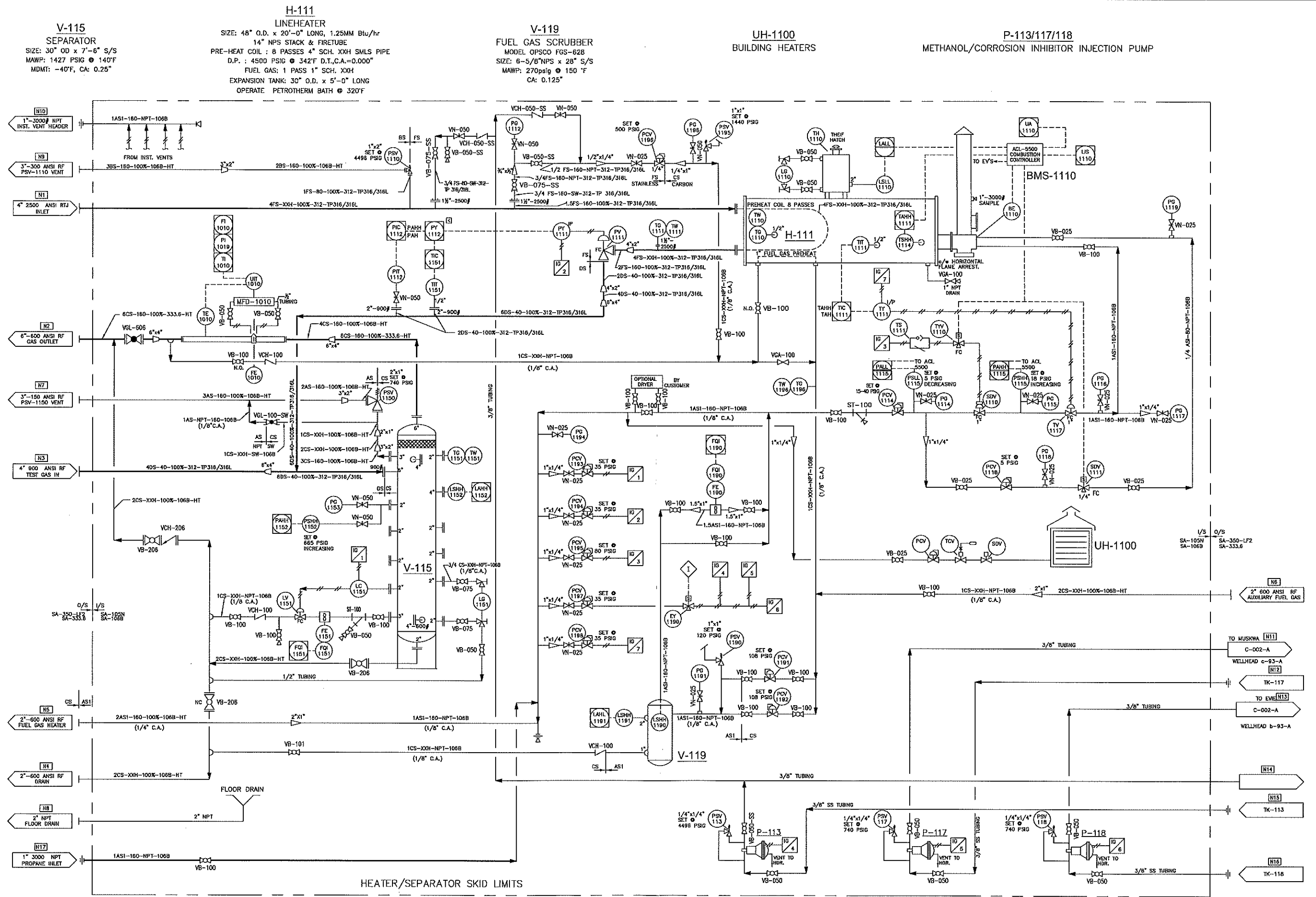


1/22/2009 3:50:18 PM, Rong.Pan, 1-2.15929



HEATER/SEPARATOR SKID LIMITS

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OPSCO STANDARD WELDED PIPELINE DESIGNATION SYSTEM

OPTIONAL: LEAVE OUT UNLESS NEEDED

EXAMPLE: 60 - 40 - 10X - 106B - HT -

LINE SIZE (NPS) ANS CLASS X-RAY STRESS REL. MATERIAL SPEC. PIPE SCHEDULE

A=150 D=900 C=600 F=2500

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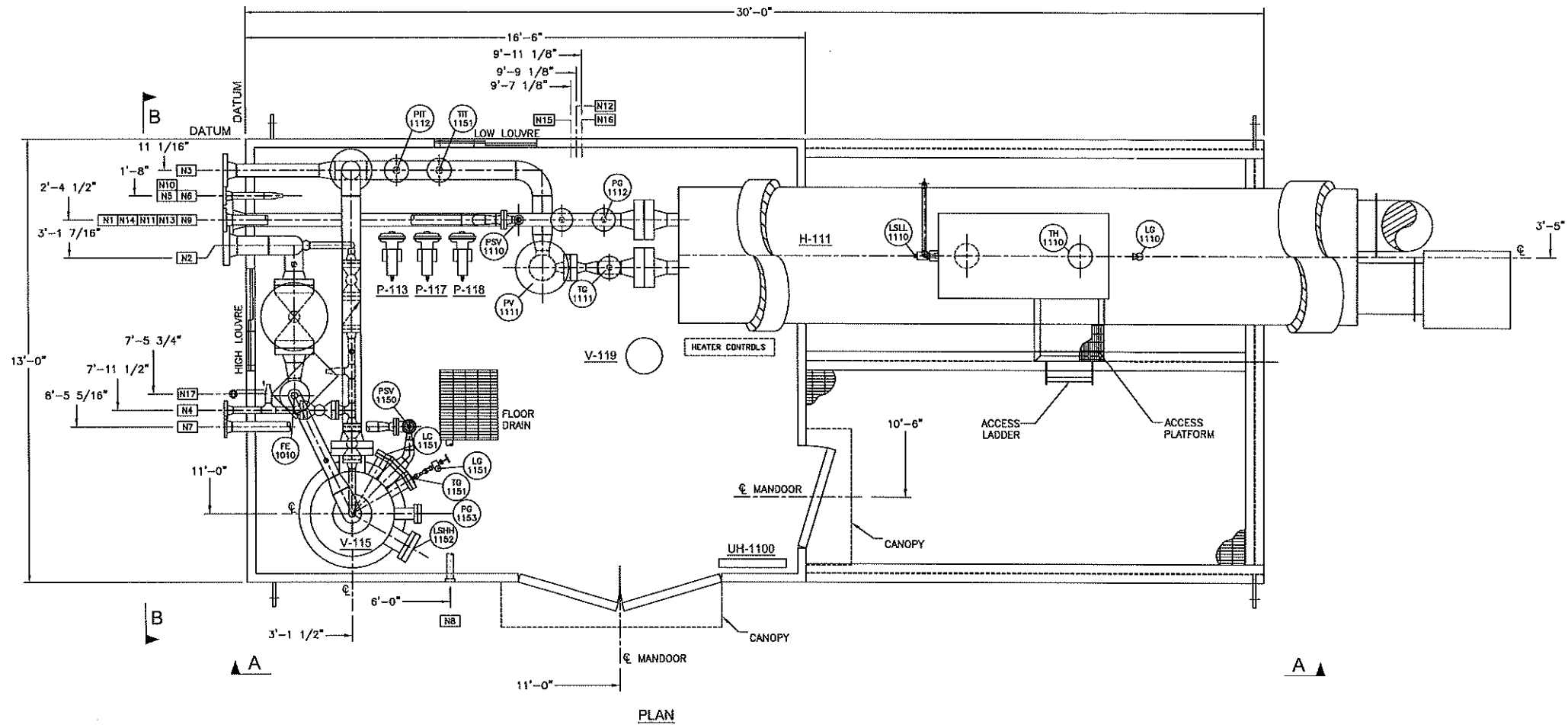
No.	DATE	REVISIONS	BY	APP	No.	DATE	REVISIONS	BY	APP
0	08/14/2008	ISSUED FOR APPROVAL	C.P.						
1	09/24/2008	ISSUED FOR CONSTRUCTION	C.P.						
2	09/22/2008	AS BUILT	C.P.						

ENGINEERS RECORD		DATE
DRAWN BY	CAROL PAN	OCT. 08, 2008
CHECKED BY		
ENG. REVIEW		
ENG. APPD.		
Q.C. APPD.		

ENSIGN
Opcco Manufacturing

CLIENT	NEXEN INC.		
PROJECT	C/O CONCISE DESIGN		
TITLE	LINE HEATER-SEPARATOR PACKAGE		
	DILLY CREEK, BRITISH COLUMBIA		
	a-93-A/94-0-B		
	FLOW DIAGRAM		
Scale	JOB No.	DWG. No.	REV.
NIS	MFG05-0253-01	F-05-0253-01-001	2

