011A	STEAM LINE L.PT DRAIN VALVE (HP STM DUMP)								5163149		
ZS 1011B	STEAM LINE L.PT DRAIN VALVE (HP STM DUMP)								5163149		
LS 1012	STEAM LINE L.PT.DRAIN LEVEL (LP STM DUMP)				98 348				5163149	MAGNETROL 402	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZS	1012A STEAM LINE L.PT.DRAIN VALVE (LP STM DUMP)								5163149		
ZS	1012B STEAM LINE L.PT.DRAIN VALVE (LP STM DUMP)								5163149		
LS	1013 STEAM LINE L.PT.DRAIN VALVE (TS CHAR LINE)			1451	650/ 960				5163149		
ZS	1013A STEAM LINE L.PT.DRAIN VALVE (TS CHAR LINE)								5163149		
ZS	1013B STEAM LINE L.PT.DRAIN VALVE (TS CHAR LINE)								5163149		
LS	1015 STEAM LINE L.PT.DRAIN LEVEL (HP AUX STEAM)			1451	650 960				5163149		
ZS	1015A STEAM LINE L.PT.DRAIN VALVE (HP AUX STEAM)								5163149		
ZS	1015B STEAM LINE L.PT.DRAIN VALVE (HP AUX STEAM)								5163149		
LS	1016 STEAM LINE L.PT.DRAIN VALVE (MAIN STEAM LINE)								5163149		
ZS	1016A STEAM LINE L.PT.DRAIN VALVE (MAIN STEAM LINE)			1451	593/ 960				5163149		
ZS	1016B STEAM LINE L.PT.DRAIN VALVE (MAIN STEAM LINE)			1451	593/ 960				5163149		
PIT	1020 AUX STEAM DESUPERHTR OUTLET PRESSURE	100 PSIG	2%FS	61	865	PIT PG7			5163149	ROSEMOUNT 1151 GP6	
TE	1022 TURBINE INLET TEMP.	0-1000	9F	1485	950	115K#			516350		
TT	1022 INLET STEAM TEMP (BEFORE STOP VALVE)	0-1000			1010				5163150	MOORE INDUSTRIES	
TW	1022 MS TO TURBINE 5163150								5163150		
PS	1024 ADMISSION STEAM TO TURBINE PRESS SWITCH	25 TO 600 PSIG		400	530	TT PG1B			5163150	UNITED ELECTRIC CONTROLS UE-105	EPGS
TE	1025 ADMISSION STEAM INLET TEMP.	600 F	5 F	385	525	110K#			5163150		
TI	1025 ADMISSION STEAM TEMP BEFORE STOP VALVE	0-600			580	TT PG1B			5163150	MOORE INDUSTRIES	
TW	1026 TSS STM TO TURBINE								5163150		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
ZS	1030A TS CHARGING STEAM ISOLATION VALVE MOV 1030									5163149		
ZS	1030B TS CHARGING STEAM ISOLATION VALVE MOV 1030									5163149		
ZS	1031A TURBINE MAIN STEAM ISOLATION VALVE MOV 1031									5163149		
ZS	1031B TURBINE MAIN STEAM ISOLATION VALVE MOV 1031									5163149		
PI	1102 FW PRESSURE AFTER 1ST PT HTR INDICATOR PSIG	0-5000		2054								PSS PULSATION DAMPER
TEX	1102 FINAL FEEDWATER TEMPERATURE	450F	2XFS	2300	400	130K				5163151		
TI	1102 FW TEMP AFTER 1ST PT HTR INDICATOR	50-500		400						5163151	UNITED ELECTRIC CONTROLS 50E141 2E	PSS
TT	1102 FW TEMP TO DAS	0-600		440			TT PGIB			5163151	MOORE INDUSTRIES	PSS
LI	1105 RFW LUBE OIL SYS									5163163	BINGHAM WILLIAMETTE	PSS
PI	1105 RFP (P917) LUBE OIL PRESS											PSS
SE	1105 RFP (P917) CASING TEMP									5163163	BINGHAM WILLIAMETTE	PSS
ST	1105 RECEIVER FEED PUMP SPEED											
TE	1105 RFP (917) THRUST BEARING TEMP									5163163	BINGHAM WILLIAMETTE	PSS
TI	1105 RFP (P917) LUBE OIL TEMP									5163163	BINGHAM WILLIAMETTE	PSS
TS	1105 RFP (P917) HYD COUPLING OIL TEMP SW									5163163	BINGHAM WILLIAMETTE	PSS
ZS	1105 RFW LUBE OIL SYS									5163163	BINGHAM WILLIAMETTE	PSS
PI	1105A RFP (P917) LUBE OIL PRESS											PSS
PS	1105A RFW DRIVE END BEARING									5163163	BINGHAM WILLIAMETTE	
TE	1105A RFP (917) THRUST BEARING TEMP									5163163	BINGHAM WILLIAMETTE	PSS
TI	1105A RFP (P917) LUBE OIL TEMP									5163163	BINGHAM WILLIAMETTE	PSS
TS	1105A RFP (P917) HYD COUPLING OIL TEMP SW									5163163	BINGHAM WILLIAMETTE	PSS
XT	1105A RFP (P917) VIBRATION DETECTOR									5163163	BINGHAM WILLIAMETTE	PSS

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
PI	1105B RFP (P917) LUBE OIL PRESS									PSS
PS	1105B RFW DRIVE END BEARING							5163163	BINGHAM WILLIAMETTE	
TE	1105B RFP (917) THRUST BEARING TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TI	1105B RFP (P917) VIBRATION DETECTOR							5163163	BINGHAM WILLIAMETTE	PSS
XT	1105B RFP (P917) VIBRATION DETECTOR							5163163	BINGHAM WILLIAMETTE	PSS
PI	1105C RFP (P917) LUBE OIL PRESS							5163163	BINGHAM WILLIAMETTE	PSS
PS	1105C RFW DRIVE END BEARING							5163163	BINGHAM WILLIAMETTE	
TE	1105C RFP (P917) DRIVE BEARING TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105D RFP (P917) CASING TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105E RFP (P917) HY COUPLING OIL TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105F RFP (P917) VIBRATION DETECTOR							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105G RFP (917) THRUST BEARING TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105H RFW LUBE OIL SYS							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105K RFP (P917) HY COUPLING OIL TEMP							5163163	BINGHAM WILLIAMETTE	PSS
TE	1105M TSS FEEDWATER BLOCK VALVE MOV 1132 TRIP							5163163	BINGHAM WILLIAMETTE	PSS
ISH	1132 TSS FEEDWATER BLOCK VALVE MOV 1132 TRIP							5163163	BINGHAM WILLIAMETTE	PSS
ZS	1132A TSS FEEDWATER BLOCK VALVE MOV 1132							5163163	BINGHAM WILLIAMETTE	PSS
ZS	1132B TSS FEEDWATER BLOCK VALVE MOV 1132							5163163	BINGHAM WILLIAMETTE	PSS
PI	1201 P-710 DISCHARGE PRES INDICATOR	0-100	35	60				5163160		PSS PULSATION DAMPER
LS	1203 DEMINERALIZED WATER STORAGE TANK LEVEL							5163160		
LI	1204 DEMIN WATER TANK LEVEL							5163160		
CIT	1205 MAKEUP DEMINERALIZER OUTLET WATER COND.							5263160		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
FQI 1205	DEMNERILIZER OUPUT TOTAL FLOW OUTLET WATER COND.		2%FS	60	75					5163160	
LE 1205	MAKE UP DEMIN									5163160	
CIT 1206	DEMNERILIZER POLISHER OUTPUT (HP AUX STEAM)									5163160	
FI 1206	DEM POLISHER OUTPUT									5163160	
LE 1206	DEM POLISHER OUTPUT									5163160	
YT 1414A	SOLAR PYRHOLIOMETER (SOUTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1414B	SOLAR PYRHOLIOMETER (SOUTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1414C	SOLAR PYRHOLIOMETER (SOUTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1414D	SOLAR PYRHOLIOMETER (SOUTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1415A	SOLAR PYRHOLIOMETER (WEST TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1415B	SOLAR PYRHOLIOMETER (WEST TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1415C	SOLAR PYRHOLIOMETER (WEST TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1415D	SOLAR PYRHOLIOMETER (WEST TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1416A	SOLAR PYRHOLIOMETER (NORTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1416B	SOLAR PYRHOLIOMETER (NORTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1416C	SOLAR PYRHOLIOMETER (NORTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1416D	SOLAR PYRHOLIOMETER (NORTH TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT 1417A	SOLAR PYRHOLIOMETER (EAST TARGET)	0-20 SUNS		AMB						MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	DEG.F	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
YT	1417B SOLAR PYRHeliometer (EAST TARGET)	0-20 SUNS								MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT	1417C SOLAR PYRHeliometer (EAST TARGET)	0-20 SUNS								MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
YT	1417D SOLAR PYRHeliometer (EAST TARGET)	0-20 SUNS								MEDTHERM CORP. FDTW-2.5-20020	SPECTRAL RESPONSE .2 TO 4.5 MICRON SENSITIVITY: 5MV/SUN
HS	1418 RECEIVER PP								5163163		
TC	1418 BCS SENSOR COOLING TEMP	0-200			130				5133152 5163163	ACTION PAK	PSS
TE	1418 BCS SENSOR COOLING TEMP								5133152 5163163	INSTRUMENT SERVICE CO CZJ4-R3-H- MGSC521	PSS
TC	1420 THERMAL STORAGE BLOWN TNK			100 PSIG	350		TC-1		5132195 5163146	UNITED ELEC- TRIC CONTROLS	
JQX	1451 HELIOSTAT ENERGY CONSUMPTION 0116								5163163		
JTX	1451 HELIOSTAT POWER 0116										
JQX	1452 HELIOSTAT ENERGY CONSUMPTION 0128										
JTX	1452 HELIOSTAT POWER 0128										
JQX	1453 HELIOSTAT ENERGY HLSTMPION 1052										
JTX	1453 HELIOSTAT POWER 1052										
JQX	1454 HELIOSTAT ENERGY CONSUMPTION 1638										
JTX	1454 HELIOSTAT POWER 1638										
JQX	1455 HELIOSTAT ENERGY CONSUMPTION 2766										
JTX	1455 HELIOSTAT POWER 2766										
JQX	1456 COLLECTOR FIELD TRANSFORMER ENERGY CONSUMP. NO.2										
JTX	1456 COLLECTOR FIELD TRANSFORMER POWER NO.2										
JQX	1457 COLLECTOR FIELD TRANSFORMER ENERGY CONSUMP. NO.6										
JTX	1457 COLLECTOR FIELD TRANSFORMER POWER NO.6										
JQX	1458 COLLECTOR FIELD ENERGY CONSUMPTION # 1										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
JTX 1458	COLLECTOR FIELD POWER #1									
JQ 1459	COLLECTOR FIELD ENERGY CONSUMPTION # 2									
JTX 1459	COLLECTOR FILED POWER #2									
JT 1460	4160V (RFP) POWER									
JT 1461	TSS SUBSTATION POWER									
JT 1462	COOLING TOWER POWER									
JT 1463	STATION SERVICE POWER									
JTX 1464	MCC-A POWER									
JTX 1465	MCC-C POWER									
JTX 1466	PPA POWER									
JTX 1467	TSS FW PUMP POWER									
JT 1468	AUX X-FORMER OUT POWER									
JT 1469	MAIN X-FORMER OUT POWER									
JT 1470	GEN GROSS OUTPUT POWER									
TSH 1480	REM STAT #1 (13) INTERIOR TEMP SWITCH									PSS
TSL 1480	REM STAT #1 (13) INTERIOR TEMP SWITCH									PSS
TSH 1481	REM STAT #1 (14) INTERIOR TEMP SWITCH									PSS
TSL 1481	REM STAT #1 (14) INTERIOR TEMP SWITCH									PSS
TSH 1482	REM STAT #2 INTERIOR TEMP SWITCH									BINGHAM WILLIAMNEHE
TSL 1482	REM STAT #2 INTERIOR TEMP SWITCH									PSS
TSH 1483	REM STAT #3 INTERIOR TEMP SWITCH									PSS
TSL 1483	REM STAT #3 INTERIOR TEMP SWITCH									PSS
LG 1501	DIESEL F.O. DAY TK LEVEL LOCAL							5163161		PSS
LS 1501	FUEL OIL DAY TNK							5163161		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
FI 1502	DIESEL FIRE PUMP RECIRC FLOW RATE SWITCH								5163161		
FS 1502	DIESEL F.O TNK SPRINKLER								5163161		PSS
PI 1502	P-706 RECIRC PRESSURE								5163161		PSS
PS 1502	FIRE PP CONTROLLER								5163161		
PI 1510	P-705 SUCTION PRESSURE								5163161		PSS
FI 1511	PRIMARY FIRE PUMP RECIRC FLOW RATE SWITCH								5163161		
PI 1511	P-705 DISCHARGE PRESSURE								5163161		PSS
PS 1511	FIRE PP CONTROLLER								5163161		
PI 1513	P-707 DISCHARGE PRESSURE								5163161		PSS
PS 1513	JOCKEY PP CONTROLLER								5163161		PSS
PI 1514	FIRE WATER PRESSURE								5163161		PSS
FE 1601	SE701 DISCH FLOW ELEMENT	0-100"		65 PSIG	70	350GPM			5133149		
FT 1601	SEPARATOR WASTE FLOW TO EVAP POND	0-100		60	140				5163155	ROSEMOUNT	
LS 1602	SEPARATOR LEVEL								5163155		
LS 1602A	SEPARATOR								5163155		PSS
LS 1603	OIL WTR SEPARATOR								5163155		
LS 1605	RAW SERVICE WTR PP								5163155		
LS 1606	SUMP PUMP								5163155		
LS 1607	MAINTENANCE OIL SUMP	ACTVAT @4"		600	2600 GPM				5163155	DELTA CONTROLS (WINN-MARION) 709:F2-A1-MLIT N7D-113-4"	PSS
TC 1607	MAINTAINANCE OIL SUMP	0-600		SET@ 200	2600 GPM				5163155	PRIME CONTROLS BURLING INSTR	
LI 1701	RAW WATER TANK LEVEL								5163159		
LS 1701A	RAW WTR STORAGE TNK								5163159		CP-9
LS 1701B	RAW WTR STORAGE TNK								5163159		CP-9
LS 1702	RAW/SERVICE WTR TNK								5163159		

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
LS 1703	SERVICE WATER TANK LEVEL								5163159		
FE 1703A	RAW WTR			125	100	400 GPM			5163159	ROSEMOUNT 1151FP 3E12M2B1A1	PULSATION DAMPER
FIT 1703A	RAW WATER	0-400 GPM	150	100					5163159	ROSEMOUNT 1151DP 3E12 M2B1A1	PULSATION DAMPER 15" H2O MAX.DP
PI 1703A	RAW WATER PUMP OUTLET PRESS	0-150 PSIG							5163159		
FE 1703B	RAW WTR			125	100	400 GPM			5163159	ROSEMOUNT 1151DP3E12 M2B1A1	PSS
FIT 1703B	RAW WATER	0-400 PSIG	150	100					5163159	ROSEMONT 1151DP 3E12 M2B1A1	PULSATION DAMPER 15" H2O MAX.DP
PI 1703B	RAW WATER PUMP OUTLET PRESS	0-150 PSIG							5163159		
FIT 1705A	RAW WTR	0-4006 PM		150	100	15" H2O			5163159		PSS
LI 1903	CALORIA MAKEUP TANK LEVEL								5163163		PSS
TE 2001	RECEIVER WATER INLET TEMP.-1	0-500 DEG F	2%FS		200					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PT 2002	PROCESS VARIABLE RS BOILER MANIFOLD H2O PRESSURE	0-3000 PSIG	2%FS	2000	200					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
ZT 2002	WATER BYPASS VALVE POSITION	0-100%	5%FS						5163159		
ZS 2004A	PREHEATER PANEL WATER INLET VALVE POSITION										
ZS 2004B	PREHEATER PANEL WATER INLET VALVE POSITION										
TE 2005	PREHEATER PANEL 25 WATER OUTLET TEMPERATURE	0-1500 DEG F	2%FS		500					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-5(1/2)-6-AA-H7
PT 2006	PREHEATER PANEL WATER OUTLET PRESS.	0-3000 PSIG	2%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-3000
ZS 2007A	PREHEATER PANEL WATER VENT VALVE POSITION		2%FS								

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZS 2007B	PREHEATER PANEL WATER VENT VALVE POSITION		2%FS								
PDT 2008	RECEIVER DIFFERENTIAL PRESS.	0-500 PSID	10%FS	1500	1000					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4256/4257 P/N:1151DP&E12-B2
PI 2011	NITROGEN PRESS. GAGE-1	0 TO 600		400	113	SP42-061					RECEIVER (R) FLUID:GN2 1/2"NPT MALE,BOTTOM ASTM A106 GRADE B
PI 2014	NITROGEN PRESS. GAGE-2	0 TO 60		10	113	SP42-061					RECEIVER (R) FLUID:GN2 1/2"NPT MALE,BOTTOM ASTM A106 GRADE B
PS 2015A	NITROGEN REGULATED PRESSURE SWITCH	SET 5 PSIG		600	16-113F	SP42-024			NEO-DYN INC.		RECEIVER (R) FLUID:GN2 1/4"NPT FEMALE ASTM A106 GRADE B P/N:100PIS
PS 2015B	NITROGEN REGULATED PRESSURE SWITCH	SET 30PSIG		600	16-113F	SP42-024					RECEIVER (R) FLUID:GN2 1/4"NPT MALE,BOTTOM ASTM A106 GRADE B P/N:100PIS
PI 2017	PREHEATER PANEL STEAM PRESS. GAGE	0 TO 3000		200	113	SP42-062					RECEIVER (R) FLUID:GN2&H2O 1/2"NPT MALE,BOTTOM ASTM A106 GRADE B
PSH 2018	NITROGEN SUPPLY PRESSURE SWITCH			300/500	16-113F	SP42-023			BARKSDALE CONTROLS L.A., CA.		RECEIVER (R) FLUID:GN2 1/4"NPT FEMALE ASTM A106 GRADE B 600 PSIG MAX. P/N:B2TM12SS
PSL 2018	NITROGEN SUPPLY PRESSURE SWITCH			300/500	16-113F	SP42-023			BARKSDALE CONTROLS L.A., CA.		RECEIVER (R) FLUID:GN2 1/4"NPT FEMALE ASTM A106 GRADE B 600 PSIG MAX. P/N:B2TM12SS
PI 2020	DOWNCOMER MANIFOLD STEAM PRESS. GAGE	0 TO 2000		1500	113	SP42-062					RECEIVER (R) FLUID:GN2&H2O 1/2"NPT MALE,BOTTOM ASTM A335 GRADE P22
TEX 2050	RECEIVER WATER INLET TEMP.-3	0-500 DEG F	2%FS						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670		SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
TEX 2051	RECEIVER WATER INLET TEMP.-2	0-500 DEG F	2%FS						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670		SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
TEX 2053A	RECEIVER STRUCTURE TEMP-LEVEL 17-HEATSHIELD-FRONT	1500 DEG F	2%FS								

