

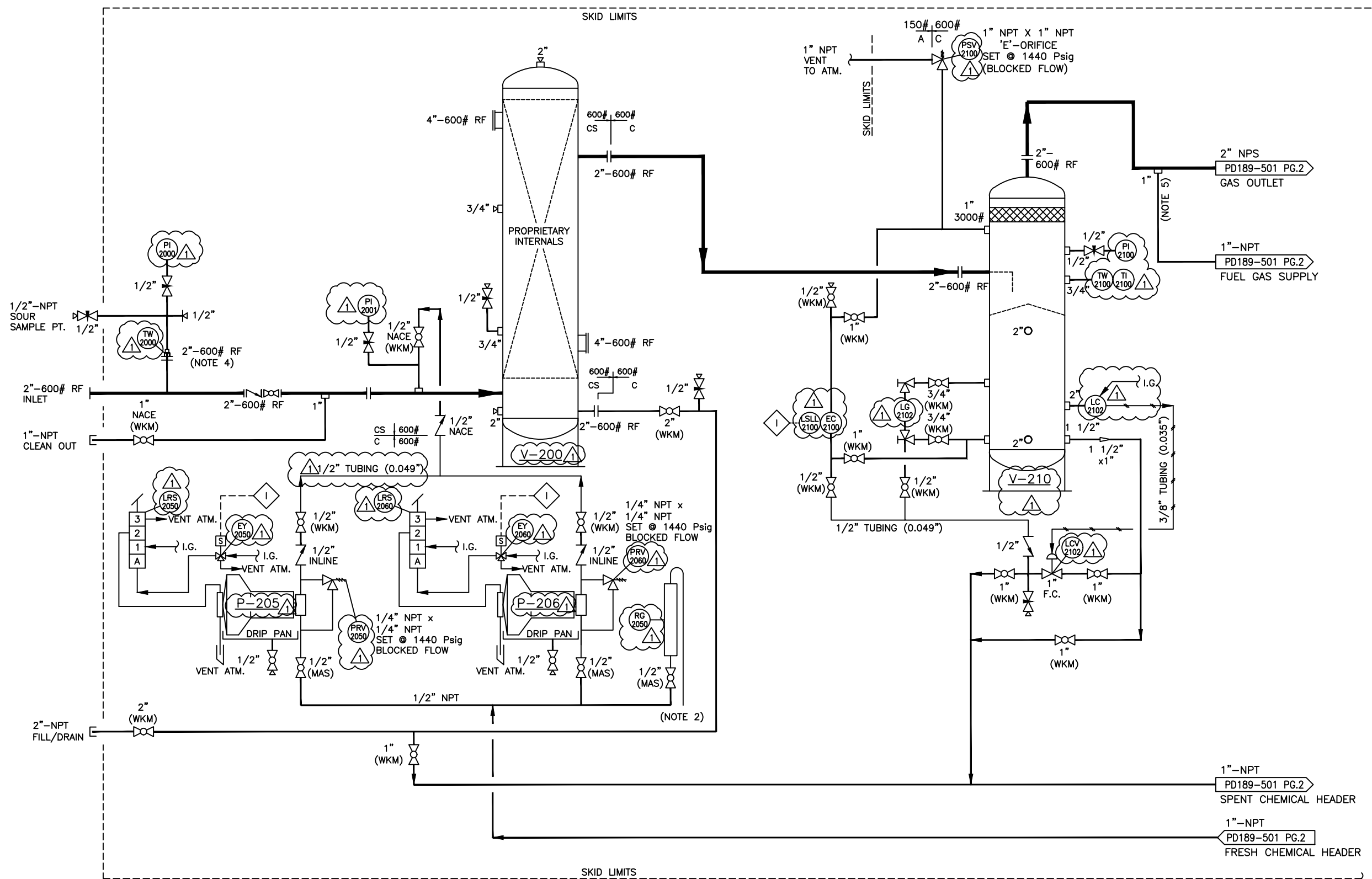
DESIGN CONDITIONS

DESIGN PRESS.:	1440 psig
DESIGN. TEMP.:	130°F
OP. PRESS.:	300 psig
OP. TEMP.:	100°F
FLOW:	0.2 mmscfd
H2S IN:	500 ppm
H2S OUT:	<4 ppm
S.G.:	— (Gas)