PO-4500104247



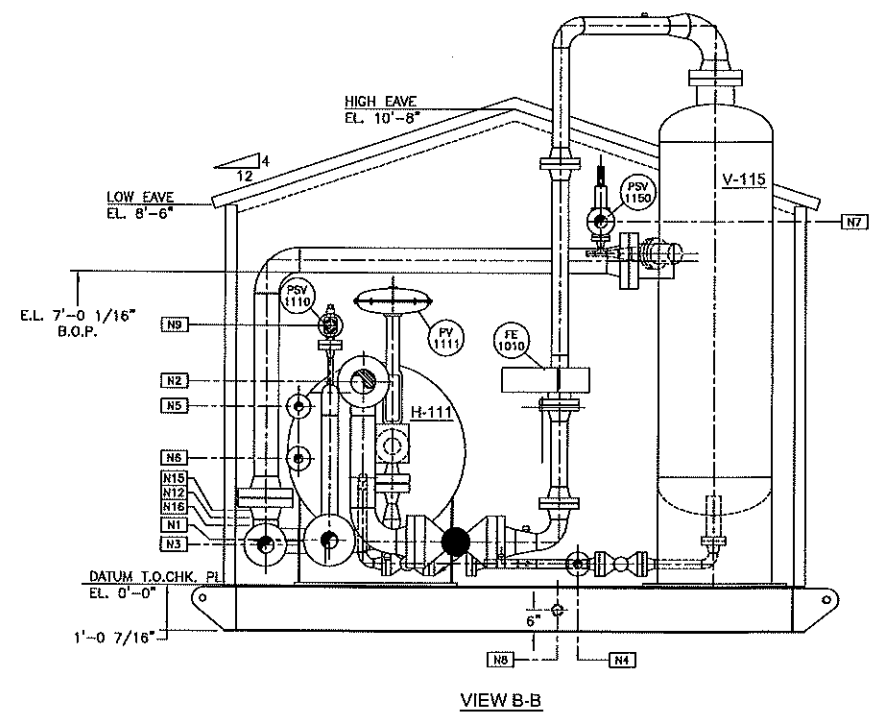
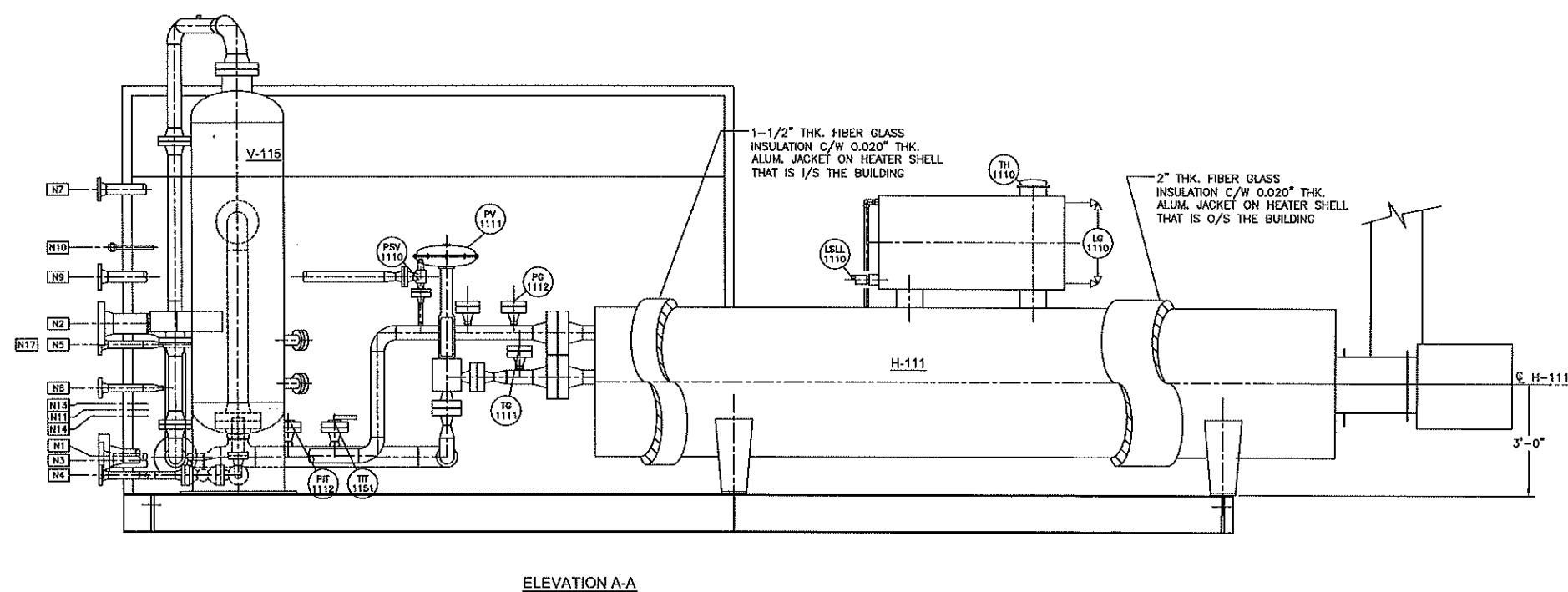
GENERAL NOTES:

- No. of Units req'd: One (1)
- Unit to be commercially sandblasted to SSPC-SP-6 and shop-primed with: One (1) coat Zinc Chromate. (Mobil 13-Y-602)
- Finish Paint: One (1) coat Alkyd Enamel (Mobil 20 Series, M&F)
- Underskid insulation: 2" Fire retardant under building.
- Radiography on Piping welding to be: See Line Specs on P&ID
- OPSCO standard pipe supports, as required.
- Unless specified otherwise, all projections beyond building wall to be: 8"
- Dimensions may change to reflect customer requests, layout changes, accessibility and non-conformity of OEM supplied components.
- Stress Relieving Details: See Line Specs on P&ID
- XP electrical hook-up of Catalytic Heaters: YES
- Other Electrical Work: NO

SKID NOTES: REFER TO DWG. # S-05-0253-01-001

BUILDING NOTES: REFER TO DWG. # B-05-0253-01-001

CONNECTION SCHEDULE					
MARK	SIZE	RATING	TYPE	DESCRIPTION	℄ ELEVATION
N1	4"	2500#	RTJ	GAS INLET	1'-0 3/4"
N2	6"	600#	RF	GAS OUTLET	4'-6 3/4"
N3	4"	900#	RF	TEST GAS IN	0'-10 1/8"
N4	2"	600#	RF	DRAIN	0'-6"
N5	2"	600#	RF	FUEL GAS HEATER	4'-0"
N6	2"	600#	RF	AUXILIARY FUEL GAS	2'-10"
N7	3"	150#	RF	VENT (PSV-1150)	8'-1 1/8"
N8	2"		NPT	FLOOR DRAIN	AS SHOWN
N9	3"	300#	RF	VENT (PSV-1110)	5'-9 1/8"
N10	1"	3000#	NPT	INSTRUMENT VENT HEADER	6'-0"
N11	3/8"		TUBING	TO MUSKWA	2'-3"
N12	3/8"		TUBING	FROM TK-117	1'-6"
N13	3/8"		TUBING	TO EVIE	2'-5"
N14	3/8"		TUBING	TO	2'-1"
N15	3/8"		TUBING	FROM TK-113	1'-8"
N16	3/8"		TUBING	FROM TK-11B	1'-4"
N17	1"	3000#	NPT	PROPANE INLET	4'-0"



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OPSCO STANDARD WELDED PIPELINE DESIGNATION SYSTEM

OPTIONAL: LEAVE OUT UNLESS NEEDED

EXAMPLE: 60 - 40 - 10X - 100B - HT - OTHER NDT

LINE SIZE (NPS) ANS CLASS X-RAY STRESS REL.

A=150 D=900 B=300 E=1500 C=600 F=2500

PIPE SCHEDULE MATERIAL SPEC. OTHER NDT

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No.	DATE	REVISIONS	BY	APP	No.	DATE	REVISIONS	BY	APP
0	Oct. 18, 2008	ISSUED FOR APPROVAL	C.T.						
1	Nov. 24, 2008	ISSUED FOR CONSTRUCTION	K.C.						
2	Jan. 22, 2009	AS BUILT	C.P.						

ENGINEERS RECORD			DATE
DRAWN BY	June Cui		OCT. 08, 2008
CHECKED BY			
ENG. REVIEW			
ENG. APPD.			
Q.C. APPD.			

ENSIGN
OpSCO Manufacturing

CLIENT: NEXEN INC.
C/O CONCISE DESIGN

PROJECT: LINE HEATER-SEPARATOR PACKAGE
DILLY CREEK, BRITISH COLUMBIA
0-93-A/94-0-B

TITLE: PIPING LAYOUT

PO-4500104247 Scale 1"=24" JOB No. MFG05-0253-01 DWG. No. L-05-0253-01-001 REV. 2