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2053B	RECEIVER STRUCTURE TEMP LEVEL 17- HEATSHILED-FRONT	1500 DEG F	2%FS								
TEX 2053C	RECEIVER STRUCTURE TEMP-CRANE	1500 DEG F	2%FS								
TEX 2053D	RECEIVER STRUCTURE TEMP-CRANE	1500 DEG F	2%FS								
TEX 2053E	RECEIVER STRUCTURE TEMP-CRANE	1500 DEG F	2%FS								
TEX 2053G	AIR TEMP NEAR VALVES VENT	300 DEG F	2%FS							5163151	
TEX 2053I	RECEIVER STRUCTURE TEMP SLIDE R0012882 -11 ITEM 3(357.75FT)	1500 DEG F	2%FS								
TEX 2053J	RECEIVER STRUCTURE TEMP TRANSVERSE BEAM R0012846-1(357.75)	1500 DEG F	2%FS								
TEX 2053K	RECEIVER STRUCTURE TEMP BASE 4554 R0012876-1 ITEM1	1500 DEG F	2%FS								
TEX 2053L	RECEIVER STRUCTURE TEMP-4 DAPTER ASSY R0012876 ITEM	1500 DEG F	2%FS								
TEX 2053M	RECEIVER STRUCTURE TEMP-STEAM MANIFOLD NEAR SUPPORTS	1500 DEG F	2%FS							5163151	
TEX 2053N	DOWNCOMER MANIFOLD SKIN TEMP - (NEAR SUPPORTS)	1500 DEG F	2%FS								
PS 2099	INSTRUMENT AIR PRESSURE SWITCH			165	113		SP42- 022				FLUID: INSTR. AIR 1/4"NPT FEMALE ASTM A106 GRADE B CAPACITY=60 PSIG ON DECREASING PRESS.
TE 2107	PREHEATER PANEL 22 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS		500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
TE 2108	PREHEATER PANEL 23 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS		500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
TE 2109	PREHEATER PANEL 24 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS		500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
YT 2110A	PREHEATER PANEL 22 HEAT FLUX-1	0-170 KW/M2	5%FS		AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
YT 2110B	PREHEATER PANEL 22 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2110C	PREHEATER PANEL 22 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2111A	PREHEATER PANEL 23 HEAT FLUX-1	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2111B	PREHEATER PANEL 23 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2111C	PREHEATER PANEL 23 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2112A	PREHEATER PANEL 24 HEAT FLUX-1	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2112B	PREHEATER PANEL 24 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
YT 2112C	PREHEATER PANEL 24 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB					MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360- 20456
OTX 2136	PANEL AXIAL MOVEMENT-22	0-6"	.1%FS						CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2137	PANEL AXIAL MOVEMENT-23	0-6"	.1%FS						CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2142A	PANEL BOW POSITION- 22-1	0-4"	.1%FS						CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2142B	PANEL BOW POSITION- 22-2	0-4"	.1%FS						CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2142C	PANEL BOW POSITION- 22-3	0-4"	.1%FS						CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TE 2207	PREHEATER PANEL 1 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS	500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
TE 2208	PREHEATER PANEL 2 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS	500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
TE 2209	PREHEATER PANEL 3 WATER OUTLET TEMPERATURE	0-800 DEG F	2%FS	500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
YT	2210A PREHEATER PANEL 1 HEAT FLUX-1	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2210B PREHEATER PANEL 1 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2210C PREHEATER PANEL 1 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2211A PREHEATER PANEL 2 HEAT FLUX-1	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2211B PREHEATER PANEL 2 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2211C PREHEATER PANEL 2 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2212A PREHEATER PANEL 3 HEAT FLUX-1	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2212B PREHEATER PANEL 3 HEAT FLUX-2	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
YT	2212C PREHEATER PANEL 3 HEAT FLUX-3	0-170 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-15-36-360-20456
FT	2230 PREHEATER PANEL 1 FLOW	70 K#/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-2(1/2) CFT7D
FT	2231 PREHEATER PANEL 2 WATER FLOWRATE	70 K#/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-2(1/2) CFT7D
FT	2232 PREHEATER PANEL 3 WATER FLOWRATE	70 K#/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-2(1/2) CFT7D
FT	2301 PROCESS VARIABLE BOILER PANEL WATER FLOW CONTROL-4	7903 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT	2301 BOILER WATER 4 TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE	2301A PROCESS VARIABLE BLR PANEL CONTROL TEMP -4-1	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TE	2301B PROCESS VARIABLE BLR PANEL CONTROL TEMP -4-2	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TE 2301C (IN.SPARE)	PROCESS VARIABLE BLR PANEL CONTROL TEMP -4-3(INSTLD SPARE)	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2302	PROCESS VARIABLE BOILER PANEL WATER FLOW CONTROL-5	7903 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2302	BOILER PANEL 5 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS							
TE 2302A	PROCESS VARIABLE BLR PANEL CONTROL TEMP -5-1	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TC 2302B (IN.SPARE)	BOILER PANEL 5 TEMP	1500	2%FS	1000						
TE 2302B	PROCESS VARIABLE BLR PANEL CONTROL TEMP -5-2	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2302C	PROCESS VARIABLE BLR PANEL CONTROL TEMP -5-3(INSTLD SPARE)	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2303	BOILER PANEL WATER FLOW CONTRL SETPOINT -6	7903 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2303	BOILER PANEL 6 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS							
TC 2303A (IN.SPARE)	BOILER PANEL 6 TEMP	1500F	2%FS	1000						
TE 2303A	PROCESS VARIABLE BLR PANEL CONTROL TEMP -6-1	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2303B	PROCESS VARIABLE BLR PANEL CONTROL TEMP -6-2	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2303C	PROCESS VARIABLE BLR PANEL CONTROL TEMP -6-3(INSTLD SPARE)	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2304A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -4	0-1500 DEG F	2%FS	950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 2304B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -4	0-1500 DEG F	2%FS		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2305A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 5	0-1500 DEG F	2%FS		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2305B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -5	0-1500 DEG F	2%FS		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2306A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 6	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2306B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -6	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
YT 2307A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -4	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2307B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -4	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2307C	BOILER PANEL 4 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2308A	BOILER PANEL 5 HEAT FLUX-1	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2308B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -5	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2308C	BOILER PANEL 5 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2309A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -6	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2309B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -6	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2309C	BOILER PANEL 6 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PDTX 2330	BOILER C.V. DIFFERENTIAL PRESS.-4	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
PDTX 2332	BOILER C.V. DIFFERENTIAL PRESS.-6	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2333	BOILER PANEL WATER INLET TEMP.-4	300-600 DEG F	1%FS		500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2334	BOILER PANEL WATER INLET TEMP.-5	0-6" 600 DEG F	1%FS		500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-003 P/N:PT101-A0A-7266
OTX 2336	BOILER PANEL AXIAL MOVEMENT-4	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2338	BOILER PANEL AXIAL MOVEMENT-6	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2341	BOILER PANEL LATERAL POSITION-6	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TTX 2345	BOILER PANEL STEAM OUTLET TEMP.-4-4	800-1200F	1%FS		950					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2346	BOILER PANEL STEAM OUTLET TEMP.-5-4	800-1200 DEG. F	1%FS		950					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2347	BOILER PANEL STEAM OUTLET TEMP.-6-4	800-1200 DEG. F	1%FS		950					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2351	MOISTURE TRAP SKIN TEMP.-4	1500 DEG F	2%FS							HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX 2353	MOISTURE TRAP SKIN TEMP.-6	1500 DEG F	2%FS							HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX 2354A	BOILER PANEL TEMP.-4-4	1500 DEG F	2%FS		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2354B	BOILER PANEL TEMP.- 4-5	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2354C	BOILER PANEL TEMP.- 4-6	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2354D	BOILER PANEL TEMP.- 4-7	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2355A	BOILER PANEL TEMP.- 5-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2355B	BOILER PANEL TEMP.- 5-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2355C	BOILER PANEL TEMP.- 5-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2355D	BOILER PANEL TEMP.- 5-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356A	BOILER PANEL TEMP.- 6-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356B	BOILER PANEL TEMP.- 6-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356C	BOILER PANEL TEMP.- 6-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356D	BOILER PANEL TEMP.- 6-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET K#/HR	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2356E	BOILER PANEL TEMP.- 6-5	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356F	BOILER PANEL TEMP.- 6-6	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356G	BOILER PANEL TEMP.- 6-7	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356H	BOILER PANEL TEMP.- 6-8	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356I	BOILER PANEL TEMP.- 6-9	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356J	BOILER PANEL TEMP.- 6-10	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356K	BOILER PANEL TEMP.- 6-11	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356L	BOILER PANEL TEMP.- 6-12	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356M	BOILER PANEL TEMP.- 6-13	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356N	BOILER PANEL TEMP.- 6-14	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2356P	BOILER PNEL TEMP. 6-15	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2356Q	BOILER PANEL TEMP.- 6-16	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356R	BOILER PANEL TEMP.- 6-17	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356S	BOILER PANEL TEMP.- 6-18	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356T	BOILER PANEL TEMP.- 6-19	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356U	BOILER PANEL TEMP.- 6-20	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356V	BOILER PANEL TEMP.- 6-21	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356W	BOILER PANEL TEMP.- 6-22	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356Y	BOILER PANEL TEMP.- 6-24	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2356Z	BOILER PANEL TEMP.- 6-25	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359A	BOILER PANEL TEMP.- 6-26	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359C	BOILER PANEL TEMP.- 6-28	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TEX 2359D	BOILER PANEL TEMP.- 6-29	1500 DEG F	1%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359E	BOILER PANEL TEMP.- 6-30	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359G	BOILER PANEL TEMP.- 6-32	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359H	BOILER PANEL TEMP.- 6-33	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359I	BOILER PANEL TEMP.- 6-34	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359K	BOILER PANEL TEMP.- 6-36	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359L	BOILER PANEL TEMP.- 6-37	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359P	BOILER PANEL TEMP.- 6-40	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359U	BOILER PANEL TEMP.- 6-45	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2359X	BOILER PANEL TEMP.- 6-48	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2362B	BOILER PANEL TEMP.- 6-52	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
FT 2401	PROCESS VARIABLE BOILER PANEL-7 FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. SPEC.NO:SP78-002 MONTVILLE, P/N:MARK V-1 N.J. 07045 CFR7D	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
ZT 2401	BOILER PANEL 7 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2401A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -7-1	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2401B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -7-2	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2401C (IN.SPARE)	PROCESS VARIABLE BLR STEAM TEMP CONTROL -7-3	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
FT 2402	PROCESS VARIABLE BOILER PANEL-8 FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2402	BOILER PANEL 8 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TC 2402A (IN.SPARE)	BOILER PANEL 8 TEMP	1500F	2%FS		1000						
TE 2402A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -8-1	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2402B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -8-2	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2402C	PROCESS VARIABLE BLR STEAM TEMP CONTROL -8-3	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
FT 2403	PROCESS VARIABLE BOILER PANEL-9 FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2403	BOILER PANEL 9 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2403A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -9-1	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2403B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -9-2	0-1500	2%FS DEG F		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 2403C (IN.SPARE)	PROCESS VARIABLE BLR STEAM TEMP CONTROL -9-3	0-1500 DEG F	2%FS	2000	1500					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265=EX-K- 23-600
TE 2404A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 7	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
TE 2404B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -7	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
TE 2405A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 8	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
TE 2405B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -8	0-1500 DEG F	0.75%		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
TE 2406A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 9	0-1500 DEG F	0.75%		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
TE 2406B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -9	0-1500 DEG F	0.75%		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C 5(1/2)-6-AA-X11-H7
YT 2407A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -7	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2407B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -7	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2407C	BOILER PANEL 7 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2408A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -8	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2408B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -8	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2408C	BOILER PANEL 8 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2409A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -9	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
YT 2409B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -9	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2409C	BOILER PANEL 9 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
PDTX 2431	BOILER C.V. DIFFERENTIAL PRESS.- 8	0-500 PSID	10%FS		500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2434	BOILER PANEL WATER INLET TEMP.-8 8	300- 600 DEG F	10%FS		500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
OTX 2436	BOILER PANEL AXIAL MOVEMENT-7	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2439	BOILER PANEL LATERAL POSITION-7	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TTX 2445	BOILER PANEL STEAM OUTLET TEMP.-7-4	800- 1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2446	BOILER PANEL STEAM OUTLET TEMP.-8-4	800- 1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2447	BOILER PANEL STEAM OUTLET TEMP.-9-4	800- 1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2454A	BOILER PANEL TEMP.- 7-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2454B	BOILER PANEL TEMP.- 7-5	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2454C	BOILER PANEL TEMP.- 7-6	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2454D	BOILER PANEL TEMP.- 7-7	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2455A	BOILER PANEL TEMP.- 8-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2455B	BOILER PANEL TEMP.- 8-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2455C	BOILER PANEL TEMP.- 8-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2455D	BOILER PANEL TEMP.- 8-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2456A	BOILER PANEL TEMP.- 9-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2456B	BOILER PANEL TEMP.- 9-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2456C	BOILER PANEL TEMP.- 9-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2456D	BOILER PANEL TEMP.- 9-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
FT 2501	PROCESS VARIABLE BOILER PANEL-10 H2O FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. SPEC.NO:SP78-002 MONTVILLE, P/N:MARK V-1 N.J. 07045 CFR7D	
ZT 2501	BOILER PANEL 10 WATER TEMP. CONTROL VALVE POSITION	0-100%	2%FS								
TE 2501A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -10	0-1500 DEG F	2%FS	2000	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	
TE 2501B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -10	0-1500 DEG F	2%FS	2000	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 2501C (IN.SPARE) 10-3	BOILER PANEL TEMP.-	0-1500 DEG F	2%FS	2000	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2502	PROCESS VARIABLE BOILER PANEL-18 FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2502	BOILER PANEL 11 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2502A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -11	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2502B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -11	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2502C (IN.SPARE) 11-3	BOILER PANEL TEMP.-	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2503	PROCESS VARIABLE BOILER PANEL WATER FLOW CONTROL	11855 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2503	BOILER PANEL 12 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2503A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -12	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2503B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -12	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2503C (IN.SPARE) 12-3	BOILER PANEL TEMP.-	0-1500 DEG F	2%FS		1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2504A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -10	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- SANTA FE. SPR. 5(1/2)-6-AA-X11-H7
TE 2504B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -10	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- SANTA FE. SPR. 5(1/2)-6-AA-X11-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 2505A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 11	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2505B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -11	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2506A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 12	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2506B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -12	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH PN:TC-723-K-C- 5(1/2)-6-AA-X11-H7
YT 2507A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -10	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2507B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -10	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2507C	BOILER PANEL 10 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2508A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -11	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2508B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -11	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2508C	BOILER PANEL 11 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
TIX 2509A	RECEIVER STRUCTURE TEMP-FLUX SENSOR ON PANEL 12	500	2%FS								
YT 2509A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -12	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2509B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -12	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2509C	BOILER PANEL 12 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
PDX 2530	BOILER C.V. DIFFERENTIAL PRESS.- 10	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
PDX 2532	BOILER C.V. DIFFERENTIAL PRESS.-12	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2533	BOILER PANEL WATER INLET TEMP.-12	300-600 DEG F	10%FS	2000	500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2535	BOILER PANEL STEAM INLET TEMP.-12	300-600 DEG F	1%FS	2000	500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
OTX 2537	BOILER PANEL AXIAL MOVEMENT-11	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2538A	BOILER PANEL AXIAL MOVEMENT-12-1	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2538B	BOILER PANEL AXIAL MOVEMENT-12-2	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2538C	BOILER PANEL AXIAL MOVEMENT-12-3	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2538D	BOILER PANEL AXIAL MOVEMENT-12-4	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2544A	BOILER PANEL BOW POSITION-12-1	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2544B	BOILER PANEL BOW POSITION-12-2	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2544C	BOILER PANEL BOW POSITION-12-3	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2544D	BOILER PANEL BOW POSITION-12-4	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2544E	BOILER PANEL BOW POSITION-12-5	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2544F	BOILER PANEL BOW POSITION-12-6	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TTX 2545	BOILER PANEL STEAM OUTLET TEMP.-10-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2546	BOILER PANEL STEAM OUTLET TEMP.-11-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TTX 2547	BOILER PANEL STEAM OUTLET TEMP.-12-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2553	MOISTURE TRAP TEMP.-12	500-1000F	2%FS							HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX 2554A	BOILER PANEL TEMP.-10-4	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2554B	BOILER PANEL TEMP.-10-5	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2554C	BOILER PANEL TEMP.-10-6	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2554D	BOILER PANEL TEMP.-10-7	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2555A	BOILER PANEL TEMP.-11-1	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2555B	BOILER PANEL TEMP.-11-2	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2555C	BOILER PANEL TEMP.-11-3	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2555D	BOILER PANEL TEMP.-11-4	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2556A	BOILER PANEL TEMP.-12-1	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2556B	BOILER PANEL TEMP.-12-2	1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET K#/HR	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2556C	BOILER PANEL TEMP.- 12-3	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556D	BOILER PANEL TEMP.- 12-4	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556E	BOILER PANEL TEMP.- 12-5	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556F	BOILER PANEL TEMP.- 12-6	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556G	BOILER PANEL TEMP.- 12-7	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556H	BOILER PANEL TEMP.- 12-8	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556I	BOILER PANEL TEMP.- 12-9	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556J	BOILER PANEL TEMP.- 12-10	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556K	BOILER PANEL TEMP.- 12-11	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556L	BOILER PANEL TEMP.- 12-12	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556M	BOILER PANEL TEMP.- 12-13	1500 DEG F	2%FS		1000				HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2556N	BOILER PANEL TEMP.- 12-14	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556P	BOILER PANEL TEMP.- 12-15	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556Q	BOILER PANEL TEMP.- 12-16	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556R	BOILER PANEL TEMP.- 12-17	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556S	BOILER PANEL TEMP.- 12-18	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556T	BOILER PANEL TEMP.- 12-19	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556U	BOILER PANEL TEMP.- 12-20	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556V	BOILER PANEL TEMP.- 12-21	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556W	BOILER PANEL TEMP.- 12-22	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556Y	BOILER PANEL TEMP.- 12-24	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2556Z	BOILER PANEL TEMP.- 12-25	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2559A	BOILER PANEL TEMP.- 12-26	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559C	BOILER PANEL TEMP.- 12-28	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559D	BOILER PANEL TEMP.- 12-29	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559E	BOILER PANEL TEMP.- 12-30	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559G	BOILER PANEL TEMP.- 12-32	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559H	BOILER PANEL TEMP.- 12-33	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559I	BOILER PANEL TEMP.- 12-34	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559K	BOILER PANEL TEMP.- 12-36	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559L	BOILER PANEL TEMP.- 12-37	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559P	BOILER PANEL TEMP.- 12-40	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2559U	BOILER PANEL TEMP.- 12-45	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2559X	BOILER PANEL TEMP.- 12-48	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2562B	BOILER PANEL TEMP.- 12-52	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2601	PROCESS VARIABLE BOILER PANEL-13 FLOW CONTROL	11855 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2601	BOILER PANEL 13 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS							
TE 2601A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -13	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2601B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -13	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2601C (IN.SPARE)	BOILER PANEL TEMP.- 13-3	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2602	PROCESS VARIABLE BOILER PANEL-14 FLOW CONTROL	11855 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2602	BOILER PANEL 14 WATER TEMP. CONTROL CONTROL POSITION	0-100%	5%FS							
TE 2602A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -14	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2602B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -14	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2602C (IN.SPARE)	BOILER PANEL TEMP.- 14-3	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2603	BOILER PANEL 15 WATER FLOWRATE	1.5-30 GPM	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F						
ZT 2603	BOILER PANEL 15 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2603A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -15	0-1500	2%FS DEG F		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	
TE 2603B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -15	0-1500	2%FS DEG F		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	
TE 2603C (IN.SPARE) 15-3	BOILER PANEL TEMP.- 15-3	0-1500	2%FS DEG F		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	
TE 2604A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 13	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
TE 2604B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -13	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
TE 2605A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 14	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
TE 2605B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -14	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
TE 2606A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 15	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
TE 2606B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -15	0-1500	0.75% DEG F		950					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C SANTA FE. SPR. 5(1/2)-6-AA-X11-H7 CA. 90670	
YT 2607A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -13	488	5%FS KW/M2	AMB						MEDTHERM CORP. SPEC.NO:78-005 HUNTSVILLE, P/N:8-43-36-360- AL. 35804 20456	
YT 2607B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -13	488	5%FS KW/M2	AMB						MEDTHERM CORP. SPEC.NO:78-005 HUNTSVILLE, P/N:8-43-36-360- AL. 35804 20456	
YT 2607C	BOILER PANEL 13 HEAT FLUX-3	488	5%FS KW/M2	AMB						MEDTHERM CORP. SPEC.NO:78-005 HUNTSVILLE, P/N:8-43-36-360- AL. 35804 20456	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F						
YT 2608A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -14	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2608B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -14	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2608C	BOILER PANEL 14 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2609A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -15	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2609B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -15	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2609C	BOILER PANEL 15 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
PDTX 2631	BOILER C.V. DIFFERENTIAL PRESS 14	0-500 PSID	10%FS	2000 500						VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2634	BOILER PANEL STEAM INLET TEMP.-14	300- 600 DEG F	1%FS	2000 500						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
OTX 2636	BOILER PANEL AXIAL MOVEMENT-13	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2637	BOILER PANEL AXIAL MOVEMENT-14	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
TTX 2645	BOILER PANEL STEAM OUTLET TEMP.-13-4	800- 1200 DEG. F	1%FS	950 7K#						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2646	BOILER PANEL STEAM OUTLET TEMP.-14-4	800- 1200 DEG. F	1%FS	950 7K#						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2647	BOILER PANEL STEAM OUTLET TEMP.-15-4	800- 1200 DEG. F	1%FS	950 7K#						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2654A	BOILER PANEL TEMP.- 13-4	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TEX 2654B	BOILER PANEL TEMP.- 13-5	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2654C	BOILER PANEL TEMP.- 13-6	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2654D	BOILER PANEL TEMP.- 13-7	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2655A	BOILER PANEL TEMP.- 14-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2655B	BOILER PANEL TEMP.- 14-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2655C	BOILER PANEL TEMP.- 14-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2655D	BOILER PANEL TEMP.- 14-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2656A	BOILER PANEL TEMP.- 15-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2656B	BOILER PANEL TEMP.- 15-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2656C	BOILER PANEL TEMP.- 15-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2656D	BOILER PANEL TEMP.- 15-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
FT 2701	PROCESS VARIABLE BOILER PANEL-16 FLOW CONTROL	11655 #/HR	1%FS	2000	500					RAMAPO INSTR. SPEC.NO:SP78-002 MONTVILLE, P/N:MARK V-1 N.J. 07045 CFR7D	
ZT 2701	BOILER PANEL 16 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA K#/HR SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TE 2701A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -16	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2701B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -16	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2701C (IN.SPARE)	BOILER PANEL TEMP.- 16-3	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
FT 2702	PROCESS VARIABLE BOILER PANEL-17 FLOW CONTROL	11855 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2702	BOILER PANEL 17 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS							
TE 2702A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -17-1	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2702B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -17-2	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2702C (IN.SPARE)	BOILER PANEL TEMP.- 17-3	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
FT 2703	PROCESS VARIABLE BOILER PANEL-18 FLOW CONTROL	11855 #/HR	1%FS	2000	500				RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2703	BOILER PANEL 18 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS							
TE 2703A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -18-1	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2703B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -18-2	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600
TE 2703C	PROCESS VARIABLE BLR STEAM TEMP CONTROL -18-3	0-1500 DEG F	2%FS	1000					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K 23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TE 2704A	PROCESS VARIABLE BLR STEAM TEMP CONTROL 16	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2704B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -16	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2705A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -17	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2705B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -17	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2706A	BOILER PANEL 18 STEAM OUTLET TEMP-1	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2706B	BOILER PANEL 18 STEAM OUTLET TEMP-2	0-1500 DEG F	0.75%		950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-X11-H7
YT 2707A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -16	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2707B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -16	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2707C	BOILER HEAT FLUX-16- 3	488 KW/M2	5%	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2708A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -17	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2708B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -17	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2708C	BOILER PANEL 17 HEAT FLUX-3	488 KW/M2	5%	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2709A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -18	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2709B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -18	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
YT 2709C	BOILER PANEL 18 HEAT FLUX-3	488 KW/M2	5%	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360-20456
PBTX 2731	BOILER C.V. DIFFERENTIAL PRESS.-17	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2734	BOILER PANEL STEAM INLET TEMP.-17	300-600 DEG F	1%FS	2000	500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
OTX 2736	BOILER PANEL AXIAL MOVEMENT-16	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2737	BOILER PANEL AXIAL MOVEMENT-17	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2741	BOILER PANEL LATERAL POSITION-18	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TTX 2745	BOILER PANEL STEAM OUTLET TEMP.-16-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2746	BOILER PANEL STEAM OUTLET TEMP.-17-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2747	BOILER PANEL STEAM OUTLET TEMP.-18-4	800-1200 DEG. F	1%FS	950	7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2754A	BOILER PANEL TEMP.-16-4	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2754B	BOILER PANEL TEMP.-16-5	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2754C	BOILER PANEL TEMP.-16-6	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2754D	BOILER PANEL TEMP.-16-4	1500 DEG F	2%FS	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2755A	BOILER PANEL TEMP.- 17-1	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755B	BOILER PANEL TEMP.- 17-2	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755C	BOILER PANEL TEMP.- 17-3	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755D	BOILER PANEL TEMP.- 17-4	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755E	BOILER PANEL TEMP.- 17-5	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755F	BOILER PANEL TEMP.- 17-6	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755G	BOILER PANEL TEMP.- 17-7	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755H	BOILER PANEL TEMP.- 17-8	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755I	BOILER PANEL TEMP.- 17-9	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755J	BOILER PANEL TEMP.- 17-10	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755K	BOILER PANEL TEMP.- 17-11	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2755L	BOILER PANEL TEMP.- 17-12	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755M	BOILER PANEL TEMP.- 17-13	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755N	BOILER PANEL TEMP.- 17-14	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755P	BOILER PANEL TEMP.- 17-15	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755Q	BOILER PANEL TEMP.- 17-16	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755R	BOILER PANEL TEMP.- 17-17	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755S	BOILER PANEL TEMP.- 17-21	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755T	BOILER PANEL TEMP.- 17-19	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755U	BOILER PANEL TEMP.- 17-20	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755V	BOILER PANEL TEMP.- 17-21	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755W	BOILER PANEL TEMP.- 17-22	1500 DEG F	2%FS	1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2755Y	BOILER PANEL TEMP.- 17-24	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2755Z	BOILER PANEL TEMP.- 17-25	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2756A	BOILER PANEL TEMP.- 18-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2756B	BOILER PANEL TEMP.- 18-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2756C	BOILER PANEL TEMP.- 18-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2756D	BOILER PANEL TEMP.- 18-7	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758A	BOILER PANEL TEMP.- 17-26	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758C	BOILER PANEL TEMP.- 17-28	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758D	BOILER PANEL TEMP.- 17-29	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758E	BOILER PANEL TEMP.- 17-30	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758G	BOILER PANEL TEMP.- 17-32	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 2758H	BOILER PANEL TEMP.- 17-33	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758I	BOILER PANEL TEMP.- 17-34	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758K	BOILER PANEL TEMP.- 17-36	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758L	BOILER PANEL TEMP.- 17-37	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758P	BOILER PANEL TEMP.- 17-40	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758U	BOILER PANEL TEMP.- 17-45	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2758X	BOILER PANEL TEMP.- 17-48	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2761B	BOILER PANEL TEMP.- 17-53	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
FT 2801	PROCESS VARIABLE BOILER PANEL-19 FLOW CONTROL	7903 #/HR	1%FS	2000	500					RAMAPO INSTR. SPEC.NO:SP78-002 MONTVILLE, P/N:MARK V-1 N.J. 07045 CFR7D	
ZT 2801	BOILER PANEL 19 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2801A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -19-1	0-1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	
TE 2801B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -19-2	0-1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA. 90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TE 2801C (IN. SPARE)	PROCESS VARIABLE BLR STEAM TEMP CONTROL -19-3	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2802	PROCESS VARIABLE BOILER PANEL-20 FLOW CONTROL	7903 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2802	BOILER PANEL 20 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2802A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -20-1	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2802B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -20-2	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2802C (IN. SPARE)	PROCESS VARIABLE BLR STEAM TEMP CONTROL -20-3	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
FT 2803	PROCESS VARIABLE BOILER PANEL-21 FLOW CONTROL	7903 #/HR	1%FS	2000	500					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-1 CFR7D
ZT 2803	BOILER PANEL 21 WATER TEMP. CONTROL VALVE POSITION	0-100%	5%FS								
TE 2803A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -21-2	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2803B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -21-2	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2803C (IN. SPARE)	PROCESS VARIABLE BLR STEAM CONTROL -21-3	0-1500 DEG F	2%FS	1000						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K- 23-600
TE 2804A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -19	0-1500 DEG F	0.75%	950						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2804B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -19	0-1500 DEG F	0.75%	950						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 2805A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -20	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2805B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -20	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2806A	PROCESS VARIABLE BLR STEAM TEMP CONTROL -21	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7
TE 2806B	PROCESS VARIABLE BLR STEAM TEMP CONTROL -21	0-1500 DEG F	0.75%		950					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/NTC-723-K-C- 5(1/2)-6-AA-X11-H7
YT 2807A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -19	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2807B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -19	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2807C	BOILER PANEL 19 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2808A	PROCESS VARIABLE BLR CONTRL HEAT FLUX -20	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2808B	PROCESS VARIABLE BLR CONTRL HEAT FLUX -20	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2808C	BOILER PANEL 20 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2809A	BOILER PANEL 21 HEAT FLUX-1	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2809B	BOILER PANEL 21 HEAT FLUX-2	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
YT 2809C	BOILER PANEL 21 HEAT FLUX-3	488 KW/M2	5%FS	AMB						MEDTHERM CORP. HUNTSVILLE, AL. 35804	SPEC.NO:78-005 P/N:8-43-36-360- 20456
PDTX 2830	BOILER C.V. DIFFERENTIAL PRESS.-	0-500 PSID	10%FS	1500	1000					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
PDTX 2832	BOILER C.V. DIFFERENTIAL PRESS.-21	0-500 PSID	10%FS	2000	500					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TTX 2833	BOILER PANEL STEAM INLET TEMP.-19	300-600 DEG F	1%FS	2000	500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2835	BOILER PANEL STEAM INLET TEMP.-21	300-600 DEG F	1%FS	2000	500					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
OTX 2836	BOILER PANEL AXIAL MOVEMENT-19	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2837	BOILER PANEL AXIAL MOVEMENT-20	0-6"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-10A-7266
OTX 2839	BOILER PANEL LATERAL POSITION-19	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2844A	BOILER PANEL BOW POSITION-21-1	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2844B	BOILER PANEL BOW POSITION-21-2	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
OTX 2844C	BOILER PANEL BOW POSITION-21-3	0-4"	.1%FS							CELESCO CANOGA PARK CA. 91304	SPEC.NO:SP78-006 P/N:PT101-5A-7266
TTX 2845	BOILER PANEL STEAM OUTLET TEMP.-19-4	800-1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2846	BOILER PANEL STEAM OUTLET TEMP.-20-4	800-1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TTX 2847	BOILER PANEL STEAM OUTLET TEMP.-21-4	800-1200 DEG. F	1%FS		7K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
TEX 2854A	BOILER PANEL TEMP.-19-4	1500 DEG F	2%FS		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600
TEX 2854B	BOILER PANEL TEMP.-19-5	1500 DEG F	2%FS		1000					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-23-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TEX 2854C	BOILER PANEL TEMP.- 19-6	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2854D	BOILER PANEL TEMP.- 19-7	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2855A	BOILER PANEL TEMP.- 20-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2855B	BOILER PANEL TEMP.- 20-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2855C	BOILER PANEL TEMP.- 20-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2855D	BOILER PANEL TEMP.- 20-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856A	BOILER PANEL TEMP.- 21-1	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856B	BOILER PANEL TEMP.- 21-2	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856C	BOILER PANEL TEMP.- 21-3	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856D	BOILER PANEL TEMP.- 21-4	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856E	BOILER PANEL TEMP.- 21-5	1500 DEG F	2%FS		1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI DEG.F	INSTR. DATA K#/HR SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2856F	BOILER PANEL TEMP.- 21-6	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856G	BOILER PANEL TEMP.- 21-7	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856H	BOILER PANEL TEMP.- 21-8	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856I	BOILER PANEL TEMP.- 21-9	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856J	BOILER PANEL TEMP.- 21-10	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856K	BOILER PANEL TEMP.- 21-11	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856L	BOILER PANEL TEMP.- 21-12	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856M	BOILER PANEL TEMP.- 21-13	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856N	BOILER PANEL TEMP.- 21-14	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856P	BOILER PANEL TEMP.- 21-15	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856Q	BOILER PANEL TEMP.- 21-16	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2856R	BOILER PANEL TEMP.- 21-17	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856S	BOILER PANEL TEMP.- 21-18	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856T	BOILER PANEL TEMP.- 21-19	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856U	BOILER PANEL TEMP.- 21-20	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856V	BOILER PANEL TEMP.- 21-21	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856W	BOILER PANEL TEMP.- 21-22	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856Y	BOILER PANEL TEMP.- 21-24	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2856Z	BOILER PANEL TEMP.- 21-25	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859A	BOILER PANEL TEMP.- 21-26	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859C	BOILER PANEL TEMP.- 21-28	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859D	BOILER PANEL TEMP.- 21-29	1500 DEG F	2%FS	1000					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
TEX 2859E	BOILER PANEL TEMP.- 21-30	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859G	BOILER PANEL TEMP.- 21-32	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859H	BOILER PANEL TEMP.- 21-33	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859I	BOILER PANEL TEMP.- 21-34	1500 DEG F	2%FS							HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859K	BOILER PANEL TEMP.- 21-36	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859L	BOILER PANEL TEMP.- 21-37	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859P	BOILER PANEL TEMP.- 21-40	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859U	BOILER PANEL TEMP.- 21-45	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2859X	BOILER PANEL TEMP.- 21-48	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
TEX 2862B	BOILER PANEL TEMP.- 21-52	1500 DEG F	2%FS		1000					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-2265-EX-K- SANTA FE. SPR. 23-600 CA.90670	
LT 2901	ACCUMULATOR WATER LEVEL	0-25" H2O	1"		1500 1000					ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. P/N:1151DP4E12-B2 EDEN PRAIRIE MINN. 55453	
ZS 2901A	ACCUMULATOR WATER DRAIN VALVE POSITION		5%FS								
ZS 2901B	ACCUMULATOR WATER DRAIN VALVE POSITION		5%FS								