**V-200**  
 H2S REMOVAL CONTACTOR  
 SIZE: Ø16" X 8'-0" S/S  
 MAWP: 1440 Psig @ 130 °F  
 MDMT: -20 °F @ 1440 Psig  
 C.A.: 0.125"  
 SOUR SERVICE  
 PWHT: YES  
 X-RAY: RT-1

**V-210**  
 VERTICAL 2 PHASE SEPARATOR  
 SIZE: Ø12" X 5'-0" S/S  
 MAWP: 1440 Psig @ 130 °F  
 MDMT: -20 °F @ 1440 Psig  
 C.A.: 0.0625"  
 SWEET SERVICE  
 PWHT: NO  
 X-RAY: RT-2

**P-205/206**  
 CHEMICAL PUMP  
 BRUNN BR 5100 SERIES  
 1/2" PLUNGER



- GENERAL NOTES:  
 1) VENT ALL INSTRUMENTS OUTSIDE OF BUILDINGS.  
 2) VENT TO ABOVE TOP OF TANK(S).  
 (TK-205 & TK-206)  
 3) BRAND OF VALVES MAY CHANGE DUE TO AVAILABILITY.  
 4) CUT THERMOWELL TIP AT 45° AND INSTALL WITH ANGLED PORTION AWAY FROM THE FLOW.  
 5) USE SCH 160 UP TO FUEL GAS INLET.

REV.	DATE	DESCRIPTION	DRAWN	CHECK	DESIGN	APPR.
1	23-JAN-18	REV PER CUST MARK-UP OF REV 0 & AS PER GEN DFTG CHECK.	AC		MS	
0	18-JAN-18	ISSUED FOR APPROVAL	AC		MS	