1/23/2009 10:40:55 AM, Rong Pan, 1:51.823

Tag	Qty	Brand	Description
BE-1110	1	Enordo	Flame Arrestor c/w eclipse burners, 1.25 MM BTU/hr, 14" Firetube (Sour Fuel Gas)
BMS-1110	1	ACL	Burner Controller, Model ACL-5500, 24 VDC CSA Cl1 Div 2 c/w ACL Pilot & Flame Rod/Ignitor
EY-1190	1	Skinner	1/4" NPT, 3-way valve sour service, Model: 713T3N2V000011102, 24 VDC Solenoid, CSA Cl1 Div 1 XP, 100 PSIG MWP (SOUR INST.GAS)
FE/FQI-1190	1	Roala	Positive Displacement Meter, BC1755SMPTZ 1 1/2 in NPT B3 Roots Meter W/M 3 Redout, PTZ MICRO CORR W/UTS/WARE PKG CS5351-100 (NACE MR-0175-2002 process) w/totalizer & Signal to PLC
FE-1010	1	Canella	Office Meter Dual Chamber, 4 in NPS Sch 80 600 ANSI RF, AGA 2000, 1" & 3/4" 6000 TOL (NACE MR-0175-2002 process) custody transfer
FE/FQI-1151	1	SIMARK	Turbine Meter, 1 x 1 in NPT 7500 psig, Model 51000H c/w MAG, Pickup Model 4.303 & totalizer Model SMRT-101, 316L (NACE MR-0175-2002 process)
LC-1151	1	Fisher	Pneumatic Level Controller, Model LZ, PVC Diaphragm, Direct snap action, 0-35 psig output, (NACE MR0175 process/Sour Inst.)
LG-1110	1	Penburthy	Tabular Level Gauge c/w cocks N7A
LG-1151	1	Penburthy	Reflex sight glass, Model 11RL6(c/w 330J cocks), 9 1/8" visible glass, 3/4" x 1/2" NPT 4000 psig c/w offset CS (NACE MR0175 process)
LSHH-1152	1	SOR	Electric Level Switch, Model 1510C-G2A-C-W9ES-CS-CV-MC-NC 2in MNPT 1500 psig MAMP, 316 SS Body, CSA CL1 DIV.1XP,C/W CRN & Manual check (Nace MR0175 Process)
LSHH-1190	1	Lotech	High Level Switch Model HLSA-A-100 2 in NPT 1000 Psig MWP,SA105 (Nace Process).
LSHH-1191	1	SOR	Electric Level Switch, Model 1510C-G2A-C-W9ES-CS-CV-MC-NC 2in MNPT 1500 psig MAMP, 316 SS Body, CSA CL1 DIV.1XP,C/W CRN & Manual check (Nace MR0175 Process)
LSLL-1110	1	SOR	Electric Level Switch, Model 1510C-G2A-C-W9ES-CS-CV-MC-NC 2in MNPT 1500 psig MAMP, 316 SS Body, CSA CL1 DIV.1XP,C/W CRN & Manual check (Nace MR0175 Process)
LV-1151	1	Fisher	Level Control Valve, Model D2, 1 in NPT 0-35 psi Fall close, 1/4 to 1/2in variable Trim Size Globe Body (NACE MR0175 process/Sour Inst.)
MFD-1010	1	Century	S-Valve Manifold, CS body/SS trim (NACE MR0175 process), W/HT-1010
P-113	1	Textsteam	Plunger Pump, Model 5113 LP, 3/8 in Plunger 12 Gal/Day (Standard process/Sour Inst.)
P-117	1	Textsteam	Plunger Pump, Model 5103 LP, 3/8 in Plunger 16.8 Gal/Day (Standard process/Sour Inst.)
P-118	1	Textsteam	Plunger Pump, Model 5103 LP, 3/8 in Plunger 16.8 Gal/Day (Standard process/Sour Inst.)
PCV-1114	1	Fisher	Pressure Regulator, Model 627, 1 in NPT 15-40 psi set spring 3/16" Port, Steel Body (NACE MR0175-2002 process)
PCV-1118	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Fuel Gas)
PCV-1191	1	Fisher	Pressure Regulator, Model 627, 1 in NPT 70-150 psi set spring 1/8 in Port, CS Body SST Trim/Nylon Disc (NACE MR0175-2002 process)
PCV-1192	1	Fisher	Pressure Regulator, Model 627, 1 in NPT 70-150 psi set spring 1/8 in Port, CS Body SST Trim/Nylon Disc (NACE MR0175-2002 process)
PCV-1193	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Inst.)
PCV-1194	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Inst.)
PCV-1195	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Inst.)
PCV-1196	1	Fisher	Pressure Regulator, Model 1301G-N102, 1/4 in NPT 100-500 psig spring range, SS Body Nylon Disc Neoprene gasket, (NACE MR0175-2002 process)
PCV-1197	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Inst.)
PCV-1198	1	Fisher	Pressure Regulator, Model 67CFR, 1/4 in NPT 0-35 psig set spring, Topped Bonnet (Sour Inst.)
PG-1112	1	Wika	Gage Pressure Indicator, Model 233.54, 4 in x 1/2 in NPT Bottom Mount, 0 - 5000 psig SS Case (NACE MR0175-2002 process)
PG-1114	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1115	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1116	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1117	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1119	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1153	1	Wika	Gage Pressure Indicator, Model 233.54, 4 in x 1/2 in NPT Bottom Mount, 0 - 1500 psig SS Case (NACE MR0175-2002 process)
PG-1118	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 30 psig SS Case (NACE MR0175-2002 process)
PG-1191	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 200 psig SS Case (NACE MR0175-2002 process)
PG-1194	1	Wika	Gage Pressure Indicator, Model 233.53, 2 1/2 in x 1/4 in NPT Bottom Mount, 0 - 200 psig SS Case (NACE MR0175-2002 process)
PG-1196	1	Wika	Gage Pressure Indicator, Model 233.54, 4 in x 1/2 in NPT Bottom Mount, 0 - 1500 psig SS Case (NACE MR0175-2002 process)
PIT-1112	1	Rosemount	Gage Pressure Transmitter / 0-1500psig Calibration Range, Model 3051S2TG4AE11A1B4K6M5 -14.7 to 4000 psi, LCD display, 4-20 mA Bracket (NACE MR0175-2002 process)
PSHH-1115	1	CCS	Electric Gage Pressure Switch, Model 6900GZE-12, 1/2 in 500 psi MWP Div 1 EXP set 18 psi Increasing, SS 316 (NACE MR0157-2002 process)
PSHH-1182	1	CCS	Electric Gage Pressure Switch, Model 6900GZE-20, 1/2 in 2000 psi MWP Div 1 EXP set 665 psi Increasing, 225-925 psig range, SS 316 (NACE MR0157-2002 process)
PSLL-1115	1	CCS	Electric Gage Pressure Switch, Model 6900GZE-12, 1/2 in 500 psi MWP Div 1 EXP set 5 psi Decreasing, SS 316 (NACE MR0157-2002 process)