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F KW/HR						
PT 2902	PROCESS VARIABLE DOWNCOMER STEAM INLET	0-2000 PSIG	5%FS	1500	1000					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
ZS 2902A	DOWNCOMER MANIFOLD STEAM VENT VALVE-1 POSITION		5%FS								
ZS 2902B	DOWNCOMER MANIFOLD STEAM VENT VALVE-1 POSITION										
TE 2903	RECEIVER STEAM OUTLET TEMP.-1	0-1500 DEG F	0.75%	1000						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-8(3/4)-6-AA-H7
ZS 2903A	DOWNCOMER MANIFOLD STEAM VENT VALVE-2 POSITION										
ZS 2903B	DOWNCOMER MANIFOLD STEAM VENT VALVE-2 POSITION										
TT 2904	RECEIVER STEAM OUTLET TEMP.-2	800-1200F	1%FS	1000						ROSEMOUNT, INC 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23N01N055
ZT 2905	DOWNCOMER MANIFOLD STEAM INLET VALVE POSITION	0-100%	5%FS								
ZS 2905B	DOWNCOMER MANIFOLD STEAM INLET VALVE POSITION		5%FS								
ZT 2906	FLASH TANK STEAM PRESS CONTROL VALVE POSITION	0-100%	5%FS								
PT 2906A	FLASH TANK STEAM OUTLET PRESS.-1	0-1000 PSIG	5%FS	600	650					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
PT 2906B	FLASH TANK STEAM OUTLET PRESSURE-2	0-1000 PSIG	5%FS	600	650					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
ZS 2906B	FLASH TANK STEAM PRESSURE CONTROL VALVE POSITION		5%FS								
TE 2907	PROCESS VARIABLE RS FLASH TANK STEAM OUT	0-800 DEG F	2%FS	650						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-8(3/4)-6-AA-H7
LT 2908	FLASH TANK WATER LEVEL	0-90" H2O	1"	600	650					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE, MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP4E12-B2

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
ZS	2911A	FLASH TANK STEAM INLET VALVE POSITION									
ZS	2911B	FLASH TANK STEAM INLET VALVE POSITION									
ZI	2913A	PANEL DRAIN VALVE POSITION COMMON INDICATION	2%FS								
ZI	2913B	PANEL DRAIN COMMON INDICATION	2%FS								
ZS	2914A	FLASH TANK BLEED STEAM OUTLET BYPASS VALVE	5%FS								
ZS	2914B	FLASH TANK BLEED STEAM OUTLET BYPASS VALVE	5%FS								
ZS	2915A	FLASH TANK BLEED STEAM INLET BYPASS VALVE	5%FS								
ZS	2915B	FLASH TANK BLEED STEAM INLET BYPASS VALVE	5%FS								
TEX	2940	DOWNCOMER MANIFOLD SKIN TEMP.-8-4IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX	2941	DOWNCOMER MANIFOLD SKIN TEMP.-11-4IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX	2942	DOWNCOMER MANIFOLD SKIN TEMP.-14-4IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX	2943	DOWNCOMER MANIFOLD SKIN TEMP.-17-4IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX	2946	DOWNCOMER MANIFOLD SKIN TEMP.-8-6IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
TEX	2947	DOWNCOMER MANIFOLD SKIN TEMP.-11-6IN.	500-1000 F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA.90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 2948	RECEIVER ACCUMULATOR TEMP.	0-1500 DEG F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-5(1/2)-6-AA-H7
PDTX 2949	DOWNCOMER STEAM DIFFERENTIAL PRESS.	0-500 PSID	10%FS	1465	950	105K#			VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:502-24-2000
TEX 2950	DOWNCOMER STEAM INLET TEMP.	0-1500 DEG F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-8(3/4)-6-AA-H7
TEX 2951	FLASH TANK TEMP.	0-1500 DEG F	2%FS	950	105K#				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-2265-EX-K-8-600
PDTX 2952	FLASH TANK STEAM DIFFERENTIAL PRESS.	0-1000 PSID	10%FS	1465	950	105K#			VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1780	SPEC.NO:SP78-007 P/N:502-24-2000
ZS 3001A	TSU HEAT TRANSFER FLUID BYPASS VALVE-1					1100K				
ZS 3001B	TSU HEAT TRANSFER FLUID BYPASS VALVE-1					1100K				
ZS 3002A	TSU HEAT TRANSFER FLUID CONTROL VALVE					1100K				
ZS 3002B	TSU HEAT TRANSFER FLUID CONTROL VALVE					1100K				
ZS 3003A	TSU HEAT TRANSFER FLUID BYPASS VALVE-2					100K#				
ZS 3003B	TSU HEAT TRANSFER FLUID BYPASS VALVE-2					100K#				
ZS 3004A	TSU HEAT TRANSFER FLUID EXTRACTION VALVE					100K#				
ZS 3004B	TSU HEAT TRANSFER FLUID EXTRACTION VALVE					100K#				
ZS 3005A	AUX. EXTRACTION FLUID INLET VALVE POSITION					97K#				
ZS 3005B	AUX. EXTRACTION FLUID INLET VALVE POSITION					97K#				

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EGUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TE 3006	TSU HEAT TRANSFER FLUID CHARGING TEMP.	800 DEG F	2%	580	1100K				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
TE 3007	TSU HEAT TRANSFER FLUID EXTRACTION TEMP	800 DEG F	2%	525	1100K				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
LT 3008	TSU HEAT TRANSFER FLUID LEVEL	0-36" H2O	10%FS	580						
TE 3009A	TSU HEAT TRANSFER FLUID TEMP.-1	800 DEG F	2%M	580						
TE 3009B	TSU HEAT TRANSFER FLUID TEMP.-2	800 DEG F	2%M	580						
TE 3009C	TSU HEAT TRANSFER FLUID TEMP.-3	800 DEG F	2%M	580						
TE 3009D	TSU HEAT TRANSFER FLUID TEMP.-4	800 DEG F	2%M	580						
TE 3009E (IN.SPARE)	TSU HEAT TRANSFER FLUID TEMP.-5	800 DEG F	2%M	580						
TE 3009F	TSU HEAT TRANSFER FLUID TEMP.-6	800 DEG F	2%M	580						
TE 3009G	TSU HEAT TRANSFER FLUID TEMP.-7	800 DEG F	2%M	580						
TE 3009H	TSU HEAT TANSFER FLUID TEMP.-8	800 DEG F	2%M	580						
TE 3009I	TSU HEAT TRANSFER FLUID TEMP.-9	800 DEG F	2%M	580						
TE 3009J (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-10	800 DEG F	2%M	580						
TE 3009K	TSU HEAT TRANSFER FLUID TEMP.-11	800 DEG F	2%M	580						
TE 3009L (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-12	800 DEG F	2%M	580						
TE 3009M	TSU HEAT TRANSFER FLUID TEMP.-13	800 DEG F	2%M	580						

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 3009N (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-14	800 DEG F	2%M		580						
TE 3009P	TSU HEAT TRANSFER FLUID TEMP.-15	800 DEG F	2%M		580						
TE 3009Q (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-16	800 DEG F	2%M		580						
TE 3009R	TSU HEAT TRANSFER FLUID TEMP.-17	800 DEG F	2%M		580						
TE 3009S (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-18	800 DEG F	2%M		580						
TE 3009T	TSU HEAT TRANSFER FLUID TEMP.-19	800 DEG F	2%M		580						
TE 3009U (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-20	800 DEG F	2%M		580						
TE 3009V	TSU HEAT TRANSFER FLUID TEMP.-21	800 DEG F	2%M		580						
TE 3009W (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-22	800 DEG F	2%M		580						
TE 3009X	TSU HEAT TRANSFER FLUID TEMP.-23	800 DEG F	2%M		580						
TE 3009Y (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-24	800 DEG F	2%M		580						
TE 3009Z	TSU HEAT TRANSFER FLUID TEMP.-25	800 DEG F	2%M		580						
TE 3010A (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-26	800 DEG F	2%M		580						
TE 3010B	TSU HEAT TRANSFER FLUID TEMP.-27	800 DEG F	2%M		580						
TE 3010C (IN.SPARE)	STORAGE UNIT HEAT TRANSFER FLUID TEMP.-28	800 DEG F	2%M		580						
TE 3010D	TSU HEAT TRANSFER FLUID TEMP.-29	800 DEG F	2%M		580						
TE 3010E (IN.SPARE)	STORAGE UNIT HEAT XFER FL. TEMP.-30	800 DEG F	5%M		580						
TE 3010F	TSU HEAT TRANSFER FLUID TEMP.-31	800 DEG F	5%M		580						

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 3010G	TSU HEAT TRANSFER FLUID TEMP.-32	800 DEG F	5%M		580						
TE 3010H	TSU HEAT TRANSFER FLUID TEMP.-33	800 DEG F	5%M		580						
TE 3010I	TSU HEAT TRANSFER FLUID TEMP.-34	800 DEG F	5%M		580						
TE 3010J	TSU HEAT TRANSFER FLUID TEMP.-35	800 DEG F	5%M		580						
TE 3010K	TSU HEAT TRANSFER FLUID TEMP.-36	800 DEG F	5%M		580						
TE 3010L	TSU HEAT TRANSFER FLUID TEMP.-37	800 DEG F	5%M		580						
TE 3010M	TSU HEAT TRANSFER FLUID TEMP.-38	800 DEG F	5%M		580						
TE 3010N	TSU HEAT TRANSFER FLUID TEMP.-39	800 DEG F	5%M		580						
TE 3010P	STORAGE UNIT HEAT (IN.SPARE) XFER FL. TEMP.-40	800 DEG F	5%M		580						
OEX 3012A	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3012B	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3013A	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3013B	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3014A	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3014B	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3015A	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3015B	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3016A	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
OEX 3016B	TSU CIRCUMFERENTIAL STRAIN	30,000 PSI	2%M		580						
LG 3017	TSU HEAT TRANSFER FLUID LEVEL GAGE									TSU	

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
OEX 3017 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3018 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3019 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3020 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3021 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3022 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3023 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3024 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3025 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3026 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3027 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3028 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3029 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
OEX 3030 (IN.SPARE)	STORAGE UNIT CIRCUM STRAIN	30,000	2%M	PSI						
YTX 3050	STORAGE UNIT HEAT FLUX-13	0-57	5%FS	AMB						
YTX 3051	STORAGE UNIT HEAT FLUX-14	0-568	5%FS	AMB						
YTX 3052	STORAGE UNIT HEAT FLUX-15	0-114	5%FS	AMB						
TEX 3065A	STORAGE UNIT BASE TEMP.-139	800	2%FS	DEG F						
TEX 3065B	STORAGE UNIT BASE TEMP.-140	800	2%FS	DEG F						
TEX 3065C	STORAGE UNIT BASE TEMP.-141	800	2%FS	DEG F						
TEX 3065D	STORAGE UNIT BASE TEMP.-142	800	2%FS	DEG F						
TEX 3065E	STORAGE UNIT BASE TEMP.-143	800	2%FS	DEG F						
TEX 3065F (IN.SPARE)	STORAGE UNIT BASE TEMP.-144	800	2%FS	DEG F						

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TEX 3065G (IN.SPARE)	STORAGE UNIT BASE TEMP.-145	800 DEG F	2%FS							
TEX 3065H (IN.SPARE)	STORAGE UNIT BASE TEMP.-146	800 DEG F	2%FS							
TEX 3065I (IN.SPARE)	STORAGE UNIT BASE TEMP.-147	800 DEG F	2%FS							
TEX 3065J (IN.SPARE)	STORAGE UNIT BASE TEMP.-148	800 DEG F	2%FS							
TEX 3066 41	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066A 42	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066B 43	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066C 44	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066D (IN.SPARE) 45	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066E (IN.SPARE) 46	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066F 47	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066G (IN.SPARE) 48	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066H (IN.SPARE) 49	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066I 50	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066J (IN.SPARE) 51	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066K (IN.SPARE) 52	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066L (IN.SPARE) 53	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066M (IN.SPARE) 54	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066N (IN.SPARE) 55	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066P (IN.SPARE) 56	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066Q (IN.SPARE) 57	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066R (IN.SPARE) 58	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						
TEX 3066S (IN.SPARE) 59	STORAGE UNIT TEMP.-	800 DEG F	2%FS	580						

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 3066T (IN.SPARE) 60	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066U (IN.SPARE) 61	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066V (IN.SPARE) 62	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066W (IN.SPARE) 63	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066X (IN.SPARE) 64	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066Y (IN.SPARE) 65	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3066Z (IN.SPARE) 66	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067 71	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067A 72	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067B 73	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067C 74	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067D 75	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067E (IN.SPARE) 76	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067F (IN.SPARE) 77	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067G (IN.SPARE) 78	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067H (IN.SPARE) 79	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067I (IN.SPARE) 80	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067J (IN.SPARE) 81	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067K (IN.SPARE) 82	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067L (IN.SPARE) 83	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067M (IN.SPARE) 84	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067N (IN.SPARE) 85	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067P (IN.SPARE) 86	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F						
TEX 3067Q (IN. SPARE) 87	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067R (IN. SPARE) 88	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067S (IN. SPARE) 89	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067T (IN. SPARE) 90	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067U (IN. SPARE) 111	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067V (IN. SPARE) 112	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067W (IN. SPARE) 113	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067X (IN. SPARE) 114	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067Y (IN. SPARE) 115	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3067Z (IN. SPARE) 116	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068A 123	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068B (IN. SPARE) 124	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068C (IN. SPARE) 125	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068D (IN. SPARE) 126	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068E (IN. SPARE) 127	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068F (IN. SPARE) 128	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068G (IN. SPARE) 129	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068H (IN. SPARE) 130	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068I 131	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068J 132	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068K (IN. SPARE) 133	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068L (IN. SPARE) 134	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068M 135	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL. DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 3068N (IN.SPARE) 136	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068P (IN.SPARE) 137	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3068Q (IN.SPARE) 138	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3069A 100	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3069B 101	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3069C 102	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070 67	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070A (IN.SPARE) 68	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070B (IN.SPARE) 69	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070C (IN.SPARE) 70	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070D 91	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070E 92	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070F 93	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070G 94	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070H 95	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070I (IN.SPARE) 96	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070J (IN.SPARE) 97	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070K (IN.SPARE) 98	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070L (IN.SPARE) 99	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070M (IN.SPARE) 103	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070N (IN.SPARE) 104	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070P (IN.SPARE) 105	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070Q (IN.SPARE) 106	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 3070R (IN.SPARE) 107	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070S (IN.SPARE) 108	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070T (IN.SPARE) 109	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070U (IN.SPARE) 117	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070V (IN.SPARE) 118	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070W (IN.SPARE) 119	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070X (IN.SPARE) 120	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070Y (IN.SPARE) 121	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
TEX 3070Z (IN.SPARE) 122	STORAGE UNIT TEMP.-	800 DEG F	2%FS		580						
PDTX 3072	STORAGE UNIT HEAT TRANSFER FLUID INLET PRESS DIFF	40 IN H2O	10%FS	15	580						
PDTX 3074	STORAGE UNIT HEAT TRANSFER FLUID OUTLET PRESS DIF	40 IN H2O	10%FS	15	580						
PDTX 3075	STORAGE UNIT BED DIFFEREN.PRESS	40 IN H2O	10%FS	15	580						
TEX 3086	OIL AUXILIARY MANIFOLD TEMP. (TUT- 110)	800 DEG F	2%FS	15	580						
PS 3099	TSS INST. AIR PRESS.LOW					16- 113F	INSTR		BARKSDALE CONTROLS L.A., CA.	SA 301 P/N:D1T M150 SPEC.NO:SP42-022	
PI 3101	DESUPERHEATER INLET STEAM PRESSURE GAGE	0-2000 PSIG					SP42- 096			1/2"NPT MALE, BOTTOM ASTM A335 GRADE P22 MAX PSIG=1775 MAX TEMP=113F	
FT 3102	PROCESS VARIABLE TSS MAIN STEAM INLET FLOW	5-130 K#/HR	1%	1465	950	130K#			RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V 6P7D	
ZT 3102	DESUPERHEATER STEAM INLET VALVE POSITION	0-100%	5%FS			130K#					
PT 3102A	DESUPERHEATER STEAM INLET PRESS.-1	0-1800 PSIG	5%FS	1465	950	130K#			ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:115GP9E12-B2	
PT 3102B	DESUPERHEATER STEAM INLET PRESS.-2	0-1800 PSIG	5%FS	1465	950	130K#			ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2	

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TE 3103	DESUPERHEATER STEAM INLET TEMPERATURE-1	0-1500 DEG F	2%	950	130K#					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 8(3/4)-6-AA-H7 CA. 90670	
PT 3104	DESUPERHEATER STEAM INLET PRESS.-3	0-1800 PSIG	5%FS	1465	950	130K#				ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. MANUAL NO.4110/4125 EDEN PRAIRIE P/N:1151GP9E12-B2 MINN. 55453	
FT 3105	DESUPERHEATER WATER FLOWRATE	1.3-25 K#/HR	1%FS	2150	406	25K#				RAMAPO INSTR. SPEC.NO:SP78-002 MONTVILLE, P/N:MARK V-1 1/2- N.J. 07045 CFT6D	
ZT 3105	DESUPERHEATER WATER TEMP. CONTROL VALVE POSITION	0-100%	2%FS			25K#					
TE 3105A	DESUPERHEATER STEAM OUTLET TEMPERATURE-1	0-800 DEG F	1.3%	650	130					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 11(3/4)-6-AA-F48X- CA. 90670 X11-H7	
TE 3105B	DESUPERHEATER STEAM OUTLET TEMPERATURE-2	0-800 DEG F	1.3%	650	130					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 11(3/4)-6-AA-F48X- CA. 90670 X11-H7	
TT 3106	DESUPERHEATER STEAM OUTLET TEMPERATURE-4	0-800F	2%	1400	650	130				ROSEMOUNT, INC SPEC.NO:SP78-003 12001 W.78 ST. P/N:78G23A60B045W17 EDEN PRAIRIE MINN.55453	
PI 3107	DESUPERHEATER INLET WATER PRESSURE GAGE	0-3000 PSIG					SP42-097				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=2185 MAX TEMP=113F
TE 3108	DESUPERHEATER WATER INLET TEMPERATURE	0-1500 DEG F	2%	406	25K#					HY-CAL ENGNRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 5(1/2)-6-AA-H7 CA. 90670	
PT 3109	DESUPERHEATER WATER INLET PRESSURE	0-2500 PSIG	5%FS	2150	406	25K#				ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. MANUAL NO.4110/4125 EDEN PRAIRIE P/N:1151GP9E12-B2 MINN. 55453	
ZT 3110	STEAM TRAP WATER PRESS. CONTROL VALVE-1 POSITION	0-100%	5%FS			65K#					
ZT 3111	STEAM TRAP WATER PRESS. CONTROL VALVE-2 POSITION	0-100%	5%FS			65K#					
LT 3112	TS FLASH TANK WATER LEVEL	0-100" H2O	1"	165	358	150K#				ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. P/N:1151DP4E12-B2 EDEN PRAIRIE MINN. 55453	
PI 3113	FLASH TANK PRESSURE GAGE	0-200 PSIG					SP42-099				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=165 MAX TEMP=113F

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
PT 3114	PROCESS VARIABLE TSS FLASH TANK STEAM PRESSURE	0-200 PSIG	5%FS	165	358	150K#					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
LS 3116	DESUPERHEATER INLET STEAM LINE WATER TRAP LEVEL CONTROL SWITCH	1786" W.C.				1010 H2O/ MAX. STEAM					MSW INSTR. HOUSTON, TEXAS	1" BUTTWELD SCHED.80 ASTM A335 GRADE P22 MAX.PRESS.=1786"WC
ZS 3116A	WATER TRAP LEVEL CONTROL VALVE POSITION											
ZS 3116B	WATER TRAP LEVEL CONTROL VALVE POSITION											
ZS 3117A	SUPERHEATER STEAM BYPASS VALVE-1 POSITION											
ZS 3117B	SUPERHEATER STEAM BYPASS VALVE-1 POSITION											
ZS 3118A	SUPERHEATER STEAM BYPASS VALVE-2 POSITION											
ZS 3118B	SUPERHEATER STEAM BYPASS VALVE-2 POSITION											
TEX 3150	DESUPERHEATER STEAM INLET TEMP.-2	0-1500 DEG F	2%FS			950					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 8(3/4)-6-AA-H7
PDX 3151	DESUPERHEATER STEAM DIFFERENTIAL PRESS.	100 PSID	10%FS	1450		950						
PTX 3152 (IN.SPARE)	TS FLASH TANK STEAM OUTLET PRESS.	0-200 PSIG	10%FS	165		358					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-200
TEX 3153	FLASH TANK STEAM OUTLET TEMP.	0-400 DEG F	2%FS			358					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
PTX 3154	TS FLASH TANK WATER OUTLET PRESS.	0-200 PSIG	5%FS	165		358					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-200
TEX 3155	FLASH TANK WATER OUTLET TEMP.	0-400 DEG F	2%FS			358					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7