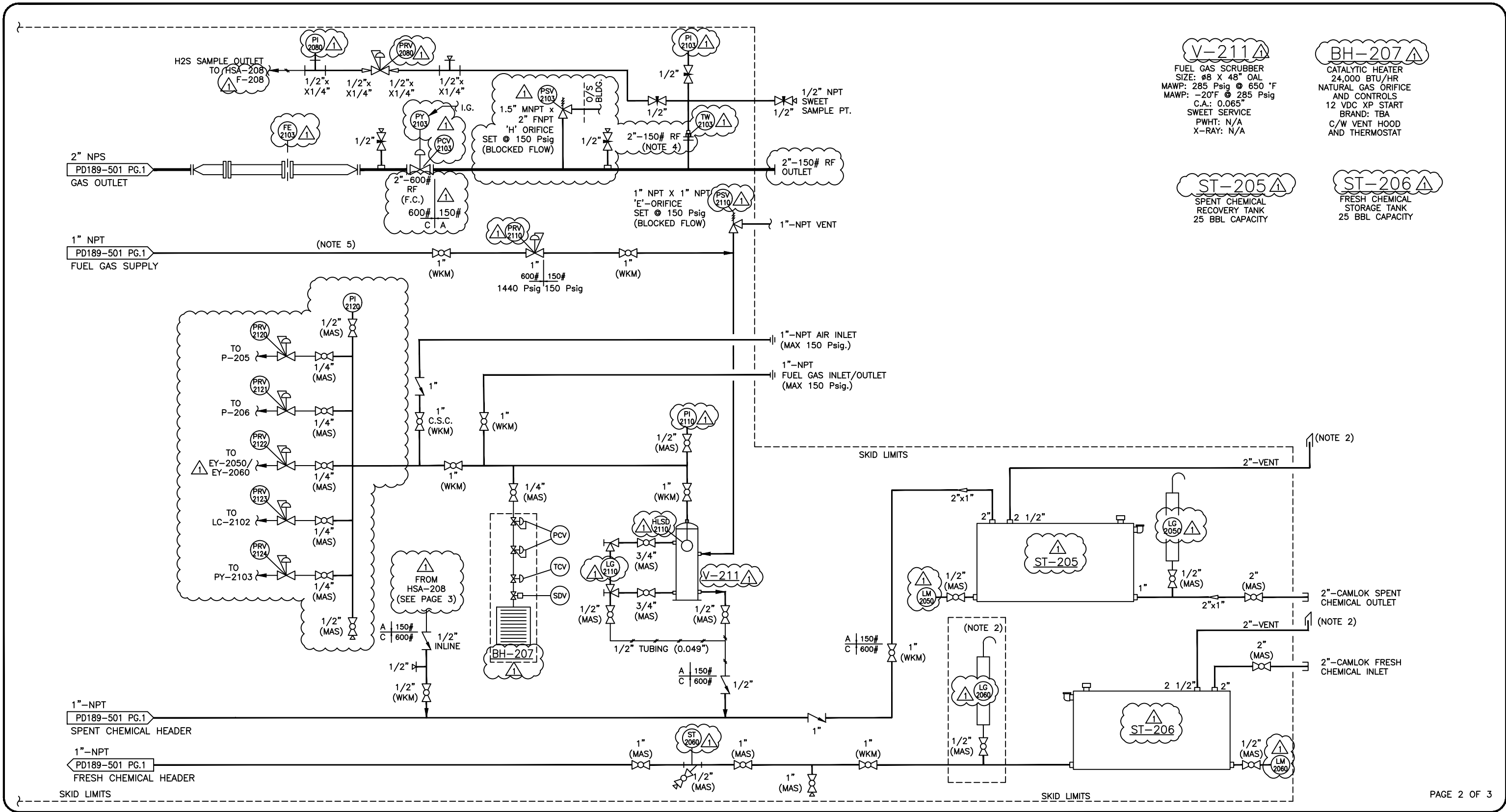
CLIENT: DIENERIAN RESOURCES INC

**UltraFab**  
 A Nalco Champion Company

TITLE: H2S REMOVAL SYSTEM - (2) 500 GALLONS DOUBLE WALL TANKS c/w Ø16" CONTACTOR & Ø12" SEPARATOR - P&ID

SCALE: NTS DRAWING No. PD189-501

FILE: M:\Projects\Projects 2018\189-500\189-501 Dienerian Res 16-12HP\Drawings\PD189-501 R1



- V-211**  
FUEL GAS SCRUBBER  
SIZE: Ø8 X 48" OAL  
MAWP: 285 Psig @ 650 °F  
C.A.: 0.065"  
SWEET SERVICE  
PWHT: N/A  
X-RAY: N/A
- BH-207**  
CATALYTIC HEATER  
24,000 BTU/HR  
NATURAL GAS ORIFICE  
AND CONTROLS  
12 VDC XP START  
BRAND: TBA  
C/W VENT HOOD  
AND THERMOSTAT
- ST-205**  
SPENT CHEMICAL  
RECOVERY TANK  
25 BBL CAPACITY
- ST-206**  
FRESH CHEMICAL  
STORAGE TANK  
25 BBL CAPACITY

GENERAL NOTES:  
1) SEE PAGE 1 FOR NOTES.

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TUBING NOTES:  
 TUBING: 3/8" O.D. x 0.035" WT 316L SMLS  
 1/2" O.D. x 0.049" WT 316L SMLS  
 TUBE FITTINGS: SWAGelok, ZINC PLATED.  
 OTHER: N/A

PIPING CLASS: A (150 ANSI RF)  
 SERVICE: SWEET, NORMAL, STD-TEMP  
 DESIGN: 150 PSIG @ -20°F/+130°F  
 CORR. ALLOW.: 0.0625" (APPROX.)  
 X-RAY: 10% (ON BW)  
 PWHT: NO (ON BW)  
 NPT PIPING: SA-106-B SCH 80.  
 NPT FITTINGS: SA-105N 3000#  
 OTHER: HYDROTEST PRESSURE 225 PSIG