Tag	Qty	Brand	Description
PSV-1110	1	Mercer	Conventional Valve Relief, Model 20 9100 Series 1" 2500 ANSI RTJ x 2" 300 ANSI RF Set 4498 psig, CF8M Body Material, Peak seat 316SS Disk & Nozzle, Inconnec Spring (NACE MR0175-2002 Primary)
PSV-1113	1	Swagelok	Conventional Valve Relief, Model SS-4R3A5-EP, 1/4 in MNPT x 1/4 in FNPT set @ 4498 psi, SS 316
PSV-1150	1	Foris	Conventional Valve Relief, Model 26EA13-120, 1 in 600 ANSI RF x 2 in 150 ANSI RF set 740 psig, CS body & bonnet, 316 SST Trim (NACE MR0175-2002 Primary)
PSV-1117	1	Swagelok	Conventional Valve Relief, Model SS-4R3A5-EP, 1/4 in MNPT x 1/4 in FNPT set @ 740 psi, SS 316
PSV-1118	1	Swagelok	Conventional Valve Relief, Model SS-4R3A5-EP, 1/4 in MNPT x 1/4 in FNPT set @ 740 psi, SS 316
PSV-1190	1	Foris	Conventional Valve Relief, Model 27DA33-M20, 1 in MNPT x 1 in FNPT set 120 psig, SA479 typ 316 (NACE MR0175-2002 primary)
PSV-1195	1	Foris	Conventional Relief Valve, Model 27DA33-M20/S4, 1" MNPT X 1" FNPT 316 SS, set @ 1440 psig, 316 SST base, disc, disc insert and cylinder, sized for failure of PCV-1196 (NACE MR-01-75 in Primary Zone)
PV-1111	1	Master Flo	Angle Choke, Model P2E w/ 667-70 Actuator, 2 in 2500 RTJ x 2 in 2500 RTJ, 6-30 psig supply, Fail Close, 316 SS (NACE MR0175 process/Sour Inst.)
PY-1111	1	Fisher	Digital Positioner, DVC-6010, 4-20 mA CI 1 Div 1 XP Sliding Stem, 6-30 psi (Sour Inst.)
SDV/TW-1110	1	Fossil	1" NPT CSA Certified Safety Shutoff Valve with Proof of closure Limit Switch, CSA CL1 Div 1 24VDC, Model 9B50-0240-2008-1112-0022 c/w Solenoid valve (Sour process/Sour Instrument Trim)
SDV-1111	1	ACL	1/8" NPT, 3-way valve, Sour service, 24 VDC solenoid, 1.6 Volt Low Power, CSA CL1 Div 1 XP, p/n ACL-SV-SS0-1-24 (Sour process)
ST-100	2	Alfa	Strainer, 1" NPT class 800, Model YS800, WP 2000 psig, A-10SN body (NACE MR0175 process)
TG-1110	1	Trend	Temperature Indicator, Model 50, 5 in Face 50/250F 1/2 in NPT, 12 in Long (NACE MR0175-2002 process)
TG-1111	1	Trend	Temperature Indicator, Model 50, 5 in Face 0/250F 1/2 in NPT, 9 in Long (NACE MR0175-2002 process)
TG-1151	1	Trend	Temperature Indicator, Model 50, 5 in Face 0/250F 1/2 in NPT, 9 in Long (NACE MR0175-2002 process)
TG-1198	1	Trend	Temperature Indicator, Model 50, 5 in Face 0/250F 1/2 in NPT, 2 1/2 in Long (NACE MR0175-2002 process)
TH-1110	1	Wanco	Theft Hatch, 8 in, 8 oz Pressure SS Spring, 0.4 oz Vacuum, Viton Gasket (NACE process)
TIT-1111	1	Rosemount	Temperature Transmitter, Model 3144PD1A1K6B4M5 4-20mA, LCD display c/w 0068N21C30A20FB6E6 RTD assembly (NACE MR0175 process)
TIT-1151	1	Rosemount	Temperature Transmitter, Model 3144PD1A1K6B4M5 4-20mA, LCD display, c/w 0068N21C30A20FB6E6 RTD (NACE MR0175 process)
TSHH-1114	1	CCS	Electric Temperature Switch, Model 6900TE18, Set @ 350 Deg.F rising (280-405 Deg.F range) CSA CL1 Div 1 XP, 1/2 in NPT 1250 psi MWP c/w 3/4" NPT thermowell, model 113-35-1-316, 4 1/2" long (NACE MR0175 process)