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EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
PI 3201	CONDENSER INLET STEAM PRESSURE GAGE	0-3000 PSIG				SP42-097				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=1550 MAX TEMP=113F
PI 3202	CONDENSER STEAM PRESSURE REGULATOR GAGE	0-2000 PSIG				SP42-098				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=1550 MAX TEMP=113F
PT 3203	HEATER STEAM INLET PRESS.-1	0-1800 PSIG	5%FS	1400	650				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
TE 3204	HEATER STEAM INLET TEMP.-1	0-800 DEG F	2%		650				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
FT 3205	HEATER STEAM FLOWRATE-1	6.5-75 K#/HR	1%FS	1400	650	65K#			RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-6PK6
ZS 3206A	HEATER STEAM INLET VALVE-1 POSITION									
ZS 3206B	HEATER STEAM INLET VALVE-1 POSITION									
PT 3208	HEATER HEAT TRANSFER FLUID OUTLET PRESS.-1	0-100 PSIG	1%FS	75	580				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
PT 3209	HEATER STEAM INLET PRESS.-1-3	1800 PSIG	5%FS	1400	650				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125
PT 3210A	HEATER STEAM INLET PRESS.-1-1	0-1800 PSIG	5%FS	1400	650				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
PT 3210B	HEATER STEAM INLET PRESS.-1-2	0-1800 PSIG	5%FS	1400	650				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP912-B2
FT 3211	HEATER HEAT TRANSFER FLUID FLOWRATE-1 (CALORIA HT-43 OIL)	53-645 K#/HR	1%FS	32	425	550			ENGNRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PAQ
PT 3211	HEATER HEAT TRANSFER FLUID INLET PRESSURE-1	0-100 PSIG	5%FS	32	425				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
TE 3211A	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-1-1	0-800 DEG F	2%		580				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-X11-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TE 3211B	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-1-2	0-800 DEG F	2%		580				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-X11-H7
TT 3212	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-1-4	0-800F	2%		580				ROSEMOUNT, INC 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23A60B045W17
LT 3213	TS SURGE TANK LEVEL CONTROL-1	0-30" H2O							ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP3E12-B2
TE 3214	HEATER HEAT TRANSFER FLUID INLET TEMP.-1	0-800 DEG F	10 F		425				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PI 3215	SUBCOOLER INLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
PT 3216	HEATER STEAM WARMUP PRESS.-1	0-600 PSIG	5%FS	75/400	308				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
TE 3217	HEATER STEAM WARMUP TEMP.-1	600F	4 F		308				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH
ZS 3218A	HEATER STEAM WARMUP VALVE-1 POSITION									
ZS 3218B	HEATER STEAM WARMUP VALVE-1 POSITION									
LT 3219	STEAM TRAP WATER LEVEL-1	0-30" H2O	1"		435				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP3E12-B2
ZS 3220A	STEAM TRAP STEAM VENT VALVE-1 POSITION									
ZS 3220B	STEAM TRAP STEAM VENT VALVE-1 POSITION									
TEX 3250	HEATER STEAM INLET TEMP.-1-2	0-800 DEG F	2%FS		650				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
TEX 3251	HEATER STEAM OUTLET TEMP.-1	0-800 DEG F	2%FS		631				HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PTX 3252	HEATER STEAM OUTLET PRESS.-1	0-1800 PSIG	5%FS	1425	650					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-2000
TEX 3253	HEATER WATER OUTLET TEMP.-1	0-800 DEG F	2%FS		475					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
TEX 3254	HEATER HEAT TRANSFER FLUID INLET TEMP.-1-2	0-800 DEG F	2%FS		487					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PDTX 3255	HEATER HEAT TRANSFER FLUID	0-20 PSIG	10%FS	15/75	532					VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND, N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:504-24-20
PI 3301	CONDENSER INLET STEAM PRESSURE GAGE	0-3000 PSIG					SP42-097				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=1550 MAX TEMP=113F
PI 3302	CONDENSER STEAM PRESSURE REGULATOR GAGE	0-2000 PSIG					SP42-098				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=1550 MAX TEMP=113F
PT 3303	HEATER STEAM INLET PRESS.-2	0-1800 PSIG	5%FS	1400	650					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:11516P9E12-B2
TE 3304	HEATER STEAM INLET TEMP.-2	0-800 DEG F	2%		650					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
FT 3305	HEATER STEAM FLOWRATE-2	6.5-75 K#/HR	1%FS	1400	650	65K#				RAMAPO INSTR. MONTVILLE, N.J. 007045	SPEC.NO:SP78-002 P/N:MARK V-6PK6
ZS 3306A	HEATER STEAM INLET VALVE-2 POSITION					66K#					
ZS 3306B	HEATER STEAM INLET VALVE-2 POSITION					66K#					
PT 3308	HEATER HEAT TRANSFER FLUID OUTLET PRESS.-2	0-100 PSIG	5%FS	75	580					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:11516P6E12-B2
PT 3309	HEATER STEAM INLET PRESS.-2-3	0-1800 PSIG	5%FS	1400	650					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
FT 3310	HEATER HEAT TRANSFER FLUID FLOWRATE-2 (CALORIA HT-43 OIL)	53-645 K#/HR	1%FS	75	425	550#					ENGRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PAQ
PT 3310	HEATER HEAT TRANSFER FLUID INLET PRESS.-2	0-100 PSIG	5%FS	75	425						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP61E12-B2
TE 3310A	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-2-1	0-800 DEG F	1.3%		580						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
TE 3310B	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-2-2	0-800 DEG F	1.3%		580				5163151		HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PT 3311A	HEATER STEAM INLET PRESS.-2-1	0-1800 PSIG	5%FS	1400	650						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
PT 3311B	HEATER STEAM INLET PRESS.-2-2	0-1800 PSIG	5%FS	1400	650						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP9E12-B2
TT 3312	HEATER HEAT TRANSFER FLUID OUTLET TEMP.-2-4	0-800F	2%		580						ROSEMOUNT, INC 12001 W.78 ST. EDEN PRAIRIE MINN.55453	SPEC.NO:SP78-003 P/N:78G23A60B045W17
LT 3313	TS SURGE TANK LEVEL CONTROL-2	0-30" H2O	2%M								ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP3E12-B2
TE 3314	HEATER HEAT TRANSFER FLUID INLET TEMP.-2	0-800 DEG F	2%		425	544K#					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PI 3315	SUBCOOLER INLET OIL PRESSURE GAGE	0-160 PSIG					SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
PT 3316	HEATER STEAM WARMUP PRESS.-2	0-600 PSIG	5%FS	75/400	308						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
TE 3317	HEATER STEAM WARMUP TEMP.-2	600	2%	75/400	308						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH
ZS 3318A	HEATER STEAM WARMUP VALVE-2 POSITION											
ZS 3318B	HEATER STEAM WARMUP VALVE-2 POSITION											

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
LT 3319	STEAM TRAP WATER LEVEL-2	0-30" H2O	1"		435				ROSEMOUNT, INC. SPEC. NO: SP78-007 12001 W. 78 ST. P/N: 1151DP3E12-B2 EDEN PRAIRIE MINN. 55453	
ZS 3320A	ST. TRAP STEAM VENT VALVE POS									
ZS 3320B	ST. TRAP STEAM VENT VALVE POS									
TEX 3350	HEATER STEAM INLET TEMP.-2-2	0-800 DEG F	2%FS		650				HY-CAL ENGRNG SPEC. NO: SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N: TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
TEX 3351	HEATER OUTLET TEMP.-2	0-800 DEG F	2%FS		631				HY-CAL ENGRNG SPEC. NO: SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N: TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
PTX 3352	HEATER STEAM OUTLET PRESS.-2	0-1800 PSIG	5%FS	1425	650				VIATRAN CORP. SPEC. NO: SP78-007 300 INDUSTRIAL P/N: 501-24-2000 GRAND ISLAND N.Y. 14072 (716)-773-1700	
TEX 3353	HEATER WATER OUTLET TEMP.-2	0-800 DEG F	2%FS		475				HY-CAL ENGRNG SPEC. NO: SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N: TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
TEX 3354	HEATER HEAT TRANSFER FLUID INLET TEMP.-2-2	0-800 DEG F	2%FS		425				HY-CAL ENGRNG SPEC. NO: SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N: TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
PDTX 3355	HEATER HEAT TRANSFER FLUID	20 PSID	10%FS	15/75	490				VIATRAN CORP. SPEC. NO: SP78-007 300 INDUSTRIAL P/N: 502-24-20 GRAND ISLAND, N.Y. 14072 (716)-773-1700	
PDT 3401 (IN. SPARE)	FLUID FILTER 1 DELTA PRESS-1	0-100 IN H2O	10%FS	15	490				ROSEMOUNT, INC. SPEC. NO: SP78-007 12001 W. 78 ST. MANUAL NO. 4256/4257 EDEN PRAIRIE P/N: 1151DP4E12-B2 MINN. 55453	
PDI 3402	FLUID FILTER 1 DELTA PRESS	0-30 PSID				SP42-100				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
PDT 3403 (IN. SPARE)	FLUID FILTER 2 DELTA PRESS-2	0-100 IN H2O	10%FS	15	490				ROSEMOUNT, INC. SPEC. NO: SP78-007 12001 W. 78 ST. MANUAL NO. 4256/4257 EDEN PRAIRIE P/N: 1151DP4E12-B2 MINN. 55453	
PDI 3404	FLUID FILTER 1 DELTA PRESS	0-30 PSID				SP42-100				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PT 3405	CHARGING PUMP INLET PRESS.-1	0-30 PSIA	5%FS	15	425					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151AP6E12-B2
PT 3406	CHARGING PUMP INLET PRESS.-2	0-30 PSIA	5%FS	15	425					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151AP6E12-B2
PI 3407	CHARGING PUMP OIL PRESSURE GAGE	0-160 PSIG					SP42-101				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
PI 3408	CHARGING PUMP OIL PRESSURE GAGE	0-160 PSIG					SP42-101				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT 3410	HEATER HEAT TRANS. FLUID INLET VALVE-2 POSITION	0-100%	5%FS			544K#					
ZT 3411	HEATER HEAT TRANS. FLUID INLET VALVE-1 POSITION	0-100%	5%FS			544K#					
TE 3412	CHARGING PUMP INLET TEMP.	0-600 DEG F	5%FS		425					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
JT 3413	CHARGING PUMP (P301) POWER										
ST 3413	CHARGING PUMP (P301) SPEED	0-2500 RPM	5%FS		2000 RPM	544K#					
JT 3414	CHARGING PUMP (P302) POWER										
ST 3414	CHARGING PUMP (P302) SPEED	0-2500 RPM	5%FS		2000 RPM	544K#					
PT 3450	CHARGING PUMP OUTLET PRESS.-1	0-120 PSIG	5%FS	100	502	544K#				VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPECNO:SP78-007 P/N:501-24-200
PT 3451	CHARGING PUMP OUTLET PRESS.-2	0-120 PSIG	5%FS	100	502	544#				VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-200
PI 3501	PREHEATER INLET WATER PRESSURE GAGE	0-1000 PSIG					SP42-102				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=595 MAX TEMP=113F
PT 3502	PREHEATER WATER PRESS.-1	0-600 PSIG	5%FS	490	250					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
TE 3503	PREHEATER WATER TEMP.-1	0-400 DEG F	2%		250						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
FT 3504	PREHEATER WATER FLOWRATE-1	5.5-63 K#/HR	1%FS	490	250	55K#					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-2 1/2- CFT2
ZT 3505	PREHEATER WATER LEVEL CONTROL VALVE-1 POSITION	0-100%	5%FS									
PTX 3550	PREHEATER WATER INLET PRESS.-1	0-600 PSIG	5%FS	495	250						VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-1000
TEX 3551	PREHEATER HEAT TRANSFER FLUID OUTLET TEMP.-1	0-600 DEG F	2%FS		462						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
PDTX 3552	PREHEATER HEAT TRANSFER FLUID DIFFERENTIAL PRESS-1	40 PSID	10%FS	10/75	462							
PI 3601	PREHEATER INLET WATER PRESSURE GAGE	0-1000 PSIG						SP42-102				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=595 MAX TEMP=113F
PT 3602	PREHEATER WATER PRESS.-2	0-600 PSIG	1%FS	490	250						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
TE 3603	PREHEATER WATER TEMP.-2	0-400 DEG F	2%		250						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 5(1/2)-6-AA-H7
FT 3604	PREHEATER WATER FLOWRATE-2	5.5-63 K#/HR	1%FS	490	250	55K#					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V-2 1/2- CFT2
ZT 3605	PREHEATER WATER LEVEL CONTROL VALVE-2 POSITION	0-100%	2%FS									
PTX 3650	PREHEATER WATER INLET PRESS.-2	0-600 PSIG	5%FS	495	250						VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-1000
TEX 3651	PREHEATER HEAT TRANSFER FLUID OUTLET TEMP.-2	0-600 DEG F	2%FS		462						HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
PDTX 3652	PREHEATER HEAT TRANSFER FLUID DIFFERENTIAL PRESS-2	40 PSID	10%FS	10/75	462							

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PI 3701	BOILER INLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT 3702	BOILER HEAT TRANSFER FLUID FLOW CONTROL VALVE-1	0-100% 2%FS									
PT 3702A	BOILER STEAM OUTLET PRESS.-1-1	0-600 PSIG	2%FS	412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
PT 3702B	BOILER STEAM OUTLET PRESS.-1-2	0-600 PSIG	5%FS	412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
PT 3703	BOILER HEAT TRANSFER FLUID INLET PRESS.-1	0-100 PSIG	5%FS	75	575					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
TE 3704	BOILER HEAT TRANSFER FLUID INLET TEMP.-1	0-800 DEG F	2%		575					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
LT 3705	PROCESS VARIABLE TSS BOILER WATER LEVEL-1	0-30 H2O	1"	412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP3E12-B2
FT 3706	BOILER HEAT TRANSFER FLUID FLOWRATE-1 (CALORIA HT-43 OIL)	29-500 K#/HR	1%FS	75	575	436				ENGRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150- 750-PAQ
ZS 3707A	SUPERHEATER STEAM WARMUP VALVE-1 POSITION										
ZS 3707B	SUPERHEATER STEAM WARMUP VALVE-1 POSITION										
ZS 3708A	BOILER WATER BLEED VALVE-1 POSITION										
ZS 3708B	BOILER WATER BLEED VALVE-1 POSITION										
PI 3709	SUPERHEATER INLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT 3710	SUPERHEATER HEAT TRANSFER FLUID FLOW CONTROL VALVE-1	0-100% 5%FS									
TE 3710A	SUPERHEATER STEAM OUTLET TEMP.-1-1	0-800 DEG F	1.4%		530					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X- X11-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
TE 3710B	SUPERHEATER STEAM OUTLET TEMP.-1-2	0-800 DEG F	1.4%		530						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-X11-H7
TE 3711	SUPERHEATER HEAT TRANSFER FLUID INLET TEMP.-1	0-800 DEG F	2%		575						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
FT 3712	SUPERHEATER HEAT TRANSFER FLUID FLOWRATE-1 (CALORIA HT-43 OIL)	14.5-291 K#/HR	1%FS	75	575	291					ENGRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PA0
PT 3713	SUPERHEATER HEAT TRANSFER FLUID INLET PRESS.-1	0-100 PSIG	5%FS	75	575						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
PT 3714	SUPERHEATER STEAM OUTLET PRESS.-1	0-600 PSIG	1.2%F	400	530						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:151GP7E12-B2
FT 3715	SUPERHEATER STEAM FLOWRATE-1	5.5-63 K#/HR	1%FS	400	530	55K#					RAMAPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78:002 P/N:MARK V 6PR2
ZS 3717A	SUPERHEATER STEAM OUTLET VALVE-1 POSITION					55K#						
ZS 3717B	SUPERHEATER STEAM OUTLET VALVE-1 POSITION											
PI 3718	SUPERHEATER OUTLET STEAM PRESSURE GAGE	0-1000 PSIG					SP42-102					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=595 MAX TEMP=113F
TEX 3750	BOILER HEAT TRANSFER FLUID INLET TEMP-1	0-600 DEG F	2%FS	75	575						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PDTX 3751	BOILER HEAT TRANSFER FLUID DELTA PRESS-1	40 PSID	10%FS	15/75	587							
TEX 3752	BOILER HEAT TRANSFER FLUID OUTLET TEMP.-1	0-600 DEG F	2%FS		480						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
TEX 3753 (IN.SPARE)	BOILER STEAM OUTLET TEMP-1	0-600 DEG F	2%FS		475						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OF ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
TEX 3754	PREHEATER WATER OUTLET TEMP.-1	0-600 DEG F	2%FS		443					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-5(1/2)-6-AA-H7
TEX 3755	STEAM HEAT TRANSFER FLUID OUTLET TEMP.-1	0-600 DEG F	2%FS		570					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
PDX 3756	SUPERHEATER FLUID DIFFERENTIAL PRESS.-1	40 PSID	10%FS	10 75	575						
PI 3801	BOILER INLET OIL PRESSURE GAGE	0-160 PSIG					SP42-101				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT 3802	BOILER HEAT TRANSFER FLUID FLOW VALVE-2	0-100%	5%FS								
PT 3802A	BOILER STEAM OUTLET PRESS.-2-1	0-600 PSIG	5%FS	412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
PT 3802B	BOILER STEAM OUTLET PRESS.-2-2	0-600 PSIG	5%FS	412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B2
PT 3803	BOILER HEAT TRANSFER FLUID INLET PRESS.-2	0-100 PSIG	5%FS	75	575					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
TE 3804	BOILER HEAT TRANSFER FLUID INLET TEMP.-2	0-800 DEG F	2%		575					HY-CAL ENGNRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C-11(3/4)-6-AA-F48X-H7
LT 3805	BOILER WATER LEVEL-2	0-30" H2O	1"	30 412	475					ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 P/N:1151DP3E12-B2
FT 3806	BOILER HEAT TRANSFER FLUID FLOWRATE-2 (CALORIA HT-43 OIL)	29-500 K#/HR	1%FS	75	575	436				ENGNRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PAQ
ZS 3807A	SUPERHEATER STEAM WARMUP VALVE-2 POSITION										
ZS 3807B	SUPERHEATER STEAM WARMUP VALVE-2 POSITION										
ZS 3808A	BOILER WATER BLEED VALVE-2 POSITION										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
ZS 3808B	BOILER WATER BLEED VALVE-2 POSITION											
PI 3809	SUPERHEATER INLET OIL PRESSURE GAGE	0-160 PSIG					SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT 3810	SUPERHEATER HEAT TRANSFER FLUID FLOW VALVE-2	0-100% 5%FS										
TE 3810A	SUPERHEATER STEAM OUTLET TEMP.-2-1	0-800 DEG F	1.4%		530						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-X11-H7
TE 3810B	SUPERHEATER STEAM OUTLET TEMP.-2-2	0-600 DEG F	1.4%		530						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-X11-H
TE 3811	SUPERHEATER HEAT TRANSFER FLUID INLET TEMP.-2	0-800 DEG F	2%		575						HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
FT 3812	SUPERHEATER HEAT TRANSFER FLUID FLOWRATE-2 (CALORIA HT-43 OIL)	14.5-291 K#/HR	1%FS	75	575	291					ENGRNG. MEAS. 600 DIAGONAL LONGMONT, CO. 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PAQ
PT 3813	SUPERHEATER HEAT TRANSFER FLUID INLET PRESS.-2	0-100 PSIG	5%FS	75	575						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
PT 3814	SUPERHEATER STEAM OUTLET PRESS.-2	0-600 PSIG	1.2%F	400	530						ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP7E12-B
FT 3815	SUPERHEATER STEAM FLOWRATE-2	5.5-63 K#/HR	1%FS	400	530	55K#					RAMPO INSTR. MONTVILLE, N.J. 07045	SPEC.NO:SP78-002 P/N:MARK V 6PR2
ZS 3817A	SUPERHEATER STEAM OUTLET VALVE-2 POSITION											
ZS 3817B	SUPERHEATER STEAM OUTLET VALVE-2 POSITION											
PI 3818	SUPERHEATER OUTLET STEAM PRESSURE GAGE	0-1000 PSIG					SP42-102					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=595 MAX TEMP=113F
TEX 3850	BOILER HEAT TRANSFER FLUID INLET PRESS.-2	0-600 DEG F	2%FS		575	582K					HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE. SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
PDTX 3851	BOILER HEAT TRANSFER FLUID DELTA PRESS.-2	40 PSID	10%FS	15/75	575						
TEX 3852	BOILER HEAT TRANSFER FLUID OUTLET TEMP.-2	0-600 DEG F	2%FS		480					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
TEX 3853 (IN.SPARE)	BOILER STEAM OUTLET TEMP.-2	0-600 DEG F	2%FS		475					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
TEX 3854 (IN.SPARE)	PREHEATER WATER OUTLET TEMP.-2	0-600 DEG F	10%FS		443					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE. SPR. 5(1/2)-6-AA-H7 CA. 90670	
TEX 3855	STEAM HEAT TRANSFER FLUID OUTLET TEMP.-2	0-600 DEG F	2%FS		570					HY-CAL ENGRNG SPEC.NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE. SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
PDTX 3856	SUPERHEATER HEAT TRANSFER FLUID DIFF. PRESS.-2	40 PSID	10%FS	10/55	575						
PI 3901	EXTRACTION PUMP OUTLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F.
PI 3902	EXTRACTION PUMP OUTLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101					1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
JT 3903	EXTRACTION PUMP POWER (P303)	300KW									
PT 3903	EXTRACTION PUMP INLET PRESS.-1	0-30 PSIA	5%FS	27 PSIA	575					ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. MANUAL NO.4110/4125 EDEN PRAIRIE P/N:151AP6E12-B2 MINN. 55453	
ST 3903	EXTRACTION PUMP SPEED (P303)	0-2500 RPM	2%FS	2000 RPM	582K#						
JT 3904	EXTRACTION PUMP POWER (P304)	300KW									
PT 3904	EXTRACTION PUMP INLET PRESS.-2	0-30 PSIA	5%FS	27 PSIA	575					ROSEMOUNT, INC. SPEC.NO:SP78-007 12001 W.78 ST. MANUAL NO.4110/4125 EDEN PRAIRIE P/N:1151AP6E12-B2 MINN. 55453	
ST 3904	EXTRACTION PUMP SPEED (P304)	0-2500 RPM	2%FS	2000 RPM	582K#						
ZS 3905A	EXTRACTION PUMP CROSSOVER VALVE-1 POSITION										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZS	3905B	EXTRACTION PUMP CROSSOVER VALVE-1 POSITION									
ZS	3906A	EXTRACTION PUMP CROSSOVER VALVE-2 POSITION									
ZS	3906B	EXTRACTION PUMP CROSSOVER VALVE-2 POSITION									
ZS	3907A	AUX. EXTRACTION FLUID INLET VALVE POSITION									
ZS	3907B	AUX. EXTRACTION FLUID INLET VALVE POSITION									
PT	3908	AUX. EXTRACTION FLUID INLET PRESS.	0-30 PSIA	5%FS	27	425				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:151AP6E12-B2
PI	3909	AUXILIARY PUMP OUTLET OIL PRESSURE GAGE	0-160 PSIG				SP42-101				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=115 MAX TEMP=113F
ZT	3910	AUX. EXTRACTION FLUID CONTROL VALVE POSITION	0-100%	5%FS							
PT	3911	AUX. EXTRACTION FLUID OUTLET PRESS.	0-60 PSIG	2%FS	30	425				ROSEMOUNT, INC. 12001 W.78 ST. EDEN PRAIRIE MINN. 55453	SPEC.NO:SP78-007 MANUAL NO.4110/4125 P/N:1151GP6E12-B2
TE	3912	AUX. EXTRACTION FLUID OUTLET TEMP.	0-800 DEG F	5 F		425				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
FT	3913	AUX. EXTRACTION FLUID FLOWRATE (CALORIA HT-43 OIL)	10-115 K#/HR	1%FS	30	425	97K#			ENGRNG. MEAS. 600 DIAGONAL LONGMONT, COL 80501	SPEC.NO:SP78-001 P/N:TMP 700-2F150-750-PAQ
TE	3914A	EXTRACTION PUMP INLET TEMP-1	0-600 DEG F			425				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
TE	3914B	EXTRACTION PUMP INLET TEMP-2	0-600 DEG F			425				HY-CAL ENGRNG 12105 LOS NIETOS RD. SANTA FE, SPR. CA. 90670	SPEC.NO:SP78-004 INCONEL 600 SHEATH P/N:TC-723-K-C- 11(3/4)-6-AA-F48X-H7
PT	3950	EXTRACTION PUMP OUTLET PRESS-1	0-120 PSIG	5%FS	100	580				VIATRAN CORP. 300 INDUSTRIAL GRAND ISLAND N.Y. 14072 (716)-773-1700	SPEC.NO:SP78-007 P/N:501-24-200