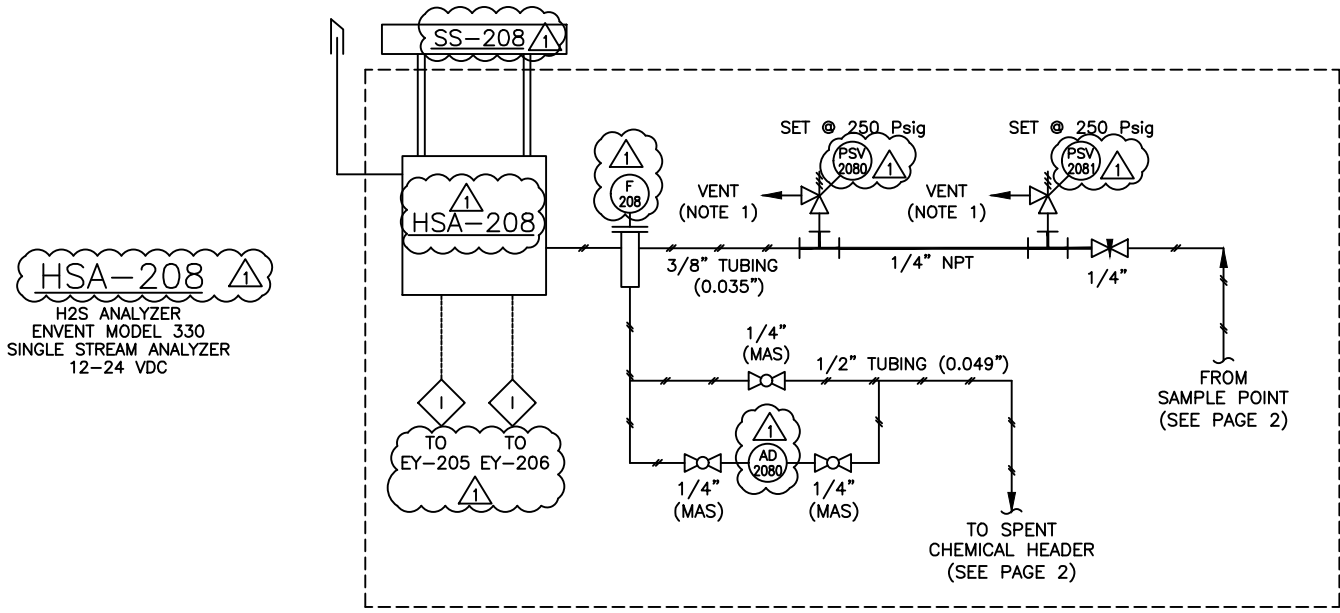
PIPING CLASS: A (150 ANSI RF)  
 SERVICE: SWEET, NORMAL, STD-TEMP  
 DESIGN: 270 PSIG @ -20°F/+130°F  
 CORR. ALLOW.: 0.0625" (APPROX.)  
 X-RAY: 10% (ON BW)  
 PWHT: NO (ON BW)  
 NPT PIPING: SA-106-B SCH 80.  
 NPT FITTINGS: SA-105N 3000#  
 OTHER: HYDROTEST PRESSURE 405 PSIG

PIPING CLASS: C (600 ANSI RF)  
 SERVICE: SWEET, NORMAL, STD-TEMP  
 DESIGN: 1440 PSIG @ -20°F/+130°F  
 CORR. ALLOW.: 0.0625" (APPROX.)  
 X-RAY: 10% (ON BW)  
 PWHT: NO (ON BW)  
 NPT PIPING: SA-106-B SCH 80.  
 NPT FITTINGS: SA-105N 3000#  
 OTHER: HYDROTEST PRESSURE 2160 PSIG

PIPING CLASS: CS (600 ANSI RF)  
 SERVICE: SOUR, NORMAL, STD-TEMP  
 DESIGN: 1440 PSIG @ -20°F/+130°F  
 CORR. ALLOW.: 0.125" (APPROX.)  
 X-RAY: 100% (ON BW)  
 PWHT: YES (ON BW)  
 NPT PIPING: SA-106-B SCH 160.  
 NPT FITTINGS: SA-105N 3000#  
 OTHER: HYDROTEST PRESSURE 2160 PSIG