TS-1111	1	SMC	Speed controller, X ² NPT Model: AS200
TW-1110	1	Wika	Thermowell Threaded, 1/2 in NPT x 3/4 in NPT x 12 in Long, 316 SS
TW-1111	1	Wika	Thermowell Flanged, 1/2 in NPT x 1 1/2 in 2500 ANSI RTJ x 6" U LENGTH, 316 SS
TW-1151	1	Wika	Thermowell Threaded, 1/2 in NPT x 3/4 in NPT x 9 in Long, 316 SS
TW-1198	1	Wika	Thermowell Threaded, 1/2 in NPT x 3/4 in NPT x 2 1/2 in Long, 316 SS
TY-1111	1	Fisher	Current to Pressure Transducer, Model i2P, 1/4 in NPT 50 psi MWP 4-20 mA Input, 6-30 psi output, CSA EXP CL1 Div.1 (Sour Inst.)
TV-1117	1	Fisher	Control Valve, 1" NPT Model D4, 1/2" port, 0-30 psig Fail Closed (Nace MR0175 Process/Sour Fuel Gas)
UH-1100	1	Colodyna	Colodyna building heater, WX24x24, 16000 Btu/hr c/w SSOV, regulator, thermostat, vent hood, 120 volt start (Sour Fuel Gas)
UIT-1010	1	Control Microsystems	Multi-variable transmitter, Model 4202-DR22F610A2-L-C, 3 - 300 in H2O, 30 - 1500 psig range, AGA 2000 c/w RTD-Assembly & 1.25" u length, Thermowell, c.l. Div.1 x P (NACE MR0175 process)
VB-025	4	Nutron	Bull Valve, Full port, 1/4 in NPT 3000 psig T3-F025305Z, CS A105 (NACE MR0175 Process)
VB-050	11	Nutron	Bull Valve, Full port, 1/2 in NPT 3000 psig T3-F055305Z, CS A105 (NACE MR0175 Process)
VB-050-SS	3	Nutron	Bull Valve, Full port, 1/2 in 6000 WOG NPT T3-F05560AZ, Stainless steel (NACE MR0175 Process)
VB-075-SS	2	Nutron	Bull Valve, Reg. port, 3/4 in 6000 WOG SW x NPT T3-R07560AZ, Stainless steel (NACE MR0175 Process)
VB-100	20	Nutron	Bull Valve, Reg. port, 1 in NPT 3000 psig T3-R105305Z, CS A105 (NACE MR0175 Process)
VB-101	1	Nutron	Bull Valve, Reg. port, 1 in NPT 3000 psig T3-R105305Z, CS A105, C/W spring return handle. (NACE MR0175 Process)
VB-205	3	Nutron	Bull Valve, Reg. port, 2 in 600 ANSI RF Reg Port T3-R20R065Z, CS A105 (NACE MR0175 Process)
VCH-050-SS	2	Novco	Swing Check Valve, 1/2 in NPT Class 2500 ANSI Bolted Body, Model CS-R05525012, F316 SS body/bonnet, F316SS trim & hardfaced seats (NACE MR0175 Process)
VCH-100	3	Novco	Swing Check Valve, 1 in NPT Class 800 API Bolted Body, Model CS-R10S08A12, A105 body/bonnet, F316SS trim & hardfaced seats (NACE MR0175 Process)
VCH-205	1	Novco	Swing Check Valve, 2 in Class 600 ANSI RF RP CS-F20R08A12, A105 body/bonnet, F316SS trim & hardfaced seats (NACE MR0175 Process)
VGA-100	1	Novco	Gate Valve, Model GA-R10S08A12 1 in NPT Class 800 API, A105 body/bonnet, F316SS trim & hardfaced seats (NACE MR0175 Process)
VGL-100-SW	1	Novco	Globe Valve, Model GL-R10R08A12 1 in SW Class 800 API, A105 body/bonnet, F316SS trim & hardfaced seats (NACE MR0175 Process)
VGL-608	1	Novco	Globe Valve, 8 in Class 600 ANSI RF 28F-CB4/2, WBG Body 316 Trim (NACE MR0175 Process)
VH-025	14	Century	Needle Valve Hard Seat, CW21F22TDNT 1/4 in FNPT x 1/4 in FNPT 6000 psig, SS-316/316L (NACE MR0175 Process)
VH-050	7	Century	Needle Valve Hard Seat, CW21F44TDNT 1/2 in FNPT x 1/2 in FNPT 6000 psig, SS-316/316L (NACE MR0175 Process)