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
PT 3951	EXTRACTION PUMP OUTLET PRESS-2	0-120 PSIG	5%FS	100	580				VIATRAN CORP. SPEC:NO:SP78-007 300 INDUSTRIAL P/N:501-24-200 GRAND ISLAND N.Y. 14072 (716)-773-1700	
PTX 3952 (IN.SPARE)	SUPERHEATER OIL INLET PRESS-1	0-100 PSIG	5%FS	75	580				VIATRAN CORP SPEC:NO:SP78-007 300 INDUSTRIAL P/N:501-24-200 GRAND ISLAND N.Y. 14072 (716)-773-1700	
TEX 3953 (IN.SPARE)	SUPERHEATER OIL INLET-1	0-650 DEG F	5%FS		580				HY-CAL ENGRNG SPEC:NO:SP78-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
PTX 3954 (IN.SPARE)	SUPERHEATER OIL INLET PRESS-2	0-100 PSIG	5%FS	75	580				VIATRAN CORP. SPEC:NO:SP78-007 300 INDUSTRIAL P/N:501-24-200 GRAND ISLAND N.Y. 14072 (716)-773-1700	
TEX 3955 (IN.SPARE)	SUPERHEATER OIL INLET PRESS-2	0-650 DEG F	5%FS		580				HY-CAL ENGRNG SPEC:NO:SP788-004 12105 LOS INCONEL 600 SHEATH NIETOS RD. P/N:TC-723-K-C- SANTA FE, SPR. 11(3/4)-6-AA-F48X-H7 CA. 90670	
PS 4001	ULLAGE NITRO. PRESS.									SA 311
PI 4003	ULLAGE NITROGEN PRESS. GAGE-1									SA311
PI 4005	ULLAGE NITROGEN PRESS. GAGE-2									SA311
PI 4007	ULLAGE GAS PRESS. GAGE-1	0-30" W.C			4"WC					SA311
PT 4008	ULLAGE GAS PRESS.	0-20" H2O								
PS 4010	ULLAGE GAS PRESS. SWITCH-1					40- M300-				1/4" NPT FEMALE ASTM A106 GRADE B MAX IN. W.C.=25 MAX TEMP=113F 9"WC ON DECREASING; 11"WC ON INCREASING
PS 4011	ULLAGE GAS PRESS. SWITCH-2					40- M300-				1/4" NPT FEMALE ASTM A106 GRADE B MAX IN. W.C.=25 MAX TEMP=113F 7"WC ON DECREASING; 9"WC ON INCREASING
PI 4013	TU ULLAGE PRESSURE GAGE FOR GASEOUS H2, N2 AND HYDROCARBONS	0-30 IN. W.C.				NONE				1/2"NPT MALE, BOTTOM ASTM A106 GRADE B MAX PSIG=25 IN.WC MAX TEMP=113F
ZS 4014A	ULLAGE GAS PRESS. CONTROL VALVE POSITION									

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ZS	4014B	ULLAGE GAS PRESS. CONTROL VALVE POSITION									
ZS	4015A	ULLAGE GAS VENT VALVE-2 POSITION									
ZS	4015B	ULLAGE GAS VENT VALVE-2 POSITION									
LG	4020A	ULLAGE STORAGE TANK LEVEL GAGE									SA311
LG	4020B	ULLAGE STORAGE TANK LEVEL GAGE									SA311
PI	4027	UMU STACK PILOT GAS PRESS				5%FS					
TEX (IN.SPARE)	4051	UMU GN2 TEMP				+140 F -20 F	5%FS				
PTX	4052	UMU GN2 PRESS.				150	5%FS				
FTX (IN.SPARE)	4053	UMU GN2 FLOW				50 SCFM	5%FS				
ET	5001	4.16KV SWGR MAIN BREAKER VOLTAGE									
ISH	5001	4.16KV SWGR MAIN BREAKER TRIPPED									
ISX	5001	MAIN BREAKER OVER CURRENT									
IT	5001	4.16KV SWGR MAIN BREAKER CURRENT									
JT	5001	AUX TRANSFORMER PWR									
JTX	5001	4.16KV SWGR MAIN BREAKER POWER (FOR AX1)									
ZS	5001	MAIN BRKR AQ-1									
ZY	5001	4.16KV SWGR MAIN BREAKER TEST POSITION									
ZS	5001A	4160 V SWITCHGEAR BREAKER STATUS (1)-									
ZS	5001B	4160 V SWITCHGEAR BREAKER STATUS (1)-									
ISH	5001G	4.16KV SWGR MAIN BREAKER GRD OVERCURRENT									
IDSH	5002	AUX TRANSFORMER DIFFERENTIAL									

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
IDSX 5002	AUX XFMR DIFFERENTIAL										
IS 5002	AUXILIARY TRANSFORMER GROUND DETECTOR ALARM										
ISH 5002	AUX TRANSFORMER GRD OVERCURRENT										
PS 5002	AUXILIARY TRANSFORMER SUDDEN PRESSURE										
PSH 5002	AUX TRANSFORMER SUDDEN PRESS.										
PSX 5002	AUXILIARY TRANSFORMER SUDDEN PRESSURE										
US 5002	AUXILIARY TRANSFORMER COMMON ALARM (5 SOURCES)										
ISH 5003	4160 V SWITCHGEAR BREAKER TRIP (1)										
ISX 5003	STATION SERVICE TRANSFORMER OVERCURRENT										
IT 5003	4.16KV SWGR STA SERV TRFR SX1 CURRENT										
JT 5003	4.16KV SWGR STA SERV TRFR SX1 POWER										
JTX 5003	4.16KV SWGR STA SERV TRFR SX1 POWER										
ZS 5003	STA SERV TRFR SX1										
ZY 5003	4.16KV SWGR STA SERV TRFR SX1 TEST POSITION										
ZS 5003A	4160 V SWITCHGEAR BREAKER STATUS (2)-										
ZS 5003B	4160 V SWITCHGEAR BREAKER STATUS (2)-										
ISH 5004	4160 V SWITCHGEAR BREAKER TRIP (2)										
ISX 5004	TS LOAD CENTER A CURRENT										
IT 5004	TSS LOAD CENTER A CURRENT										
JT 5004	TS SUBSTATION POWER LOAD CENTER A										
JTX 5004	TS SUBSTATION POWER LOAD CENTER A										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
ZS	5004	TSS LOAD CENTER A								
ZY	5004	TSS LOAD CENTER A TEST								
ZS	5004A	4160 V SWITCHGEAR BREAKER STATUS (3)-								
ZS	5004B	4160 V SWITCHGEAR BREAKER STATUS (3)-								
ISH	5006	4160 V SWITCHGEAR BREAKER TRIP (4)								
ISX	5006	COOLING TOWER XFMR OVERCURRENT								
IT	5006	CLG TWR TRFR CTX1 CURRENT								
JT	5006	COOLING TOWER TRANSFORMER TXI								
JTX	5006	COOLING TOWER TRANSFORMER TXI								
ZS	5006	CLG TWR TRFR CTX1								
ZY	5006	CLG TWR TRFR CTX1 TEST								
ZS	5006A	4160 V SWITCHGEAR BREAKER STATUS (5)-								
ZS	5006B	4160 V SWITCHGEAR BREAKER STATUS (5)-								
ISH	5007	4160 V SWITCHGEAR BREAKER TRIP (5)								
JT	5007	COLLECTOR FIELD POWER -1 HELIOSTAT								
ZS	5007A	4160 V SWITCHGEAR BREAKER STATUS (6)-								
ZS	5007B	4160 V SWITCHGEAR BREAKER STATUS (6)-								
ISH	5008	4160 V SWITCHGEAR BREAKER TRIP (6)								
US	5008	AUX BOILER TRFR								
ZY	5008	AUX BOILER FDR B901 TEST								
ZS	5008A	4160 V SWITCHGEAR BREAKER STATUS (7)-								
ZS	5008B	4160 V SWITCHGEAR BREAKER STATUS (7)-								
ISH	5009	HELIO FOR #2 TRIP								
JT	5009	COLLECTOR FIELD POWER -2 HELIOSTAT								

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
ZY 5009	HELIO FOR #2 TEST									
ZS 5009A	4160 V SWITCHGEAR BREAKER STATUS (8)-									
ZS 5009B	4160 V SWITCHGEAR BREAKER STATUS (9)-									
ISH 5010	WATER WELL 4KV LINE TRIP									
ISX 5010	WATERWELL 4KV LINE OVERCURRENT									
IT 5010	WATER WELL 4KV LINE CURRENT									
ZS 5010	WATER WELL 4KV LINE									
ZY 5010	WATER WELL 4KV LINE TEST									
ZS 5010A	4160 V SWITCHGEAR BREAKER STATUS (9)									
ZS 5010B	4160 V SWITCHGEAR BREAKER STATUS (9)-									
ISH 5011	SPARE BREAKER TRIP									
IT 5011	SPARE BREAKER CURRENT									
ZS 5011A	SPARE BREAKER									
ZS 5011B	SPARE BREAKER									
IS 5013	COOLING TWR TRFR GROUND									
PSH 5013	COOLING TOWER TRANS. SUDDEN PRESS ALARM									
US 5013	COOLING TOWER TRANS. COMMON ALARM									
ESL 5014	COOLING TOWER BREAKER UNDERVOLTAGE ALARM									
IS 5014	COOLING TOWER BREAKER GROUND DETECTOR ALARM									
ESL 5015	COOLING TWR SWGR METER COMP LOW VOLTAGE									
ET 5015	COOLING TWR SWGR METER COMP VOLTAGE									
IS 5015	COOLING TWR SWGR METER COMP GROUND									

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ISH 5015	COOLING TOWER BREAKER TRIP ALARM										
ISX 5015	MAIN BREAKER B02 OVERCURRENT										
IT 5015	COOLING TWR SWGR MAIN BREAKER CURRENT										
ZS 5015	CLG TWR MAIN BRKR										
ZY 5015	COOLING TWR SWGR MAIN BREAKER TEST										
ZS 5015A	COOLING TWR SWGR MAIN BREAKER OPEN										
ZS 5015B	COOLING TWR SWGR MAIN BREAKER CLOSED										
ISH 5017	ADMIN BLDG FDR TRIP									WILLIAMETTE	
ZY 5017	ADMIN BLDG FDR TEST										
ZS 5017A	ADMIN BLDG FDR										
ZS 5017B	ADMIN BLDG FDR										
ISH 5019	SPARE BREAKER TRIPPED										
IT 5019	SPARE BREAKER CURRENT										
ZS 5019A	SPARE BREAKER										
ZS 5019B	SPARE BREAKER										
ESL 5020	METER COMPART LO VOLTS										
IS 5020	METER COMPART GROUND										
ISH 5020	MAIN BREAKER TRIP										
ISX 5020	MAIN BREAKER TRIP										
ZS 5020	MAIN BRKR CLG TWR										
ZY 5020	MAIN BREAKER TEST										
ZS 5020A	MAIN BREAKER										
ZS 5020B	MAIN BREAKER										
ISH 5021	MCC-BOA FDR TRIP										
ISX 5021	MOTOR CONTR. CENTER BOA OVERCURRENT										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI DEG.F	INSTR. DATA K#/HR SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
JT 5021	MTR CONTROL CENTER (A) POWER									
ZS 5021	MCC-BOA FDR									
ZY 5021	MCC-BOA FDR TEST									
ZS 5021A	MCC-BOA FDR									
ZS 5021B	MCC-BOA FDR									
ISH 5022	WATER TREATMENT 480V-MCC BOC TRIP									
JT 5022	MTR CONTROL CENTER									
ZS 5022A	WATER TREATMENT 480V-MCC BOC									
ZS 5022B	WATER TREATMENT 480V-MCC BOC									
ISH 5025	RCVR SUBSYSTEM PWR PANEL PPA TRIP									
ISX 5025	RCVR SUBSYS. PPA OVERCURRENT									
JT 5025	POWER PANEL "A" POWER									
ZS 5025	RCVR SUB PWR PNL PPA									
ZS 5025A	RCVR SUBSYSTEM PWR PANEL PPA									
ZS 5025B	RCVR SUBSYSTEM PWR PANEL PPA									
IS 5026	SERVICE STATION TRANSFORMER GRD OVERCURRENT									
ISH 5026	SERVICE STATION TRANSFORMER SUDDEN PRESS									
US 5026	SERVICE STATION TRANSFORMER COMMON TROUBLE									
ISX 5070	MAIN BREAKER B01 OVERCURRENT									
EHL 5100	GEN. OVER/UNDER VOLTAGE									
EHLX 5100	GEN. OVER/UNDER VOLTAGE									
ES 5100	GENERATOR OUTPUT VOLT UNBALANCED ALARM									
ESHX 5100	GENERATOR OVEREXCITATION ALARM									

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ESLX 5100	LOSS OF EXCITATION										
ESSL 5100	GENERATOR OUTPUT PRE-TRIP ALARM OVER EXCIT.V/HZ										
ESX 5100	OVER-UNDER VOLTAGE										
ET 5100	GENERATOR OUTPUT VOLTAGE										
EYX 5100	GEN. DISTANCE BACKUP										
IDSX 5100	GENERATOR DIFFERENTIAL ALARM										
ISX 5100	GENERATOR STATOR GROUND										
IT 5100	GENERATOR OUTPUT CURRENT										
KYX 5100	GENERATOR NEGATIVE PHASE SEQUENCE ALARM										
SHLX 5100	GENERATOR FREQUENCY OVER UNDER ALARM										
JT 5100A	GENERATOR OUTPUT POWER										
ZS 5100A	GEN BREAKER										
JT 5100B	GENERATOR PWR OUTPUT (WATTS)										2.5ZF
JTX 5100B	GENERATOR PWR OUTPUT (WATTS)										2.5ZF
IDSX 5101	GENERATOR UNIT DIFFERENTIAL ALARM										
IS 5101	GENERATOR ANTIMOTOR										
ISX 5101	GENERATOR ANTIMOTOR										
JT 5101	GENERATOR PWR OUTPUT (VAR)										2.5ZF
KYX 5101	OUT-OF-STEP										
ZS 5101A	GEN FIELD BRKR										
JT 5102A	33KV BRKR										
ZS 5102A	33KV BRKR										
AQT 5200	MAIN TRANSFORMER ELECT ENERGY FLOW (KWH)										2.5ZF
ISH 5200	MAIN TRANSFORMER GRD OVERCURRENT										
ISX 5200	MAIN TRANSFORMER GRD OVERCURRENT										
IT 5200	MAIN TRANSFORMER CURRENT										

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
JT 5200	MAIN TRANSFORMER POWER										
JTX 5200	MAIN TRANSFORMER POWER										
PS 5200	MAIN TRANSFORMER SUDDEN PRESSURE ALARM										
PSH 5200	MAIN TRANSFORMER SUDDEN PRESS.										
PSX 5200	MAIN TRANSFORMER SUDDEN PRESS.										
US 5200	MAIN TRANSFORMER COMMON TROUBLE										
YS 5555	FIRE ALARM TO SDPC										
KYX 5701	GENERATOR OUT OF STEP ALARM										
TTX 9001A	HELIOSTAT TEMPERATURE 0116A	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9001B	HELIOSTAT TEMPERATURE 0116B	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9001C	HELIOSTAT TEMPERATURE 0116C	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9001D	HELIOSTAT TEMPERATURE 0116D	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9001E	HELIOSTAT TEMPERATURE 0116E	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9001F	HELIOSTAT TEMPERATURE 0116F	200F	2%	AMB	16F-113F	2131				ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON PSI	INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
TTX 9002A	HELIOSTAT TEMPERATURE 1638A	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9002B	HELIOSTAT TEMPERATURE 1638B	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9002C	HELIOSTAT TEMPERATURE 1638C	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9002D	HELIOSTAT TEMPERATURE 1638D	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9002E	HELIOSTAT TEMPERATURE 1638E	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9002F	HELIOSTAT TEMPERATURE 1638F	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9005A	HELIOSTAT TEMPERATURE 2766A	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9005B	HELIOSTAT TEMPERATURE 2766B	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9005C	HELIOSTAT TEMPERATURE 2766C	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9005D	HELIOSTAT TEMPERATURE 2766D	200F	2%	AMB	16F-113F	2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR

INSTRUMENTATION LIST

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA	ELECT ELEM.	INSTALL DWG.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR	SHEET	DIAG.	NO.		
TTX 9005E	HELIOSTAT TEMPERATURE 2766E	200F	2%	AMB	16F- 113F		2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR
TTX 9005F	HELIOSTAT TEMPERATURE 2766F	200F	2%	AMB	16F- 113F		2131			ROSEMOUNT, INC. P.O. BOX 35129 MINNEAPOLIS MINN. 55435 612-941-5560 MODEL 118MF	PLATINUM RESISTANCE TEMPERATURE SENSOR

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
DARM- 100 - 1	EXCITATION POWER SUPPLY							REMOTE STATION # 1
DARM- 100 - 2	DISCRETE INPUT PANEL							REMOTE STATION # 1
DARM- 100 - 3	DUAL PREAMPLIFIERS PANELS							REMOTE STATION # 1
DARM- 100 - 4	MULTIPLEXER PANEL (SLAVE)							REMOTE STATION # 1
DARM- 100 - 5	MULTIPLEXER PANEL (SLAVE)							REMOTE STATION # 1
DARM- 100 - 6	MULTIPLEXER PANEL (MASTER)							REMOTE STATION # 1
DARM- 100 - 7	FILLER PANEL							REMOTE STATION # 1
DARM- 100 - 8	FILLER PANEL							REMOTE STATION # 1
DARM- 100 - 9	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -10	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -11	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -12	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -13	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -14	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -15	FILLER PANEL							REMOTE STATION # 1
DARM- 100 -16	I/O TERMINATION PANELS							REMOTE STATION # 1
SDP- 100 - 1	ANALOG CONDITIONING MODULE (1-1)							REMOTE STATION # 1
SDP- 100 - 2	MULTIVARIABLE CONTROL UNIT (1-1)							REMOTE STATION # 1
SDP- 100 - 3	ANALOG CONDITIONING MODULE (1-2)							REMOTE STATION # 1

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 100 - 4	MULTIVARIABLE CONTROL UNIT (1-2)							REMOTE STATION # 1
SDP- 100 - 5	MULTIVARIABLE CONTROL UNIT (1-3)							REMOTE STATION # 1
SDP- 100 - 6	ANALOG CONDITIONING MODULE (1-3)							REMOTE STATION # 1
SDP- 100 - 7	FILLER PANEL							REMOTE STATION # 1
SDP- 100 - 8	ANALOG CONDITIONING MODULE (1-4)							REMOTE STATION # 1
SDP- 100 - 9	MULTIVARIABLE CONTROL UNIT (1-4)							REMOTE STATION # 1
SDP- 100 -10	ANALOG CONDITIONING MODULE (1-5)							REMOTE STATION # 1
SDP- 100 -11	MULTIVARIABLE CONTROL UNIT (1-5)							REMOTE STATION # 1
SDP- 100 -12	MULTIVARIABLE CONTROL UNIT (1-6)							REMOTE STATION # 1
SDP- 100 -13	ANALOG CONDITIONING MODULE (1-6)							REMOTE STATION # 1
SDP- 100 -14	FILLER PANEL							REMOTE STATION # 1
SDP- 100 -15	AIRCONDITIONING UNIT							REMOTE STATION # 1
SDP- 100 -16	O.P.I.U. BUSS ACCESS PANEL							REMOTE STATION # 1
SDP- 100 -17	POWER DISTRIBUTION PANEL							REMOTE STATION # 1
SDP- 100 -18	ANALOG CONDITIONING MODULE (1-7)							REMOTE STATION # 1
SDP- 100 -19	MULTIVARIABLE CONTROL UNIT (1-7)							REMOTE STATION # 1
SDP- 100 -20	ANALOG CONDITIONING MODULE (1-8)							REMOTE STATION # 1

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 100 -21	MULTIVARIABLE CONTROL UNIT (1-8)							REMOTE STATION # 1
SDP- 100 -22	MULTIVARIABLE CONTROL UNIT (1-9)							REMOTE STATION # 1
SDP- 100 -23	ANALOG CONDITIONING MODULE (1-9)							REMOTE STATION # 1
SDP- 100 -24	FILLER PANEL							REMOTE STATION # 1
SDP- 100 -25	ANALOG CONDITIONING MODULE (1-10)							REMOTE STATION # 1
SDP- 100 -26	MULTIVARIABLE CONTROL UNIT (1-10)							REMOTE STATION # 1
SDP- 100 -27	SPARE (ACM) SLOT							REMOTE STATION # 1
SDP- 100 -28	SPARE (MVCU) SLOT							REMOTE STATION # 1
SDP- 100 -29	SPARE (DCM) SLOT							REMOTE STATION # 1
SDP- 100 -30	O.P.I.U. BUSS ACCESS PANEL							REMOTE STATION # 1
SDP- 100 -31	FILLER PANEL							REMOTE STATION # 1
SDP- 100 -32	MULTIPLEXER (IPAC) TERMINATION PANEL (1-1A)							REMOTE STATION # 1
SDP- 100 -33	MULTIPLEXER (IPAC) TERMINATION PANEL (1-1B)							REMOTE STATION # 1
SDP- 100 -34	MULTIPLEXER (IPAC) TERMINATION PANEL (1-2A)							REMOTE STATION # 1
SDP- 100 -35	MULTIPLEXER (IPAC) TERMINATION PANEL (1-2B)							REMOTE STATION # 1
SDP- 100 -36	MULTIPLEXER INPUT PANEL (1-1)							REMOTE STATION # 1
SDP- 100 -37	MULTIPLEXER INPUT PANEL (1-2)							REMOTE STATION # 1

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 100 -38	M.V.C.U. TERMINATION PANEL (1-3)							REMOTE STATION # 1
SDP- 100 -39	M.V.C.U. TERMINATION PANEL (1-2)							REMOTE STATION # 1
SDP- 100 -40	M.V.C.U. TERMINATION PANEL (1-1)							REMOTE STATION # 1
SDP- 100 -41	M.V.C.U. TERMINATION PANEL (1-6)							REMOTE STATION # 1
SDP- 100 -42	M.V.C.U. TERMINATION PANEL (1-5)							REMOTE STATION # 1
SDP- 100 -43	M.V.C.U. TERMINATION PANEL (1-4)							REMOTE STATION # 1
SDP- 100 -44	M.V.C.U. TERMINATION PANEL (1-9)							REMOTE STATION # 1
SDP- 100 -45	M.V.C.U. TERMINATION PANEL (1-8)							REMOTE STATION # 1
SDP- 100 -46	M.V.C.U. TERMINATION PANEL (1-7)							REMOTE STATION # 1
SDP- 100 -47	M.V.C.U. TERMINATION PANEL (1-10)							REMOTE STATION # 1
SDP- 100 -48	M.V.C.U. TERMINATION PANEL (1-SD)							REMOTE STATION # 1
SDP- 100 -49	M.V.C.U. TERMINATION PANEL (1-SA)							REMOTE STATION # 1
BCS 101	BCS D/A CABINET				ID44819	7871 2037	MODCOMP 1804-1	RS # 1 (LEVEL 13)
DARM 101	DARMS DATA ACQ. CABINET				ID77112	8072 2027	CYBER SYSTEM 9904	RS # 1 (LEVEL 13)