BILL OF MATERIALS - VALVES						
QTY	NPS	RATING	PARTS NO.	DESCRIPTION	MODEL NO.	MANUFACT.
1	2"	600#	VA-2266	BALL VALVE RED PORT RF (NACE)	-	KF
2	2"	3000#	VA-1727	BALL VALVE RED PORT NPT.	-	WKM
14	1"	3000#	VA-1599	BALL VALVE RED PORT NPT.	-	WKM
1	1"	3000#	VA-1605	BALL VALVE RED PORT NPT (NACE).	-	WKM
2	3/4"	3000#	VA-1597	BALL VALVE FULL PORT NPT.	-	WKM
4	1/2"	3000#	VA-1596	BALL VALVE RED PORT NPT.	-	WKM
1	1/2"	3000#	VA-2028	BALL VALVE RED PORT NPT (NACE).	-	WKM
2	2"	2000#	VA-1643	BALL VALVE RED PORT NPT.	-	MAS
3	1"	2000#	VA-1654	BALL VALVE RED PORT NPT.	-	MAS
2	3/4"	2000#	VA-2282	BALL VALVE RED PORT NPT.	-	MAS
14	1/2"	2000#	VA-1731	BALL VALVE RED PORT NPT.	-	MAS
8	1/4"	2000#	VA-1103	BALL VALVE RED PORT NPT.	-	MAS
1	2"	600#	VA-2292	CHECK VALVE RF SWING (NACE).	-	KF
2	1"	800#	VA-2599	CHECK VALVE NPT SWING.	-	HAITIMA
2	1/2"	800#	VA-2502	CHECK VALVE NPT SWING.	-	OMB
1	1/2"	800#	VA-2006	CHECK VALVE NPT SWING, (NACE).	-	GWC
3	1/2"	3000#	VA-1862	CHECK VALVE NPT INLINE.	-	PLAINSMAN
8	1/2"	6000#	VA-1044	NEEDLE VALVE NPT MXF.	-	WGI
2	1/2"	6000#	VA-1117	NEEDLE VALVE NPT FXF.	-	WGI
1	1/4"	6000#	VA-1049	NEEDLE VALVE NPT FXF.	-	WGI