GENERAL NOTES:

- No of Units req'd: ONE (1)
- Materials shown for one Unit only
- Welded piping to be: See Line Specs. on P&ID
- All Threaded Piping to be: See Table below
- All Welded Fittings to be: See Line Specs. on P&ID
- All Forged Steel Fittings to be: See Table below
- Unit to be designed / pressure tested as follows:
PRESS. AS PER B31.3, CODE YEAR: 2008

SPEC.	SERVICE	MAMP	NPT PIPING	F.S. FITTINGS	STRESS RELIEF	PRESSURE TEST @ ROOM TEMP.	C.A.
AS1	SOUR	120 PSIG @ 150° F	SEE LINE SPEC.	SA-105N, 3000#	SEE LINE SPEC.	140 PSIG (HYDROTEST)	0.125"
AS	SOUR	275 PSIG @ 140° F	SEE LINE SPEC.	SA-105N, 3000#	SEE LINE SPEC.	413 PSIG (HYDROTEST)	0.25"
BS	SOUR	716 PSIG @ 140° F	SEE LINE SPEC.	SA-105N, 3000#	SEE LINE SPEC.	1074 PSIG (HYDROTEST)	0.25"
CS	SOUR	1427 PSIG @ 140° F	SEE LINE SPEC.	SA-105N, 6000#	SEE LINE SPEC.	2140 PSIG (HYDROTEST)	0.25"
FS	SOUR	4500 PSIG @ 342° F	SEE LINE SPEC.	1827-316/316L, 6000#	SEE LINE SPEC.	8476 PSIG (HYDROTEST)	0.00"
DS	SOUR	1427 PSIG @ 140° F	SEE LINE SPEC.	1827-316/316L, 6000#	SEE LINE SPEC.	2140 PSIG (HYDROTEST)	0.00"

* Use SA-350-LF2 for Low Temp F.S. Fittings & SA-333 for Low Temp. NPT Piping

VESSEL AS PER ASME VIII DIV. 1, CODE YEAR: 2002

TAG #	MAMP	HYDROTEST @ ROOM TEMP.	STRESS RELIEF	C.A.
V-115	1427 PSIG @ 140° F	2140 PSIG	YES	0.25"
V-119	270 PSIG @ 150° F	405 PSIG	YES	0.125"

HEATER COIL AS PER B31.3, CODE YEAR: 2008

SPEC.	SERVICE	MAMP	STRESS RELIEF	HYDROTEST @ ROOM TEMP.	C.A.
FS	PREHEAT	4500 PSIG @ 342° F	SEE LINE SPEC.	8476 PSIG	0.25"

- All bleeding type of instruments with bleed ports (including diaphragms & regulator bonnets) to be vented to vent header.
- Tubing Details:

SERVICE	SIZE	TUBE	WT	FITTINGS	FERRULES
ALL TUBING	3/8"	SS	0.049"	SS	SS
	1/2"	SS	0.035"	SS	SS

10. Total piping volume is < 0.5 cu.m.

11. Studs, Nuts & Gaskets Details:

SERVICE	STUDS	NUTS	GASKETS
SOUR/ NACE/ LOW TEMP. /REG. TEMP.	SA-193-B7M	SA-194-2HM	316SS FLEXITALIC

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OPSCO STANDARD WELDED PIPELINE DESIGNATION SYSTEM
OPTIONAL LEAVE OUT UNLESS NEEDED

EXAMPLE: 6B - 40 - 10X - 106B - HT - [Symbol] - OTHER NOT

LINE SIZE (NPS) ANS CLASS: A=150, B=300, C=600; D=800, E=1600, F=2500

PIPE SCHEDULE

X-RAY MATERIAL SPEC. STRESS REL.

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No.	DATE	REVISIONS	BY	APP	No.	DATE	REVISIONS	BY	APP	ENGINEERS RECORD	DATE
0	Oct. 15, 2008	ISSUED FOR APPROVAL	C.P.							DRAWN BY CAROL PAN	OCT. 08, 2008
1	Nov. 24, 2008	ISSUED FOR CONSTRUCTION	M.T.							CHECKED BY	
2	Nov. 24, 2008	AS BUILT	C.P.							ENG. REVIEW	
										ENG. APPD.	
										Q.C. APPD.	

ENSIGN
Opsco Manufacturing

CLIENT: NEXEN INC.
C/O CONCISE DESIGN

PROJECT: LINE HEATER-SEPARATOR PACKAGE
DILLY CREEK, BRITISH COLUMBIA
0-93-A/94-0-8

TITLE: FLOW DIAGRAM

Scale: NTS JOB No: MFG05-0253-01 DWG. No: F-05-0253-01-002 REV. 2