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
ILS 101	ILS REMOTE UNIT (WALL)	36"WX72"HX16"D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771721	RS # 1 (LEVEL 14)
RLU 101	RECEIVER RED LINE UNIT (RLU)	UNINTERRUPTIBLE PWR. SYS. LAMBDA POWER ASSEMBLY MODICON 584 CONTROLLER				7801 2038	DELTEC LAMBDA ELECTRIC GOULD INC. CUSTOM CONTROL	RS # 1 (LEVEL 14)
SCU 101	SIGNAL CONDITIONING UNIT (SCU) CABINET					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 1 (LEVEL 14)
SDP 101	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771702	RS # 1 (LEVEL 14)
DARM 102	DARMS DATA ACQ. CABINET				ID77112	8072 2027	CYBER SYSTEM 9904	RS # 1 (LEVEL 13)
RLU 102	RED LINE UNIT (RLU)					7801 2038		RS # 1 (LEVEL 14)
SCU 102	SIGNAL CONDITIONING UNIT (SCU) CABINET					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 1 (LEVEL 14)
SDP 102	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771702	RS # 1 (LEVEL 14)
DARM 103	DARMS TERMINATION CABINET				ID77112	8072 2027	CYBER SYSTEM	RS # 1 (LEVEL 13)
SCU 103	SIGNAL CONDITIONING UNIT (SCU) CABINET					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 1 (LEVEL 14)
SDP 103	SDPC- MVCU				ID44164	8071 2005	BECKMAN INSTR. 771702	RS # 1 (LEVEL 14)
SCU 104	SIGNAL CONDITIONING UNIT (SCU) CABINET					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 1 (LEVEL 14)
SDP 104	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771702	RS # 1 (LEVEL 14)
SDP 105	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771702	RS # 1 (LEVEL 14)
SDP 106	SDPC- MULTIPLEXER				ID44164	8071 2005	BECKMAN INST. #771703	RS # 1 (LEVEL 14)

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP 107	SDPC- MVCU TERMINATION (WALL)				ID44164	8071 2005	BECKMAN INST. #771711	RS # 1 (LEVEL 14)
SDP 108	SDPC- MVCU TERMINATION (WALL)				ID44164	8071 2005	BECKMAN INST. #771711	RS # 1 (LEVEL 14)
SDP 109	SDPC- MVCU TERMINATION (WALL)				ID44164	8071 2005	BECKMAN INST. #771711	RS # 1 (LEVEL 14)
SDP 110	SDPC- MVCU TERMINATION (WALL)				ID44164	8071 2005	BECKMAN INST. #771711	RS # 1 (LEVEL 14)
DARM- 200 - 1	EXCITATION POWER SUPPLY PANEL							REMOTE STATION # 2
DARM- 200 - 2	DISCRETE INPUT PANEL							REMOTE STATION # 2
DARM- 200 - 3	DUAL PREAMPLIFIER PANEL							REMOTE STATION # 2
DARM- 200 - 4	MULTIPLEXER (SLAVE)							REMOTE STATION # 2
DARM- 200 - 5	MULTIPLEXER (MASTER)							REMOTE STATION # 2
DARM- 200 - 6	FILLER PANEL							REMOTE STATION # 2
DARM- 200 - 7	FILLER PANEL							REMOTE STATION # 2
DARM- 200 - 8	I/O TERMINATION PANELS							REMOTE STATION # 2
SDP- 200 - 1	ANALOG CONDITIONING MODULE (2-1)							REMOTE STATION # 2
SDP- 200 - 2	MULTIVARIABLE CONTROL UNIT (2-1)							REMOTE STATION # 2
SDP- 200 - 3	ANALOG CONDITIONING MODULE (2-2)							REMOTE STATION # 2
SDP- 200 - 4	MULTIVARIABLE CONTROL UNIT (2-2)							REMOTE STATION # 2

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 200 - 5	MULTIVARIABLE CONTROL UNIT (2-3)							REMOTE STATION # 2
SDP- 200 - 6	ANALOG CONDITIONING MODULE (2-3)							REMOTE STATION # 2
SDP- 200 - 7	FILLER PANEL							REMOTE STATION # 2
SDP- 200 - 8	AIRCONDITONING UNIT							REMOTE STATION # 2
SDP- 200 - 9	POWER DISTRIBUTION PANEL							REMOTE STATION # 2
SDP- 200 -10	ANALOG CONDITIONING MODULE (2-4)							REMOTE STATION # 2
SDP- 200 -11	MULTIVARIABLE CONTROL UNIT (2-4)							REMOTE STATION # 2
SDP- 200 -12	ANALOG CONDITIONING MODULE (2-5)							REMOTE STATION # 2
SDP- 200 -13	MULTIVARIABLE CONTROL UNIT (2-5)							REMOTE STATION # 2
SDP- 200 -14	O.P.I.U. BUSS ACCESS PANEL							REMOTE STATION # 2
SDP- 200 -15	FILLER PANEL							REMOTE STATION # 2
SDP- 200 -16	MULTIPLEXER (IPAC) TERMINATION PANEL (2-1A)							REMOTE STATION # 2
SDP- 200 -17	MULTIPLEXER (IPAC) TERMINATION PANEL (2-1B)							REMOTE STATION # 2
SDP- 200 -18	MULTIPLEXER (IPAC) TERMINATION PANEL (2-2A)							REMOTE STATION # 2
SDP- 200 -19	MULTIPLEXER (IPAC) TERMINATION PANEL (2-2B)							REMOTE STATION # 2

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 200 -20	MULTIPLEXER INPUT PANEL (2-1)							REMOTE STATION # 2
SDP- 200 -21	MULTIPLEXER INPUT PANEL (2-2)							REMOTE STATION # 2
SDP- 200 -22	M.V.C.U. TERMINATION PANEL (2-4A)							REMOTE STATION # 2
SDP- 200 -23	M.V.C.U. TERMINATION PANEL (2-5A)							REMOTE STATION # 2
SDP- 200 -24	M.V.C.U. TERMINATION PANEL (2-3A)							REMOTE STATION # 2
SDP- 200 -25	M.V.C.U. TERMINATION PANEL (2-2A)							REMOTE STATION # 2
SDP- 200 -26	M.V.C.U. TERMINATION PANEL (2-1A)							REMOTE STATION # 2
SDP- 200 -27	M.V.C.U. TERMINATION PANEL SPARE							REMOTE STATION # 2
DARM 201	DARMS DATA ACQ. CABINET				ID77112	8072 2027	CYBER SYSTEM 9904	RS # 2
ILS 201	ILS CABINET (WALL)	36"WX72"HX16D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771722	RS # 2
RLU 201	THERMAL STORAGE RED LINE UNIT (RLU)					7801 2038		RS # 2
SCU 201	SIGNAL CONDITIONING UNIT (SCU)					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 2
SDP 201	SDPC - MVCU				ID44164	8071 2005	BECKMAN INST. #771704	RS # 2
DARM 202	DARMS TERMINATION CABINET				ID77112	8072 2027	CYBER SYSTEM	RS # 2
RLU 202	RED LINE UNIT (RLU)					7801 2038		RS # 2

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SCU 202	SIGNAL CONDITIONING UNIT (SCU)					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 2
SDP 202	SDPC - MVCU				ID44164	8071 2005	BECKMAN INST. #771704	RS # 2
SDP 203	SDPC - MVCU				ID44164	8071 2005	BECCMAN INST. #771704	RS # 2
SDP 204	SDPC- MULTIPLEXER				ID44164	8071 2005	BECKMAN INST. #771705	RS # 2
SDP 205	SDPC- MVCU TERMINATION CABINET				ID44164	8071 2005	BECKMAN INST. #771712	RS # 2
DARM- 300 - 1	EXCITATION POWER SUPPLY PANEL							REMOTE STATION # 3
DARM- 300 - 2	DISCRETE INPUT PANEL							REMOTE STATION # 3
DARM- 300 - 3	DUAL PREAMPLIFIER PANEL							REMOTE STATION # 3
DARM- 300 - 4	MULTIPLEXER (MASTER)							REMOTE STATION # 3
DARM- 300 - 5	FILLER PANEL							REMOTE STATION # 3
DARM- 300 - 6	FILLER PANEL							REMOTE STATION # 3
DARM- 300 - 7	FILLER PANEL							REMOTE STATION # 3
DARM- 300 - 8	I/O TERMINATION PANELS							REMOTE STATION # 3
SDP- 300 - 1	SPARE (ACM)							REMOTE STATION # 3
SDP- 300 - 2	SPARE (MVCU)							REMOTE STATION # 3
SDP- 300 - 3	SPARE (DCM)							REMOTE STATION # 3
SDP- 300 - 4	ANALOG CONDITIONING MODULE (3-1)							REMOTE STATION # 3
SDP- 300 - 5	MULTIVARIABLE MODULE (3-1)							REMOTE STATION # 3

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 300 - 6	FILLER PANEL							REMOTE STATION # 3
SDP- 300 - 7	AIRCONDITIONING UNIT							REMOTE STATION # 3
SDP- 300 - 8	POWER DISTRIBUTION PANEL							REMOTE STATION # 3
SDP- 300 - 9	ANALOG CONDITIONING MODULE (3-2)							REMOTE STATION # 3
SDP- 300 -10	MULTIVARIABLE MODULE (3-2)							REMOTE STATION # 3
SDP- 300 -11	SPARE (ACM) SLOT							REMOTE STATION # 3
SDP- 300 -12	SPARE (MVCU) SLOT							REMOTE STATION # 3
SDP- 300 -13	O.P.I.U. BUSS ACCESS PANEL							REMOTE STATION # 3
SDP- 300 -14	FILLER PANEL							REMOTE STATION # 3
SDP- 300 -15	MULTIPLEXER (IPAC) TERMINATION PANEL (3-1A)							REMOTE STATION # 3
SDP- 300 -16	MULTIPLEXER (IPAC) TERMINATION PANEL (3-1B)							REMOTE STATION # 3
SDP- 300 -17	MULTIPLEXER INPUT PANEL (3-1)							REMOTE STATION # 3
SDP- 300 -18	M.V.C.U. TERMINATION PANEL (3-SA)							REMOTE STATION # 3
SDP- 300 -19	M.V.C.U. TERMINATION PANEL (3-2A)							REMOTE STATION # 3
SDP- 300 -20	M.V.C.U. TERMINATION PANEL (3-1A)							REMOTE STATION # 3

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 300 -21	M.V.C.U. TERMINATION PANEL (3-5A)							REMOTE STATION # 3
SDP- 300 -22	M.V.C.U. TERMINATION PANEL (3-5A)							REMOTE STATION # 3
SDP- 300 -23	M.V.C.U. TERMINATION PANEL (3-5D)							REMOTE STATION # 3
DARM 301	DARMS DATA ACQ. CABINET				ID77112	8072 2027	CYBER SYSTEM 9904	RS # 3
ILS 301	ILS CABINET (WALL)	36"WX72"HX16"D	120	VAC	ID44164	8071 2005	BECKMAN INST. #771723	RS # 3
SCU 301	SIGNAL CONDITIONING UNIT (SCU)					7801 2038	ROCKETDYNE CANOGA PARK CALIF.	RS # 3
SDP 301	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771706	RS # 3
DARM 302	DARMS TERMINATION CABINET				ID77112	8072 2027	CYBER SYSTEM	RS # 3
SDP 302	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771706	RS # 3
SDP 303	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771706	RS # 3
SDP 304	SDPC- MULTIPLEXER				ID44164	8071 2005	BECKMAN INST. #771707	RS # 3
SDP 305	SDPC- TERMINATION CABINET				ID44164	8071 2005	BECKMAN INST. #771713	RS # 3
DARM- 400 - 1	EXCITATION POWER SUPPLY PANEL							REMOTE STATION # 4
DARM- 400 - 2	DISCRETE INPUT PANEL							REMOTE STATION # 4
DARM- 400 - 3	DUAL PREAMPLIFIER PANEL							REMOTE STATION # 4
DARM- 400 - 4	MULTIPLEXER (MASTER)							REMOTE STATION # 4

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
DARM- 400 - 5	FILLER PANEL							REMOTE STATION # 4
DARM- 400 - 6	FILLER PANEL							REMOTE STATION # 4
DARM- 400 - 7	FILLER PANEL							REMOTE STATION # 4
DARM- 400 - 8	I/O TERMINATION PANELS							REMOTE STATION # 4
SDP- 400 - 1	ANALOG CONDITIONING MODULE (4-1)							REMOTE STATION # 4
SDP- 400 - 2	MULTIVARIABLE CONTROL UNIT (4-1)							REMOTE STATION # 4
SDP- 400 - 3	ANALOG CONDITIONING MODULE (4-2)							REMOTE STATION # 4
SDP- 400 - 4	MULTIVARIABLE CONTROL UNIT (4-2)							REMOTE STATION # 4
SDP- 400 - 5	MULTIVARIABLE CONTROL UNIT (4-3)							REMOTE STATION # 4
SDP- 400 - 6	ANALOG CONDITIONING MODULE (4-3)							REMOTE STATION # 4
SDP- 400 - 7	FILLER PANEL							REMOTE STATION # 4
SDP- 400 - 8	AIRCONDITIONING UNIT							REMOTE STATION # 4
SDP- 400 - 9	POWER DISTRIBUTION PANEL							REMOTE STATION # 4
SDP- 400 -10	ANALOG CONDITIONING MODULE (4-4)							REMOTE STATION # 4
SDP- 400 -11	MULTIVARIABLE CONTROL UNIT (4-4)							REMOTE STATION # 4
SDP- 400 -12	SPARE (ACM) SLOT							REMOTE STATION # 4

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 400 -13	SPARE (MVCU) SLOT							REMOTE STATION # 4
SDP- 400 -14	SPARE (DCM) SLOT							REMOTE STATION # 4
SDP- 400 -15	O.P.I.U. BUSS ACCESS PANEL							REMOTE STATION # 4
SDP- 400 -16	FILLER PANEL							REMOTE STATION # 4
SDP- 400 -17	MULTIPLEXER INPUT PANEL (4-1)							REMOTE STATION # 4
SDP- 400 -18	MULTIPLEXER INPUT PANEL (4-2)							REMOTE STATION # 4
SDP- 400 -19	MULTIPLEXER INPUT PANEL (4-3)							REMOTE STATION # 4
SDP- 400 -20	FILLER PANEL							REMOTE STATION # 4
SDP- 400 -21	MULTIPLEXER (IPAC) TERMINATION PANEL (4-1A)							REMOTE STATION # 4
SDP- 400 -22	MULTIPLEXER (IPAC) TERMINATION PANEL (4-1B)							REMOTE STATION # 4
SDP- 400 -23	MULTIPLEXER (IPAC) TERMINATION PANEL (4-2A)							REMOTE STATION # 4
SDP- 400 -24	MULTIPLEXER (IPAC) TERMINATION PANEL (4-2B)							REMOTE STATION # 4
SDP- 400 -25	MULTIPLEXER (IPAC) TERMINATION PANEL (1-2A)							REMOTE STATION # 4
SDP- 400 -26	MULTIPLEXER (IPAC) TERMINATION PANEL (1-2B)							REMOTE STATION # 4
SDP- 400 -27	M.V.C.U. TERMINATION PANEL (4-1A)							REMOTE STATION # 4

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
SDP- 400 -28	M.V.C.U. TERMINATION PANEL (4-2A)							REMOTE STATION # 4
SDP- 400 -29	M.V.C.U. TERMINATION PANEL (4-3A)							REMOTE STATION # 4
SDP- 400 -30	M.V.C.U. TERMINATION PANEL (4-4A)							REMOTE STATION # 4
SDP- 400 -31	M.V.C.U. TERMINATION PANEL (4-5A)							REMOTE STATION # 4
SDP- 400 -32	M.V.C.U. TERMINATION PANEL (4-6A)							REMOTE STATION # 4
DARM 401	DARMS DATA ACQ. CABINET				ID77112	8072 2027	CYBER SYSTEM 9904	RS # 4
ILS 401	ILS CABINET (WALL)	36"WX72"HX16"D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771724	RS # 4
SDP 401	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771708	RS # 4
DARM 402	DARMS TERMINATION CABINET				ID77112	8072 2027	CYBER SYSTEM	RS # 4
ILS 402	ILS CABINET (WALL)	36"WX71"HX16"D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771724	RS # 4
SDP 402	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771708	RS # 4
ILS 403	ILS CABINET (WALL)	36"WX72"HX16"D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771724	RS # 4
SDP 403	SDPC- MVCU				ID44164	8071 2005	BECKMAN INST. #771708	RS # 4
SDP 404	SDPC- MULTIPLEXER				ID44164	8071 2005	BECKMAN INST. #771709	RS # 4
SDP 405	SDPC- MVCU TERMINATION CABINET				ID44164	8071 2005	BECKMAN INST. #771714	RS # 4
SDP 406	TERMINATION RACK				ID44164	8071 2005	BECKMAN INST. 771714	RS#4

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
ILS 501	ILS CABINET (WALL)	36"WX71"HX16"D	120 VAC	5AMP	ID44164	8071 2005	BECKMAN INST. #771725	RS # 5
DARM- 600 - 1	FILLER PANEL							ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 2	FILLER PANEL							ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 3	DISK DRIVE							ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 4								ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 5	POWER SUPPLY							ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 6	FILLER PANEL							ELECTRICAL EQUIPMENT ROOM
DARM- 600 - 7	FILLER PANEL							ELECTRICAL EQUIPMENT ROOM
BCS 601	BCS CAMERA CONTROL RACK	CAMERA CONTROL EQUIPMENT			ID44821	33326	T.L. SNITZER SFR-727A	SSC-INSTALLED IN THE EQUIPMENT ROOM
BCS 601 - 1	TRANSMITTER UNIT	OUTPUT SIG. -6DBM ACROSS 600 BALANCED TWISTED PAIR	110 VAC 60HZ	.17 AMP	ID44818	105308	COHU ELECT DTM-100	SSS-INSTALLED IN THE BCS CAMERA CONTROL RACK
BCS 601 - 2	PELCO SWITCHER	4X1	110 VAC 60HZ		ID44818	105308	COHU ELECT VSS04R	SSS-INSTALLED IN THE BCS CAMERA CONTROL RACK
BCS 601 - 3	DIGITAL VIDEO PROCESSOR (DIGITIZER)	MEM. SIZE 256X256-PIXEL RES. 8 BIT 5 MHZ; SYNC. RS170 AVERAGING CAPABILITY	110 VAC 60HZ		ID44817	32317	QUANTEX CORP. DS-12	SSS-INSTALLED IN THE BCS CAMERA CONTROL RACK
BCS 601 - 4	SHORT HAUL MODEM	INTF. RS232,ASYN. FULL DUPLEX	115 VAC 60HZ	.1 AMP	ID44819	34560	CODEX INC. CODEX 8200	SSS-INSTALLED IN THE BCS CAMERA CONTROL RACK
CS 601	CS 3 BAY COMPUTER		120 VAC					EQUIPMENT ROOM
DARM 601	DARMS CENTRAL CONTROL UNIT				ID77112	8072 2027	CYBER SYSTEM	EQUIPMENT ROOM
DAS 601	DAS COMPUTER- 7863 CPU & MEMORY	128KB CLASSIC DUAL BUS IOP W128KB MEMORY EXPANSION & BACK UP BATTERIES	120 VAC	50A	ID44805	7871 2037	MOD COMP 7863	EQUIPMENT ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
ILS 601	ILS MUX				ID44164	8071 2005	BECKMAN INST. #771718	EQUIPMENT ROOM
OCS 601	MODCOMP MINICOMPUTER		120 VAC	50	ID47096	7871 2037	MODCOMP 7863	1 CABINET WITH A LOUVERED SIDE-SKIN FOR AIR EQUIPMENT ROOM
CS 602	CS 3 BAY COMPUTER							EQUIPMENT ROOM
DARM 602	DARMS CRT OPERATOR INPUT				ID77112	8072 2027	CYBER SYSTEM	EQUIPMENT ROOM
DAS 602	DAS COMPUTER- PCI		120 VAC	50A	ID44805	7871 2037	MOD COMP 0001	EQUIPMENT ROOM
ILS 602	ILS MUX				ID44164	8071 2005	BECKMAN INST. #771718	EQUIPMENT ROOM
OCS 602	MAGNETIC TAPE SYSTEM			9	ID47096	7871 2037	MODCOMP 4164-1	2 CABINETS
CS 603	CS KEYBOARD PRINTER		120 VAC	1AMP			TI 820	EQUIPMENT ROOM
DAS 603	DAS COMPUTER- MAGNETIC TAPE UNIT		120 VAC	50A	ID44805	7871 2037	MOD COMP 0005	EQUIPMENT ROOM
ILS 603	ILS P.L.C.				ID44164	8071 2005	BECKMAN INST. #771718	EQUIPMENT ROOM
OCS 603	MOVING HEAD DISC			30	ID47096	7871 2037	MODCOMP	2 CABINETS MUST HAVE ROOM TO STORE TWO 4175-A DISC PACKS
CS 604	CS KEYBOARD PRINTER		120 VAC	1AMP			TI-820	EQUIPMENT ROOM
DAS 604	DAS COMPUTER- MAGNETIC TAPE UNIT		120 VAC	50A	ID44805	7871 2037	MOD COMP 0005	EQUIPMENT ROOM
ILS 604	ILS P.L.C.				ID44164	8071 2005	BECKMAN INST. #771718	EQUIPMENT ROOM
OCS 604	OCS COMPUTER- PCI				ID47096	7871 2037	MODCOMP	EQUIPMENT ROOM
CS 605	CS LARD READER	300CPM CARD READER 12.5"X 23"X14"	120 VAC	5AMP			MODCOMP 4411	EQUIPMENT ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
DAS 605	DAS COMPUTER-INTERFACE		120 VAC	50A	ID44805	7871 2037	MOD COMP 0001	EQUIPMENT ROOM
OCS 605	OCS COMPUTER-INTERFACE				ID47096	7871 2037	MODCOMP	EQUIPMENT ROOM
CS 606	CS LINE PRINTER		120 VAC	1.5 AMP			MODCOMP 4227	EQUIPMENT ROOM
OCS 606	KEYBOARD PRINTER				ID47096	7871 2037	MODCOMP 4222	
CS 607								EQUIPMENT ROOM
DAS 607	DAS PERIPHERAL-67 MB DISC	67 MB MOVING HEAD DISC	120 VAC		ID44805	7871 2037	MOD COMP 4174-2	EQUIPMENT ROOM
CS 608								EQUIPMENT ROOM
DAS 608	DAS PERIPHERAL-KEYBOARD PRINTER	30CPS PRINTER	120 VAC		ID44805	7871 2037	MOD COMP 4222	EQUIPMENT ROOM
CS 609								EQUIPMENT ROOM
DAS 609	DAS PERIPHERAL-600LPM LINE PRINTER	600 LPM PRINTER			ID44805	7871 2037	MOD COMP 4211-2	EQUIPMENT ROOM
CS 610	4411 300CPM CARD READER	115VAC+/-10%, 60+/-2HZ, 150W 570WATTS (RUN) H=12.5IN, W=23.0IN, D=14.0IN 68LBS					MODCOMP	EQUIPMENT ROOM
DAS 610	DAS A/D CONVERTERS				ID44805	7871 2037	MODCOMP 1804-1	EQUIPMENT ROOM
CS 611	4227 LINE PRINTER	115VAC+/-10%, 60+/-2HZ, 150W H=40.0IN, W=31.0IN, D=22.0IN 153LBS					MODCOMP	EQUIPMENT ROOM
BCS- 700 - 1	TIME CODE GENERATOR							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 2	FILLER PANEL							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 3	DTMF-100 TRANSMITTER							CONTROL ROOM BCS CHASSIS NUMBERS