BILL OF MATERIALS - INSTRUMENTS					
ITEM	QTY	DESCRIPTION	MODEL NO.	MANUFACT.	PARTS NO.
LC-2102	1	LEVEL CONTROLLER- 2" NPT, DIRECT/SNAP ACTING, VERTICAL SS FLOAT, 6-30 Psig OUTPUT.	1001A	NORRISEAL	CO-1065
LCV-2102	1	CONTROL/DUMP VALVE- 1" NPT, FAIL CLOSED, 6-30 Psig ACTUATOR PRESSURE, 0.25" SEAT.	2220	NORRISEAL	VA-1433
LG-2102/2110	2	LEVEL GAUGE (REFLECTIVE) c/w 3/4" NPT GAUGE COCKS.	91RL	QUEST-TECH	GG-1323 VA-1318
PI-2000/2001/2100/2103	4	PRESSURE GAUGE- 1/2" NPT BOTTOM MOUNT x 4" DIAL, LIQUID FILLED, 0-2000 Psig.	WH10976P	WGI	GG-1103
TI/TW-2100	1	TEMPERATURE INDICATOR- 1/2" NPT BK. MOUNT X 3" DIAL, 0 - 250 °F DUAL C/W 3/4" NPT X 2.5" INS. THERMOWELL.	TL30	WGI	GG-1071 GG-1090
PSV-2100	1	RELIEF VALVE- 1" x 1" NPT, 'E' ORIFICE, SET @ 1440 Psig.	8100	MERCER	VA-1907
PRV-2050/2060	2	RELIEF VALVE- 1/4" NPT X 1/4" NPT MXF, ETHYL PROP RUBBER, PTFE, SS BODY, SET @ 1440 Psig.	RH4A	PARKER	VA-1236/ VA-1237
RG-2050	1	RATE/LEVEL GAUGE. METRIC/IMPERIAL DUAL SCALE, RATE CHECK, 2 1/2" O.D., ALUMINUM.	-	PHASE-TECH	GG-1319
LG-2050/2060	2	RATE/LEVEL GAUGE- 48" RATE CHECK.	-	LOUVRES & GAUGES	GG-1136
EY-2050/2060	2	SOLENOID VALVE- 1/4" NPT, 12-24 V, 3-WAY, 200 Psig MWP, 0.05 CV, 316SS BODY, CLASS 1, DIV 2, 2 WATT, LOW POWER.	EE8314R123-12-24VDC	ASCO	CO-1256
LRS-2050/2060	2	LATCHING RELAY SWITCH- 3-WAY. MAWP 125 Psig @ 250°F.	4057CP	AMOT	VA-1266
PI-2110	1	PRESSURE GAUGE- 1/2" NPT BOTTOM MOUNT x 4" DIAL, LIQUID FILLED, 0-300 Psig.	WH10958P	WGI	GG-1047
HLSD-2110	1	FUEL GAS SHUT OFF- 2"x1", INCLUDED IN SCRUBBER.	-	LO-TECH	-
PSV-2110	1	RELIEF VALVE- 1" x 1", 'E' ORIFICE. SET @ 150 Psig.	8100	MERCER	VA-1892
PRV-2110	1	REGULATOR- 1" NPT, STEEL BODY, 1500# INLET PRES. 1/8" ORIFICE, 75-150 Psig SPRING.	2002PR	WELLMARK	PR-1168
PRV-2120/2121/2122/2123/2124	5	REGULATOR- 1/4" NPT, 35# SPRING C/W PI, MAWP 250 Psig.	962-275-000 WJ2406	BELLOFRAM	PR-1141 GG-1214
F-208	1	FILTER- 1/4" NPT, 250 Psig. MAWP @ 200°F, ALUMINUM BODY, C/W 0-60 Psig GAUGE SITE GAUGE.	FRAT-066-5 OSG-1/4-30 -PELIO	UNITED FILTRATION	AN-1032
AD-2080	1	AUTO DUMP VALVE- 3/4" NPT, 5/64" ORIFICE, 400 Psig MOP.	11LD	ARMSTRONG	VA-1165
PRV-2080	1	REGULATOR - 1/4" NPT, 0-120 Psig, 5/64" ORIFICE, 5500 Psig MAX INLET.	P0390212001 1101	BELLOFRAM	PR-1068 GG-1215
PSV-2080/2081	2	RELIEF VALVE- 1/4" X 1/4" MXF NPT, ETHYL PROP RUBBER, PTFE, SS BODY, SET @ 250 Psig.	4M4FRH4AEP RTSS	PARKER	VA-1236 VA-1201
TW-2000/2103	2	THERMOWELL- 1/2" X 1/2" X 4" (SEE NOTE 4).	1/2- 040-316	WGI	GG-1257
ST-2060	1	'Y' STRAINER- 1" NPT, 1/32 PERF. SCREEN.	NYS3000	ALTA	VA-1163
LM-2050/2060	2	LEAK MONITOR	-	LOUVRES & GAUGES	GG-1075
SS-208	1	SOLAR PANEL (2)- 110-150W, USES 4 BATTERIES (12 VDC, 100 Ah AMP) & 1 BATTERY BOX, SUNSAVER (12 VDC, 20 AMP), DPM. (SHIPPED LOOSE)	150W	-	SW-1127 SW-1130 SW-1131 SW-1145
PCV-2103	1	CONTROL VALVE- 2"-600# RF, 667-40, D SERIES, FAIL CLOSED ACTUATOR, 6-30 psig SPRING, 1/4" TRIM.	SERIES D	CVS	VA-tba
PCY-2103	1	PRESSURE CONTROLLER- 6-30 psig, SST BOURDON TUBE, DIRECT ACTING.	4150	CVS	CO-1173
FE-2103	1	DUAL CHAMBER METER RUN- 2"-600# RF, FLANGED ENDS, SCH. 80 BORE.	9A-MR-52- 0192E	NUFLO	MR-1235
LSLL-2100	1	LEVEL SWITCH- 2" NPT, ELECTRIC 30VAC/VDC @ 75mA, 2000 Psig MAWP, -20°F TO 300°F, 304SS FLOAT	MLS 020	MURPHY	CO-1247
EC-2100	1	LEVEL SWITCH EXTERNAL FLOAT CHAMBER	-	MURPHY	CO-1248
PSV-2103	1	RELIEF VALVE- 1.5"x2" NPT, 'H' ORIFICE, SET @ 150psig.	82H571311	TAYLOR	VA-



GENERAL NOTES:  
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