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
BCS- 700 - 4	SWITCHING MATRIX							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 5	VIDEO PROCESSOR							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 6	FILLER PANEL							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 7	FILLER PANEL							CONTROL ROOM BCS CHASSIS NUMBERS
BCS- 700 - 8	MODEM							CONTROL ROOM BCS CHASSIS NUMBERS
CON- 700 - 1	CONFIGURATION STORAGE MODULE							CONTROL ROOM
CON- 700 - 2	ISOLATION TRANSFORMER							CONTROL ROOM
CON- 700 - 3	PANEL ASSEMBLY POWER-BAY1(TOP)							CONTROL ROOM
CON- 700 - 4	PANEL ASSEMBLY POWER-BAY1(BOTTOM)							CONTROL ROOM
CON- 700 - 5	BREAKER BOX ASSEMBLY							CONTROL ROOM
CON- 700 - 6	CONFIGURATION STORAGE MODULE							CONTROL ROOM
CON- 700 - 7	CONFIGURATION STORAGE MODULE							CONTROL ROOM
CON- 700 - 8	B.C.S. VIDEO MONITOR PANEL							CONTROL ROOM
CON- 700 - 9	TREND RECORDER							CONTROL ROOM
CON- 700 -10	TREND RECORDER							CONTROL ROOM
CON- 700 -11	TREND RECORDER							CONTROL ROOM
CON- 700 -12	R.S.S. CRT							CONTROL ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 700 -13	DEDICATED PUSH-BUTTON PANEL (BLANK)							CONTROL ROOM
CON- 700 -14	R.S.S. DEDICATED PUSHBUTTON PANEL							CONTROL ROOM
CON- 700 -15	ANNUNCIATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -16	OPERATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -17	HISTORIC TREND PROCESSOR							CONTROL ROOM
CON- 700 -18	REPORT GENERATION PROCESSOR							CONTROL ROOM
CON- 700 -19	CONSOLE ACCESS PROCESSOR							CONTROL ROOM
CON- 700 -20	COMMUNICATION CONTROL MODULE							CONTROL ROOM
CON- 700 -21	COMMUNICATION CONTROL MODULE POWER SUPPLY							CONTROL ROOM
CON- 700 -22	ISOLATION TRANSFORMER							CONTROL ROOM
CON- 700 -23	PANEL ASSEMBLY POWER BAY2 (TOP)							CONTROL ROOM
CON- 700 -24	PANEL ASSEMBLY POWER BAY2 (BOTTOM)							CONTROL ROOM
CON- 700 -25	BREAKER BOX ASSEMBLY (LEFT)							CONTROL ROOM
CON- 700 -26	BREAKER BOX ASSEMBLY (RIGHT)							CONTROL ROOM
CON- 700 -27	KEYBOARD PROCESSOR							CONTROL ROOM
CON- 700 -28	COMMUNICATION TRANSLATOR PANEL							CONTROL ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 700 -29	OCS COLOR CRT							CONTROL ROOM
CON- 700 -30	OCS COLOR CRT							CONTROL ROOM
CON- 700 -31	ANNUNCIATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -32	MCS DEDICATED PUSHBUTTON PANEL							CONTROL ROOM
CON- 700 -33	OCS OPERATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -34	OCS OPERATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -35	KEYBOARD PROCESSOR							CONTROL ROOM
CON- 700 -36	CONSOLE ACCESS PROCESSOR							CONTROL ROOM
CON- 700 -37	ISOLATION TRANSFORMER							CONTROL ROOM
CON- 700 -38	PANEL ASSEMBLY POWER-BAY 3 (TOP)							CONTROL ROOM
CON- 700 -39	PANEL ASSEMBLY POWER-BAY 3 (BOTTOM)							CONTROL ROOM
CON- 700 -40	BREAKER BOX ASSEMBLY (LEFT)							CONTROL ROOM
CON- 700 -41	BREAKER BOX ASSEMBLY (RIGHT)							CONTROL ROOM
CON- 700 -42	KEYBOARD PROCESSOR							CONTROL ROOM
CON- 700 -43	PLANT GRAPHICS PROCESSOR							CONTROL ROOM
CON- 700 -44	T.S.S. CRT							CONTROL ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 700 -45	T.S.S. AND EPGS DEDICATED PUSH- BUTTON PANEL							CONTROL ROOM
CON- 700 -46	E.P.G.S. CRT							CONTROL ROOM
CON- 700 -47	ANNUNCIATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -48	ANNUNCIATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -49	OPERATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -50	OPERATOR KEYBOARD ASSEMBLY							CONTROL ROOM
CON- 700 -51	HISTORIC TREND PROCESSOR							CONTROL ROOM
CON- 700 -52	REPORT GENERATION PROCESSOR							CONTROL ROOM
CON- 700 -53	KEYBOARD PROCESSOR							CONTROL ROOM
CON- 700 -54	COMMUNICATION CONTROL MODULE							CONTROL ROOM
CON- 700 -55	COMMUNICATION CONTROL MODULE POWER SUPPLY							CONTROL ROOM
CON- 700 -56	ISOLATION TRANSFORMER							CONTROL ROOM
CON- 700 -57	PANEL ASSEMBLY POWER-BAY 4 (TOP)							CONTROL ROOM
CON- 700 -58	PANEL ASSEMBLY POWER-BAY 4 (BOTTOM)							CONTROL ROOM
CON- 700 -59	BREAKER BOX ASSEMBLY (LEFT)							CONTROL ROOM
CON- 700 -60	BREAKER BOX ASSEMBLY (RIGHT)							CONTROL ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 700 -61	KEYBOARD PROCESSOR							CONTROL ROOM
CON- 700 -62	COMMUNICATION TRANSLATOR MODULE							CONTROL ROOM
CON- 700 -63	TURBINE GENERATOR (SCE) PANEL							CONTROL ROOM
CON- 700 -64	HISTORIC TREND PROCESSOR							CONTROL ROOM
CON- 700 -65	REPORT GENERATION PROCESSOR							CONTROL ROOM
CON- 700 -66	CONSOLE ACCESS PROCESSOR							CONTROL ROOM
CON- 700 -67	COMMUNICATION CONTROL MODULE							CONTROL ROOM
CON- 700 -68	COMMUNICATION CONTROL MODULE POWER SUPPLY							CONTROL ROOM
CON- 700 -69	ISOLATION TRANSFORMER							CONTROL ROOM
CON- 700 -70	PANEL ASSEMBLY POWER-BAY 5 (TOP)							CONTROL ROOM
CON- 700 -71	PANEL ASSEMBLY POWER-BAY 5 (BOTTOM)							CONTROL ROOM
CON- 700 -72	BREAKER BOX ASSEMBLY							CONTROL ROOM
CON- 700 -73	CONSOLE ACCESS PROCESSOR							CONTROL ROOM
CON- 700 -74	COMMUNICATION TRANSLATOR MODULE							CONTROL ROOM
CON 701	CONTROL CONSOLE-COLLECTOR SUBSYSTEM SECTION	FLAT TABLE TOP THREE (3) 19"X30"X21" BAYS ONE (1) 24"X30"X21" BAY	120 VAC	4A	ID44766	8071 2005	BECKMAN INST. SPS-610617	CONTROL ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON-	701 - 1 LEFT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	701 - 2 LEFT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	701 - 3 RIGHT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	701 - 4 RIGHT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CS	701 C.S. OPERATOR CRT.	19" CRT/TERMINAL & KEYBOARD	120 VAC	2.5 AMPS			ISC-8001G	CONTROL ROOM
OCS	701 O.C.S. LOGGER	C4-440 LPM MATRIX PRINTER	120 VAC	1AMP	ID47096	7871 2037	MODCOMP #4228	CONTROL ROOM
BCS	702 - 1 VIDEO MONITOR	P3 PHOSPHOR WITH A GREY FILTER GLASS NOISE = 25DB EIA RS-170	120 VAC 60HZ 1PH.	0.9	ID44818	105308	COHU ELECT. DM-9R	SSS INSTALLED IN THE CONTROL CONSOLE (CON 702)
CON	702 CONTROL CONSOLE- RECEIVER SUBSYSTEM SECTION	THREE(3) BAY TOP THREE(3) 19"X30"X21" BAYS ONE(1) 24"X30"X21" BAY	120 VAC	19A	ID44766	8071 2005	BECKMAN INST. SPS-610617	CONTROL ROOM
CON-	702 - 1 LEFT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	702 - 2 CENTER TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	702 - 3 RIGHT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	702 - 4 LEFT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	702 - 5 LEFT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON-	702 - 6 RIGHT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 702 - 7	RIGHT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CS 702	C.S. GRAPHICS DISPLAY	COLOR GRAPHICS CRT WITH KEYBOARD & FLOPPY DISC	120 VAC	7AMP			CHROMATICS #1999	CONTROL ROOM
CON 703	CONTROL CONSOLE- OPERATIONS CONTROL SYS. SECTION	TWO(2) BAY TOP TWO(2) 19"X30"X21" BAYS ONE(1) 24"X30"X21 BAY	120 VAC	11 .2A	ID44766	8071 2005	BECKMAN INST. SPS-610617	CONTROL ROOM
CON- 703 - 1	LEFT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 703 - 2	RIGHT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 703 - 3	LEFT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 703 - 4	CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 703 - 5	RIGHT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CS 703	C.S. LOGGER.	440 LPM MATRIX PRINTER	120 VAC	1AMP			MOD COMP #4228	CONTROL ROOM
CON 704	CONTROL CONSOLE- T.S.S. & E.P.G.S. SECTION	THREE BAY TOP THREE 19"X30"X21" BAYS ONE 24"X30"X21" BAY	120 VAC	2.A	ID44766	8071 2005	BECKMAN INST. SPS-610617	CONTROL ROOM
CON- 704 - 1	LEFT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 704 - 2	RIGHT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 704 - 3	LEFT HAND TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 704 - 4	LEFT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
CON- 704 - 5	LEFT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 704 - 6	RIGHT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 704 - 7	RIGHT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON 705	CONTROL CONSOLE-TURBINE SYSTEM	THREE BAY TOP THREE 19"X30"X21" BAYS ONE 24"X30"X21" BAY	120 VAC	16.8A	ID44766	8071 2005	BECKMAN INST. SPS-610617	CONTROL ROOM
CON- 705 - 1	TURRET							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 705 - 2	LEFT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 705 - 3	LEFT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 705 - 4	RIGHT HAND CENTER BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON- 705 - 5	RIGHT HAND BAY							CONTROL ROOM CONSOLE RACK NUMBERS
CON 706	R.S. LOGGER	TELETYPE MOD-43			ID44164	8071 2005	BECKMAN INST. 888076	CONTROL ROOM
CON 707	TSS LOGGER	TELETYPE MOD-43			ID44164	8071 2005	BECKMAN INST. 888076	CONTROL ROOM
CON 708	E.P.G.S. LOGGER	TELETYPE MOD-43			ID44164	8071 2005	BECKMAN INST. 888076	CONTROL ROOM
BCS 801	CRT/KEYBOARD TERMINAL AND HARD COPIER	12"B/W CRT, MEM 187,146 BYTES. GRAPHICS PKG OPT 311&700. BIT RATE:9.6K THERMAL PRINTER:80CHAR. 480 LINES/MIN 8.5"X11" PAPER	100 VAC	2.5 AMP	ID44820	37425	HP 9845T	SSC (ENGINEERING EVALUATION ROOM)
CS 801	CS COLOR GRAPHICS CRT	COLOR GRAPHICS CRT WITH KEYBOARD	120 VAC	70 MPC			CHROMATICS #1999	EVALUATION ROOM

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
DAS 801	DAS COLOR OPERATOR STATION CRT		120 VAC	5A	ID44805	0003 6617	ISC-8001H	EVALUATION ROOM
OCS 801	B/W CRT				ID44802	7871 2037	MODCOMP 4612	EVALUATION ROOM
DAS 802	DAS COLOR OPERATOR STATION CRT		120 VAC	5A	ID44805	0003 6617	ISC-8001H	EVALUATION ROOM
OCS 802	B/W CRT				ID44802	7871 2037	MODCOMP 4612	EVALUATION ROOM
DAS 803	DAS BLACK/WHITE CRT		120 VAC	5A	ID44802	7871 2037	MODCOMP 4612	EVALUATION ROOM
DAS 804	DAS BLACK/WHITE CRT		120 VAC	5A	ID44802	7871 2037	MODCOMP 4612	EVALUATION ROOM
DAS 805	DAS STRIP CHART RECORDER	8-4MM CHANNELS	120 VAC	5A	ID44801	0003 6114	GOULD INC 2008 -8878-0011-1154 -6113-4615-10	EVALUATION ROOM
DAS 806	DAS STRIP CHART RECORDER	8-40MM CHANNELS	120 VAC	5A	ID44801	0003 6114	GOULD INC 2008 -8878-0011-1154 -6113-4615-10	EVALUATION ROOM
DAS 807	DAS STRIP CHART RECORDER	8-40MM CHANNELS	120 VAC	5A	ID44801	0003 6114	GOULD INC 2008 -8878-0011-1154 -6113-4615-10	EVALUATION ROOM
DAS 808	DAS HARD COPY UNIT				ID44805	0003 6617	ISC B65A	EVALUATION ROOM
DAS 809	DAS HARD COPY UNIT				ID44805	0003 6617	ISC B65A	EVALUATION ROOM
DAS 810	DAS DATA LOGGER				ID44802	7871 2037	MODCOMP 4226	EVALUATION ROOM
BCS 901B	CAMERA RECEIVER UNIT (NORTH)	INPUT SIG. -6 TO -20DBM IMPEDANCE: 250K BALANCED OPER TEMP -40 TO +140 F 100% RH.	120 VAC 60HZ 1 PH.	.4 AMP	ID44818	105308	COHU ELECT DTMF-200	SSC
BCS 902A	VIDEO CAMERA (EAST)	BANDWIDTH 5MHZ VIDEO OUTPUT = 1V P-P	120 VAC 60HZ 1 PH.	.23 AMP	ID44818	105308	COHU ELECT. 2850C-207	SSC
BCS 902B	CAMERA RECEIVER UNIT (EAST)	INPUT SIG. -6 TO -20DBM IMPEDANCE: 250K BALANCED OPER TEMP -40 TO +140 F 100% RH.	120 VAC 60HZ 1 PH.	.4 AMP	ID44818	105308	COHU ELECT DTMF-200	SSC

CONTROL AND DATA SYSTEMS EQUIPMENT LIST

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	POWER		DRAWING NO.	P.O. NO.	MANUFACTURER AND MODEL NO.	REMARKS
			VOLTS	AMPS				
BCS 903A	VIDEO CAMERA (SOUTH)	BANDWIDTH 5MHZ VIDEO OUTPUT = 1V P-P	120 VAC 60HZ 1 PH.	.23 AMP	1044818	105308	COHU ELECT. 2850C-207	SSC
BCS 903B	CAMERA RECEIVER UNIT (SOUTH)	INPUT SIG. -6 TO -20DBM IMPEDANCE: 250K BALANCED OPER TEMP -40 TO +140 F 100% RH.	120 VAC 60HZ 1 PH.	.4 AMP	1044818	105308	COHU ELECT DTMF-200	SSC
BCS 904A	VIDEO CAMERA (WEST)	BANDWIDTH 5MHZ VIDEO OUTPUT = 1V P-P	120 VAC 60HZ 1 PH.	.23 AMP	1044818	105308	COHU ELECT. 2850C-207	SSC
BCS 904B	CAMERA RECEIVER UNIT (WEST)	INPUT SIG. -6 TO -20DBM IMPEDANCE: 250K BALANCED OPER TEMP -40 TO +140 F 100% RH.	120 VAC 60HZ 1 PH.	.4 AMP	1044818	105308	COHU ELECT DTMF-200	SSC
BCS 910A	VIDEO CAMERA (NORTH)	BANDWIDTH 5MHZ VIDEO OUTPUT = 1V P-P	120 VAC 60HZ 1 PH.	.23 AMP	1044818	105398	COHU ELECT. 2850C-207	SSC

COLLECTOR SYSTEM (CS) 7

COLLECTOR SUBSYSTEM

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	DRAWING NO.	P.O. NO.	QUANTITY (UNITS)	MANUFACTURER AND MODEL NO.	REMARKS
CFS 1	HELIOSTAT ASSEMBLY		40M500 5132720		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1	HELIOSTAT RACK ASSEMBLY		40M500 5132732		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1A	MIRROR ASSEMBLY		40M500 5132719		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1B	BAR JOISTS		40M500 5132733		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1C	TORQUE TUBE		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1D	SUPPORT ARMS		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-1E	MOUNTING HARDWARE		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-2	DRIVE UNIT ASSEMBLY		40M500 5132721		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-2A	DRIVE MECHANISM		40M500 5132711		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	

COLLECTOR SUBSYSTEM

EQUIP. NO.	DESCRIPTION	SPECIFICATIONS	DRAWING NO.	P.O. NO.	QUANTITY (UNITS)	MANUFACTURER AND MODEL NO.	REMARKS
CFS 1-2B	SUPPORT BASE		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-2C	MOTORS/GEARHEADS		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-2D	ENCODERS		40M500 5132727		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-2E	MOUNTING HARDWARE		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-3	PEDESTAL ASSEMBLY		40M500 5132725		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-4	HELIOSTAT CONTROLLER (HC)		40M500		1818	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-5	HELIOSTAT FIELD CONTROLLERS (HFC)		40M500		64	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	
CFS 1-6	COMPUTER CONTROL SYSTEM		40M500		1	MARTIN MARIETTA AEROSPACE PO BOX 179 DENVER, CO. 80201 (303)977-3000	

**SPECIAL HELIOSTAT INSTRUMENTATION AND
METEOROLOGICAL MEASUREMENTS
SUBSYSTEM (SHIMMS)**

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8 SPECIAL HELIOSTAT INSTRUMENTATION AND
METEOROLOGICAL MEASUREMENTS SUBSYSTEM
(SHIMMS)

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9011A	HELIOSTAT 0116 LOAD CELL NO. 1	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011B	HELIOSTAT 0116 LOAD CELL NO. 2	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011C	HELIOSTAT 0116 LOAD CELL NO. 3	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011D	HELIOSTAT 0116 LOAD CELL NO. 4	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011E	HELIOSTAT 0116 LOAD CELL NO. 5	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011F	HELIOSTAT 0116 LOAD CELL NO. 6	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011G	HELIOSTAT 0116 LOAD CELL NO. 7	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011H	HELIOSTAT 0116 LOAD CELL NO. 8	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011I	HELIOSTAT 0116 LOAD CELL NO. 9	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011J	HELIOSTAT 0116 LOAD CELL NO. 10	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011K	HELIOSTAT 0116 LOAD CELL NO. 11	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011L	HELIOSTAT 0116 LOAD CELL NO. 12	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011M	HELIOSTAT 0116 LOAD CELL NO. 13	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9011N	HELIOSTAT 0116 LOAD CELL NO. 14	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011P	HELIOSTAT 0116 LOAD CELL NO. 15	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011Q	HELIOSTAT 0116 LOAD CELL NO. 16	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011R	HELIOSTAT 0116 LOAD CELL NO. 17	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011S	HELIOSTAT 0116 LOAD CELL NO. 18	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011T	HELIOSTAT 0116 LOAD CELL NO. 19	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011U	HELIOSTAT 0116 LOAD CELL NO. 20	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011V	HELIOSTAT 0116 LOAD CELL NO. 21	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011W	HELIOSTAT 0116 LOAD CELL NO. 22	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011X	HELIOSTAT 0116 LOAD CELL NO. 23	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011Y	HELIOSTAT 0116 LOAD CELL NO. 24	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9011Z	HELIOSTAT 0116 LOAD CELL NO. 25	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012A	HELIOSTAT 0116 LOAD CELL NO. 26	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
WTX 9012B	HELIOSTAT 0116 LOAD CELL NO. 27	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012C	HELIOSTAT 0116 LOAD CELL NO. 28	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012D	HELIOSTAT 0116 LOAD CELL NO. 29	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012E	HELIOSTAT 0116 LOAD CELL NO. 30	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012F	HELIOSTAT 0116 LOAD CELL NO. 31	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012G	HELIOSTAT 0116 LOAD CELL NO. 32	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012H	HELIOSTAT 0116 LOAD CELL NO. 33	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012I	HELIOSTAT 0116 LOAD CELL NO. 34	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012J	HELIOSTAT 0116 LOAD CELL NO. 35	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9012K	HELIOSTAT 0116 LOAD CELL NO. 36	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013A	HELIOSTAT 1638 LOAD CELL NO. 1	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013B	HELIOSTAT 1638 LOAD CELL NO. 2	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013C	HELIOSTAT 1638 LOAD CELL NO. 3	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9013D	HELIOSTAT 1638 LOAD CELL NO. 4	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110 5163134	
WTX 9013E	HELIOSTAT 1638 LOAD CELL NO. 5	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013F	HELIOSTAT 1638 LOAD CELL NO. 6	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013G	HELIOSTAT 1638 LOAD CELL NO. 7	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013H	HELIOSTAT 1638 LOAD CELL NO. 8	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013I	HELIOSTAT 1638 LOAD CELL NO. 9	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013J	HELIOSTAT 1638 LOAD CELL NO. 10	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013K	HELIOSTAT 1638 LOAD CELL NO. 11	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013L	HELIOSTAT 1638 LOAD CELL NO. 12	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013M	HELIOSTAT 1638 LOAD CELL NO. 13	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013N	HELIOSTAT 1638 LOAD CELL NO. 14	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013P	HELIOSTAT 1638 LOAD CELL NO. 15	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013Q	HELIOSTAT 1638 LOAD CELL NO. 16	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9013R	HELIOSTAT 1638 LOAD CELL NO. 17	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013S	HELIOSTAT 1638 LOAD CELL NO. 18	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013T	HELIOSTAT 1638 LOAD CELL NO. 19	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013U	HELIOSTAT 1638 LOAD CELL NO. 20	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013V	HELIOSTAT 1638 LOAD CELL NO. 21	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013W	HELIOSTAT 1638 LOAD CELL NO. 22	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013X	HELIOSTAT 1638 LOAD CELL NO. 23	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013Y	HELIOSTAT 1638 LOAD CELL NO. 24	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9013Z	HELIOSTAT 1638 LOAD CELL NO. 25	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014A	HELIOSTAT 1638 LOAD CELL NO. 26	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014B	HELIOSTAT 1638 LOAD CELL NO. 27	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014C	HELIOSTAT 1638 LOAD CELL NO. 28	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014D	HELIOSTAT 1638 LOAD CELL NO. 29	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9014E	HELIOSTAT 1638 LOAD CELL NO. 30	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014F	HELIOSTAT 1638 LOAD CELL NO. 31	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014G	HELIOSTAT 1638 LOAD CELL NO. 32	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014H	HELIOSTAT 1638 LOAD CELL NO. 33	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014I	HELIOSTAT 1638 LOAD CELL NO. 34	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014J	HELIOSTAT 1638 LOAD CELL NO. 35	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9014K	HELIOSTAT 1638 LOAD CELL NO. 36	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015A	HELIOSTAT 2050 LOAD CELL NO. 1	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015B	HELIOSTAT 2050 LOAD CELL NO. 2	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015C	HELIOSTAT 2050 LOAD CELL NO. 3	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015D	HELIOSTAT 2050 LOAD CELL NO. 4	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015E	HELIOSTAT 2050 LOAD CELL NO. 5	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9015F	HELIOSTAT 2050 LOAD CELL NO. 6	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON			INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F	K#/HR						
WTX 9016A	HELIOSTAT HLSTAT . 1	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9016B	HELIOSTAT CELL NO. 2	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9016C	HELIOSTAT CELL NO. 3	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9016D	HELIOSTAT CELL NO. 4	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9016E	HELIOSTAT CELL NO. 5	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9016F	HELIOSTAT CELL NO. 6	2350 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017A	HELIOSTAT CELL NO. 1	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017B	HELIOSTAT CELL NO. 2	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017C	HELIOSTAT CELL NO. 3	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017D	HELIOSTAT CELL NO. 4	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017E	HELIOSTAT CELL NO. 5	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9017F	HELIOSTAT CELL NO. 6	2650 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018A	HELIOSTAT CELL NO. 1	2766 LOAD -350#	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
WTX 9018B	HELIOSTAT 2766 LOAD CELL NO. 2	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018C	HELIOSTAT 2766 LOAD CELL NO. 3	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018D	HELIOSTAT 2766 LOAD CELL NO. 4	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018E	HELIOSTAT 2766 LOAD CELL NO. 5	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018F	HELIOSTAT 2766 LOAD CELL NO. 6	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018G	HELIOSTAT 2766 LOAD CELL NO. 7	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018H	HELIOSTAT 2766 LOAD CELL NO. 8	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018I	HELIOSTAT 2766 LOAD CELL NO. 9	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018J	HELIOSTAT 2766 LOAD CELL NO. 10	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018K	HELIOSTAT 2766 LOAD CELL NO. 11	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018L	HELIOSTAT 2766 LOAD CELL NO. 12	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018M	HELIOSTAT 2766 LOAD CELL NO. 13	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018N	HELIOSTAT 2766 LOAD CELL NO. 14	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG. F						
WTX 9018P	HELIOSTAT 2766 LOAD CELL NO. 15	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018Q	HELIOSTAT 2766 LOAD CELL NO. 16	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018R	HELIOSTAT 2766 LOAD CELL NO. 17	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018S	HELIOSTAT 2766 LOAD CELL NO. 18	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018T	HELIOSTAT 2766 LOAD CELL NO. 19	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018U	HELIOSTAT 2766 LOAD CELL NO. 20	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018V	HELIOSTAT 2766 LOAD CELL NO. 21	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018W	HELIOSTAT 2766 LOAD CELL NO. 22	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018X	HELIOSTAT 2766 LOAD CELL NO. 23	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018Y	HELIOSTAT 2766 LOAD CELL NO. 24	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9018Z	HELIOSTAT 2766 LOAD CELL NO. 25	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019A	HELIOSTAT 2766 LOAD CELL NO. 26	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019B	HELIOSTAT 2766 LOAD CELL . 27	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F K#/HR						
WTX 9019C	HELIOSTAT 2766 LOAD CELL NO. 28	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019D	HELIOSTAT 2766 LOAD CELL NO. 28	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019E	HELIOSTAT 2766 LOAD CELL NO. 29	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019F	HELIOSTAT 2766 LOAD CELL NO. 31	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019G	HELIOSTAT 2766 LOAD CELL NO. 32	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019H	HELIOSTAT 2766 LOAD CELL NO. 33	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019I	HELIOSTAT 2766 LOAD CELL NO. 34	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019J	HELIOSTAT 2766 LOAD CELL NO. 35	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	
WTX 9019K	HELIOSTAT 2766 LOAD CELL NO. 36	+350 -350#	0.5%	AMB	16F- 113F	A29057				LEBOW ASSOCIATES, INC TROY, MICH. MODEL 3167-110	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
STX 1801	CUP ANEMOMETER (SOUTH STATION)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1802	WIND VANE (SOUTH STATION)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
TTX 1803	AIR TEMPERATURE (SOUTH STATION)	-22F, 266F		AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 015-3	
PTX 1804	PRESSURE TRANSDUCER (BAROMETRIC PRESSURE)	24.6-31.5 IN	.15%	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 0502-3	
MTX 1805	DEWPOINT (SOUTH STATION)	-40F, 122F		AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 015-12	
LTX 1806	RAINFALL GAGE (TIPPING BUCKET)	1/100 IN	.125%	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 0501-4	
ATX 1807	CIRCUMSOLAR TELESCOPE			AMB	16F-113F					LAWRENCE BERKELEY LAB 1 CYCLOTRON RD BERKELEY CALIF. 94720	GFE
ATX 1807B	CIRCUMSOLAR TELESCOPE ACTIVE CAV. RADIOMTR	1500 W/M2		AMB	16F-113F					LAWRENCE BERKELEY LAB 1 CYCLOTRON RD BERKELEY CALIF. 94720	GFE
ATX 1807C	CIRCUMSOLAR TELESCOPE PYRANOM. - HORIZ.	2800 W/M2		AMB	16F-113F					LAWRENCE BERKELEY LAB 1 CYCLOTRON RD BERKELEY CALIF. 94720	GFE
ATX 1807D	CIRCUMSOLAR TELESCOPE PRECISION SPECTRAL PYRANOM. - NORMAL	2800 W/M2		AMB	16F-113F					LAWRENCE BERKELEY LAB 1 CYCLOTRON RD BERKELEY CALIF. 94720	GFE

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT. ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ATX 1808	PYRANOMETER (SOUTH STATION)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1809	PYRANOMETER (SOUTH SPOKE ROAD)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
STX 1810	CUP ANEMOMETER (WEST STATION)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1811	WIND VANE (WEST STATION)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
ATX 1812	PYRANOMETER (WEST STATION)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1813	PYRANOMETER (WEST SPOKE ROAD - OUTER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1814	PYRANOMETER (WEST SPOKE ROAD - INNER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
STX 1815	CUP ANEMOMETER (NORTH STATION)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1816	WIND VANE (NORTH STATION)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
ATX 1817	NORMAL INCIDENCE PYRHeliometer (NIP)- NORTH STATION	2800 W/M2	.5%FS	AMB	16F-113F				CP11-1	EPPLEY LAB, INC 12 SHEFFIELD NEWPORT R. I. 02840 401-847-1020	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ATX 1818	ACTIVE CAVITY RADIOMETER (ACR)- NORTH STATION	1500 W/M2	.5%FS	AMB	16F-113F				CP11-1	RADIOMETRICS P.O. BOX 251 ALTADENA CALIF. 91001 213-798-0071	DUAL CAVITY
ATX 1819	PYRANOMETER (NORTH STATION)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1820	PYRANOMETER (NORTH SPOKE ROAD - OUTER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1821	PYRANOMETER (NORTH SPOKE ROAD - INNER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
STX 1822	CUP ANEMOMETER (EAST STATION)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1823	WIND VANE (EAST STATION)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
ATX 1824	PYRANOMETER (EAST STATION)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1825	PYRANOMETER (EAST SPOKE ROAD - OUTER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ATX 1826	PYRANOMETER (EAST SPOKE ROAD - INNER)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
STX 1827	CUP ANEMOMETER #1 (RECEIVER TOWER) - LEVEL 7	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
OTX 1828	WIND VANE #1 (RECEIVER TOWER) - LEVEL 7	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
STX 1829	CUP ANEMOMETER #2 (RECEIVER TOWER) - LEVEL 7	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1830	WIND VANE #2 (RECEIVER TOWER) - LEVEL 7	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
TTX 1831	AIR TEMPERATURE (RECEIVER TOWER) - LEVEL 7	-22F, 266F		AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 015-3	
MTX 1832	DEWPOINT (RECEIVER TOWER) - LEVEL 7	-40F, 122F		AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 015-12	
ATX 1833	NEPHELOMETER (RECEIVER TOWER) - LEVEL 7	40 MILES	10%FS	AMB	16F-113F				CP11-1	METEOROLOGY RESEARCH, INC. BOX 637 464 W. WOODBURY ALTADENA CALIF. 91001	TEL. 213-791-1901 TELEX 675421 MODEL 1550
ATX 1834	PYRANOMETER (CONTROL ROOM ROOF)	1000 W/M2	1%FS	AMB	16F-113F				CP11-1	LI-COR, INC. BOX 4425 LINCOLN, NEB. 68504 402-467-3576 MODEL LI-200S	
ST 1835	CUP ANEMOMETER (CONTROL ROOM ROOF)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OT 1836	WIND VANE (CONTROL ROOM ROOF)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
AT 1837	NORMAL INCIDENCE PYRHELIOMETER (NIP) - CONTROL RM ROOF	2800W/M2	.5%FS	AMB	16F-113F				CP11-1	EPPLEY LAB, INC 12 SHEFFIELD NEWPORT R. I. 02840 401-847-1020	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SH(MMS))

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG. NO.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
ATX 1838	PRECISION SPECTRAL PYRANOMETER (PSP)- PORTABLE	2800W/M2	.5%FS	AMB	16F-113F						EPPLEY LAB, INC PORTABLE 12 SHEFFIELD NEWPORT R.I.02840 401-847-1020
STX 1839	CUP ANEMOMETER (WIND TOWER 1, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
STX 1840	CUP ANEMOMETER (WIND TOWER 1, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
STX 1841	CUP ANEMOMETER (WIND TOWER 1, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
OTX 1842	WIND VANE (WIND TOWER 1)	360 DEGREE	3	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 012-15
STX 1843	CUP ANEMOMETER (WIND TOWER 2, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
STX 1844	CUP ANEMOMETER (WIND TOWER 2, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
STX 1845	CUP ANEMOMETER (WIND TOWER 2, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3
OTX 1846	WIND VANE (WIND TOWER 2)	360 DEGREE	3	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 012-15
STX 1847	CUP ANEMOMETER (WIND TOWER 3, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1		CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF.92373 714-793-2788 MODEL 011-3

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
STX 1848	CUP ANEMOMETER (WIND TOWER 3, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1849	CUP ANEMOMETER (WIND TOWER 3, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1850	WIND VANE (WIND TOWER 3)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
STX 1851	CUP ANEMOMETER (WIND TOWER 4, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1852	CUP ANEMOMETER (WIND TOWER 4, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1853	CUP ANEMOMETER (WIND TOWER 4, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1854	WIND VANE (WIND TOWER 4)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
STX 1855	CUP ANEMOMETER (WIND TOWER 5, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1856	CUP ANEMOMETER (WIND TOWER 5, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	

SPECIAL HELIOSTAT INSTRUMENTATION AND METEOROLOGICAL MEASUREMENTS SYSTEM (SHIMMS)

(SANDIA HELIOSTAT LOAD CELL INSTRUMENTATION)

EQUIP. NO.	SERVICE/FUNCTION	RANGE	ACCY. (+/-)	NORM OP ENVIRON		INSTR. DATA SHEET	ELECT ELEM. DIAG.	INSTALL DWG. NO.	P&ID COORD.	MANUFACTURER AND MODEL NO.	REMARKS
				PSI	DEG.F						
STX 1857	CUP ANEMOMETER (WIND TOWER 5, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1858	WIND VANE (WIND TOWER 5)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	
STX 1859	CUP ANEMOMETER (WIND TOWER 6, 32.2 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1860	CUP ANEMOMETER (WIND TOWER 6, 20 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
STX 1861	CUP ANEMOMETER (WIND TOWER 6, 10 FT. LEVEL)	0-110 MPH	1%FS	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 011-3	
OTX 1862	WIND VANE (WIND TOWER 6)	360 DEGREE	3	AMB	16F-113F				CP11-1	CLIMET INSTR. 1320 W. COLTON REDLANDS CALIF. 92373 714-793-2788 MODEL 012-15	

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL		HEAT		S.P. W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS TOT.	MBH	MBH	FLOW							
HVAC EF-1	1 SECONDARY FIRE PUMP BLDG.	PROP PANEL				4620 CFM	1/4"	1750	1/2 H.P.	460V 3 PH.	100	AEROVENT 21L424DDP	PROVIDE AUTO. SHUTTER
HVAC EF-2	2 RAW WATER PUMP BLDG.	PROP PANEL				4620 CFM	1/4"	1750	1/2 H.P.	460V 3 PH.	100	AEROVENT 21L424DDP	PROVIDE AUTO. SHUTTER
HVAC EF-3	3 RAW WATER PUMP BLDG.	PROP PANEL				4620 CFM	1/4"	1750	1/2 H.P.	460V 3 PH.	100	AEROVENT 21L424DDP	PROVIDE AUTO. SHUTTER
HVAC EDH-1	5 S. WEATHER STA. ELECTRIC DUCT HEATER	2 STAGES								208V 3 PH. 60HZ		INDEECO QUA	5 KW CAPACITY PROVIDE NEMA 4 WEATHERPROOF TERMINAL BOX
HVAC EUH-1	6 SECONDARY FIRE PUMP BLDG. ELECTRIC UNIT HEATER	HORIZ.				400 CFM		1550	1/125	480V 3 PH.	45	TRANE UHEC-053DQAO	5.0 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-2	7 SECONDARY FIRE PUMP BLDG. ELECTRIC UNIT HEATER	HORIZ.				400 CFM		1550	1/125	480V 3 PH.	45	TRANE UHEC-053DQAO	5.0 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-5	8 RAW WATER PUMP BLDG.	HORIZ.				400 CFM		1550	1/125	208V 3 PH. MOTOR 208V 1 PH.	45	TRANE UHEC-033AAA0	3.3 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-6	9 RAW WATER PUMP BLDG.	HORIZ.				400 CFM		1550	1/125	208V 3 PH. MOTOR 208V 1 PH.	45	TRANE UHEC-033AAA0	3.3 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-7	10 RAW WATER PUMP BLDG.	HORIZ.				400 CFM		1550	1/125	208V 3 PH. MOTOR 208V 1 PH.	45	TRANE UHEC-033AAA0	3.3 KW CAPACITY W/UNIT MTD. T-STAT

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL		HEAT	S.P. W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS	MBH TOT.	MBH							
HVAC EUH-8	11 RAW WATER PUMP BLDG.	HORIZ.				400 CFM	1550	1/125	208V 3 PH. MOTOR 208V 1 PH.	45	TRANE UHEC-033AAA0	3.3 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-9	12 RAW WATER PUMP BLDG.	HORIZ.				400 CFM	1550	1/125	208V 3 PH. MOTOR 208V 1 PH.	45	TRANE UHEC-033AAA0	3.3 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-10	13 TS CONTROL BLDG.709	HORIZ.				700 CFM	1550	1/50 H.P.	480V 3 PH. MOTOR 480V 1 PH.	45	TRANE UHEC-073D0A0	7.5 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-11	14 TS CONTROL BLDG.716	HORIZ.				700 CFM	1550	1/50 H.P.	480V 3 PH. MOTOR 480V 1 PH.	45	TRANE UHEC-073D0A0	7.5 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-12	15 TS CONTROL BLDG.712	HORIZ.				700 CFM	1550	1/50 H.P.	480V 3 PH. MOTOR 480V 1 PH.	45	TRANE UHEC-073D0A0	7.5 KW CAPACITY W/UNIT MTD. T-STAT
HVAC EUH-13	16 14TH LEVEL TOWER ROOM	HORIZ.				400 CFM	1550	1/125 H.P.	480V 3 PH. MOTOR 480V 1 PH.	45	TRANE UHEC-053D0A0	5.0 KW CAPACITY W/UNIT MTD. T-STAT
HVAC AHU-1	17 TS CONTROL BLDG. 709	DWDI CENT. FC				3000 CFM	.56"	1800	1.5 H.P.	460V 3 PH.	TRANE #6 DRAW-THRU HORIZ. CLIMATE CHANGER CAPACITY=59MBH BELT DRIVE MOTOR LOC=LEFT	COMB. FILTER-MIXING BOX REFR. R-22 SIZE=18"X45"
HVAC AHU-2	18 TS CONTROL BLDG. 710	DWDI CENT. FC				3000 CFM	.56"	1800	1.5 H.P.	460V 3 PH.	TRANE #6 DRAW-THRU HORIZ. CLIMATE CHANGER CAPACITY=59MBH BELT DRIVE MOTOR LOC=RIGHT	COMB. FILTER-MIXING BOX REFR. R-22 SIZE=18"X45"

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL		HEAT		S.P. W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS	MBH TOT.	MBH	FLOW							
HVAC AHU-3	19 TS ELECTRICAL BLDG. 712	DWDI CENT. FC			8260 CFM	.88"	1800	5.0 H.P.	460V 3 PH.	TRANE #14 DRAW THRU HORIZ. CLIMATE CHANGER CAPACITY=236.4MBH BELT DRIVE MOTOR LOC=LEFT	COMB. FILTER-MIXING BOX REFR. R-22 SIZE=33"X60"		
HVAC AHU-4	20 SOUTH WEATHER STATION	DWDI CENT. FC			800 CFM	.16"	1800	.75 H.P.	208V 3 PH.	TRANE #3B DRAW-THRU VERT. CLIMATE CHANGER CAPACITY=24.1 MBH BELT DRIVE MOTOR LOC=RIGHT	SELECT MOTOR FOR 113F AMBIENT REFR. R-22 SIZE=18"X24"		
HVAC ACU-1	21 14TH LEVEL TOWER ROOM		62.0	79.3	2700 CFM	0.5"	3450	6.25 H.P.	460V 3 PH.	1500 TRANE SACA-754	ROOF CURB ECONOMIZER, CONT. PANEL CONDENSER HP=2-1/3 CONDENSER RPM=1075 CONDENSER 460V/1PH		
HVAC ACCU-1	22 TS CONTROL BLDG. 709	PROP.	60.0		4050 CFM		1100	1/2 H.P.	460V 3 PH.	275 TRANE RAUC-504 REFR. R-22 COMPRESSOR INPUT=3.7KW			
HVAC ACCU-2	23 TS CONTROL BLDG. 710	PROP.	60.0		4050 CFM		1100	1/2 H.P.	460V 3 PH.	275 TRANE RAUC-504 REFR. R-22 COMPRESSOR INPUT=3.7KW			
HVAC ACCU-3	24 TS ELECTRICAL BLDG. 712	PROP.	231		17400 CFM		1150	1.0 H.P.	460V 3 PH.	1950 TRANE RAUA-200M REFR. R-22 COMPRESSOR INPUT=24.0 KW	50/8/100/CAPACITY STEPS		
HVAC ACCU-4	25 SOUTH WEATHER STATION	PROP.	22.1		2600 CFM		1060		208V 1 PH.	1950 CARRIER 38GS024 REFR. R-22 COMPRESSOR INPUT=3.2 KW			

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL		HEAT		S.P. FLOW	W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS	MBH TOT.	MBH	CFM								
HVAC 26 ACU-2		THRU THE WALL	15		380/90						208V 1 PH 60 HZ		G.E. AGFCE 15DB	
HVAC 27 ACU-3		THRU THE WALL	15		380/90						208V 1 PH 60 HZ		G.E. AGFCE 15DB	
HVAC 28 H-1	TS CONTROL BLDG. 709				8.5		3600				460V 3 PH		JOHNSON SERVICE CO. VAPOR STREAM VSH-3	STD. PKG. W/HTR. INCLUDED HEATER PWR=3KW
HVAC 29 H-2	TS CONTROL BLDG. 710				8.5		3600				460V 3 PH		JOHNSON SERVICE CO. VAPOR STREAM VSH-3	STD. PKG. W/HTR. INCLUDED HEATER PWR=3KW
HVAC 30 H-3	14TH LEVEL TOWER ROOM				8.5		3600				460V 3 PH		JOHNSON SERVICE CO. VAPOR STREAM VSH-3	STD. PKG. W/HTR. INCLUDED HEATER PWR=3KW
HVAC 31 H-4	13TH LEVEL TOWER ROOM				4.0		3400	1/4 H.P.		115V			BAHNSON ENVIROTECH TYPE E MODEL IA	TYPE MBE-1 HUMIDISTAT
HVAC 101 AH-1	PACKAGE AIR CONDITIONING UNIT	HEAT PUMP	85.2	93.7	62.8	3600	.85"	974			480V 3 PH. 60 HZ	825	CARRIER 50R0010 BELT DRIVE	
HVAC 102 AH-2	PACKAGE AIR CONDITIONING UNIT	HEAT PUMP	153	162	102	6000	.84"	1225			480V 3 PH. 60 HZ	1900	CARRIER 50P0016 BELT DRIVE	
HVAC 103 RACU-1	AIR CONDITION INDOOR UNIT	CENT. DRAW-THRU	38.6	40.0		2000	.05"		1+3		480V 3 PH. 60 HZ	800	LISKEY INC DA3 IR HUMIDIFIER HUMID. CAP.=15.8#/HR REFRIG=R-22	

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL.		HEAT		S.P. W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS TOT.	MBH	MBH	FLOW							
HVAC 104 RACU-2	AIR CONDITION INDOOR UNIT	CENT. DRAW-THRU	38.6	40.0		2000 CFM	.05"		1+3 H.P.	480V 3 PH. 60 HZ	800	LISKEY INC DA3 IR HUMIDIFIER HUMID. CAP.=15.8#/HR REFRIG=R-22	
HVAC 105 RACU-3	AIR CONDITION INDOOR UNIT	CENT. DRAW-THRU	195	216		9000 CFM	0.5"		5+9 H.P.	480V 3 PH. 60 HZ	1725	LISKEY INC DA18 IR HUMIDIFIER HUMID. CAP.=15.8#/HR REFRIG=R-22	
HVAC 106 ACC-1	AIR CONDITION OUTSIDE UNIT			102				1075	1/2 H.P.	480V 3 PH. 60 HZ	260	LISKEY INC RDD-11 2 FANS 105F OUTSIDE TEMP. REFRIG=R-22	CONDENSING TEMP=130F
HVAC 107 ACC-2	AIR CONDITION OUTSIDE UNIT			102				1075	1/2 H.P.	480V 3 PH. 60 HZ	260	LISKEY INC RDD-11 2 FANS 105F OUTSIDE TEMP. REFRIG=R-22	CONDENSING TEMP=130F
HVAC 108 ACC-3	AIR CONDITION OUTSIDE UNIT			356				820	1 H.P.	480V 3 PH. 60 HZ	835	LISKEY INC RDD-36 3 FANS 105F OUTSIDE TEMP. REFRIG=R-22	CONDENSING TEMP=130F
HVAC 109 EF-1	FAN FOR BATTERY ROOM 109	DIRECT DRIVE				850 CFM	.19"	1140	1/6 H.P.	120V 1 PH. 60 HZ		JENN AIR 101CW	WALL EXHAUSTER
HVAC 110 EF-2	FAN FOR CONFERENCE ROOM 210	DIRECT DRIVE				285 CFM	.1"	610	165 WATTS	120V 1 PH. 60 HZ		THERMADOR VQT300	CEILING MOUNTED ON LIGHT SW. W/7" DIA. VTR & ROOF JACK
HVAC 111 EF-3	FAN FOR MEN'S TOILET ROOM 205	DIRECT DRIVE				190 CFM	.1"	520	106 WATTS	120V 1 PH. 60 HZ		THERMADOR VGT200	CEILING MOUNTED W/7" DIA. VTR & ROOF JACK

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

EQUIP. NO.	SERVICE	TYPE	COOL		HEAT		S.P. W.G.	RPM	POWER	VOLTS PHASE CYCLE	WEIGHT (LBS.)	MANUFACTURER AND MODEL NO.	REMARKS
			MBH SENS	MBH TOT.	MBH	FLOW							
HVAC 112 EF-4	FAN FOR WOMEN'S TOILET ROOM 204	DIRECT DRIVE				190 CFM	.1"	520	106 WATTS	120V 1 PH. 60 HZ		THERMADOR VQT200	CEILING MOUNTED W/7" DIA. VTR & ROOF JACK
HVAC 113 EF-5	FAN FOR CHEM LAB. ROOM 104	DIRECT DRIVE				1000 CFM	1.25"		3/4 H.P.	208V 1 PH. 60 HZ		VWR SCIENTIFIC VL 7254	ON/OFF SWITCH INTERLOCK W/FUME HOOD SWITCH

FACILITIES (FAC) 10

10 FACILITIES (FAC)

FACILITIES

EQUIP. NO.	DESCRIPTION	OUTSIDE DIMENSIONS (IN FEET) LXWXH	FLOOR AREA (SQ.FT)	ALLOW. FLOOR LOADING (LB/SQ.FT)	GENERAL AVAIL. ARRANG. DIMENS:	HEATING/AIR COND. CAPACITY (TWD/RHS)	MAJOR INSTALLER EQUIPMENT	REMARKS
BL- 201	RECEIVER CORE SUPPORT STRUCTURE	40FT X 40FT X 211FT	N/A	100#/SQFT	40L. 5133904		P-708AB P-201,R.S.#1 HS-701	CONT (R) CONST PKG 5A
BL- 701	ADMINISTRATION BUILDING							SCE
HS- 701	RECEIVER TOWER PERSONNEL HOIST	N/A	N/A	2000LBS (TOTAL)	40C 5133904		EMERGENCY BRAKE	CONT (S-R)
BL- 702	RAW/SERVICE WATER PUMP BUILDING	46FT-8IN X 22FT-8IN X 16FT-0IN	880	250#/SQ FT	40A... 5133255 40C... 5133901		P-703,P-704 P-710,P-705 P-707,P-704 P-715	CONT (S-R) CONST PKG 5
BL- 703	WAREHOUSE	100FT-5IN X 60FT-5IN X 16FT-0IN	6066.	250#/SQ FT	40A... 5133101 40C... 5133900			CONT (S-R) CONST PKG 3
BL- 704	GUARD HOUSE							SCE
BL- 705	PIPE RACK	202FT X 20FT X 20FT	2671.	100#/SQFT	40C... 5133901		O2 ANALYZER	CONT (S-R) CONST PKG 5
BL- 706	SECONDARY FIRE PUMP BUILDING	22FT-8IN X 16FT-8IN X 11FT-7IN	280	250#/SQFT	40A 5133256 40C... 5133200		P-706 MCC-4	CONT (S-R) CONST PKG 5
BL- 707	RECEIVER SUPPORT TOWER	23FT DIA. X 75FT		50#/SQFT	40C... 5133904		RP-222 THRU RP-224 RP-201 THRU RP-203 V-201 RB-204 THRU RB-221	CONT (S-R) CONST PKG 5A
BL- 708	14TH LVL RECEIVER TOWER ELECTRONICS ROOM	33FT X 28FT-7IN X 8FT-6 3/4IN	569	100#/SQFT	40A... 5131600		REMOTE STATION 1	CONT (S-R) CONST PKG 9
BL- 708A	13TH LVL RECEIVER TOWER ELECTRONICS ROOM	26FT-10.38" X 8FT-7.25" X 8FT-6.75"	231	100#/SQFT	40A... 5131600		REMOTE STATION 1	CONT (S-R) CONST PKG 9
BL- 709	THERMAL STORAGE CONTROL BUILDING	26FT-8IN X 18FT-8IN X 13FT-7IN	384	250#/SQFT	40A 5132000		REMOTE STATION 3	CONT (S-R) CONST PKG 5
BL- 710	THERMAL STORAGE CONTROL BUILDING	26FT-8IN X 18FT-8IN X 13FT-7IN		250#/SQFT	40A... 5132000		REMOTE STATION 2	CONT (S-R) CONST PKG 5

FACILITIES

EQUIP. NO.	DESCRIPTION	OUTSIDE DIMENSIONS LXWXH (IN FEET)	FLOOR AREA (SQ.FT)	ALLOW. FLOOR LOADING (LB/SQ.FT)	GENERAL ARRANG. DWG.NO.	AVAIL. PWR/BUS (KW/NO.)	HEATING/ AIR COND. CAPACITY (BTU/HR)	MAJOR INSTALLED EQUIPMENT	REMARKS
BL- 712	THERMAL STORAGE ELECTRICAL EQUIPMENT BUILDING	26FT-8IN X 22FT-8IN X 14FT	480	250#/SQFT	40A.. 5132004			HVAC CONTROL STA MCC3,P301,302 303,304 CONTROLLER	CONT (S-R) CONST PKG 5
BL- 901	ELECTRIC POWER GENERATION SUBSYSTEM BUILDING								SCE
EL- 901	ELEVATOR				5159201				BY ARCHI-TECHTURAL (SCE)