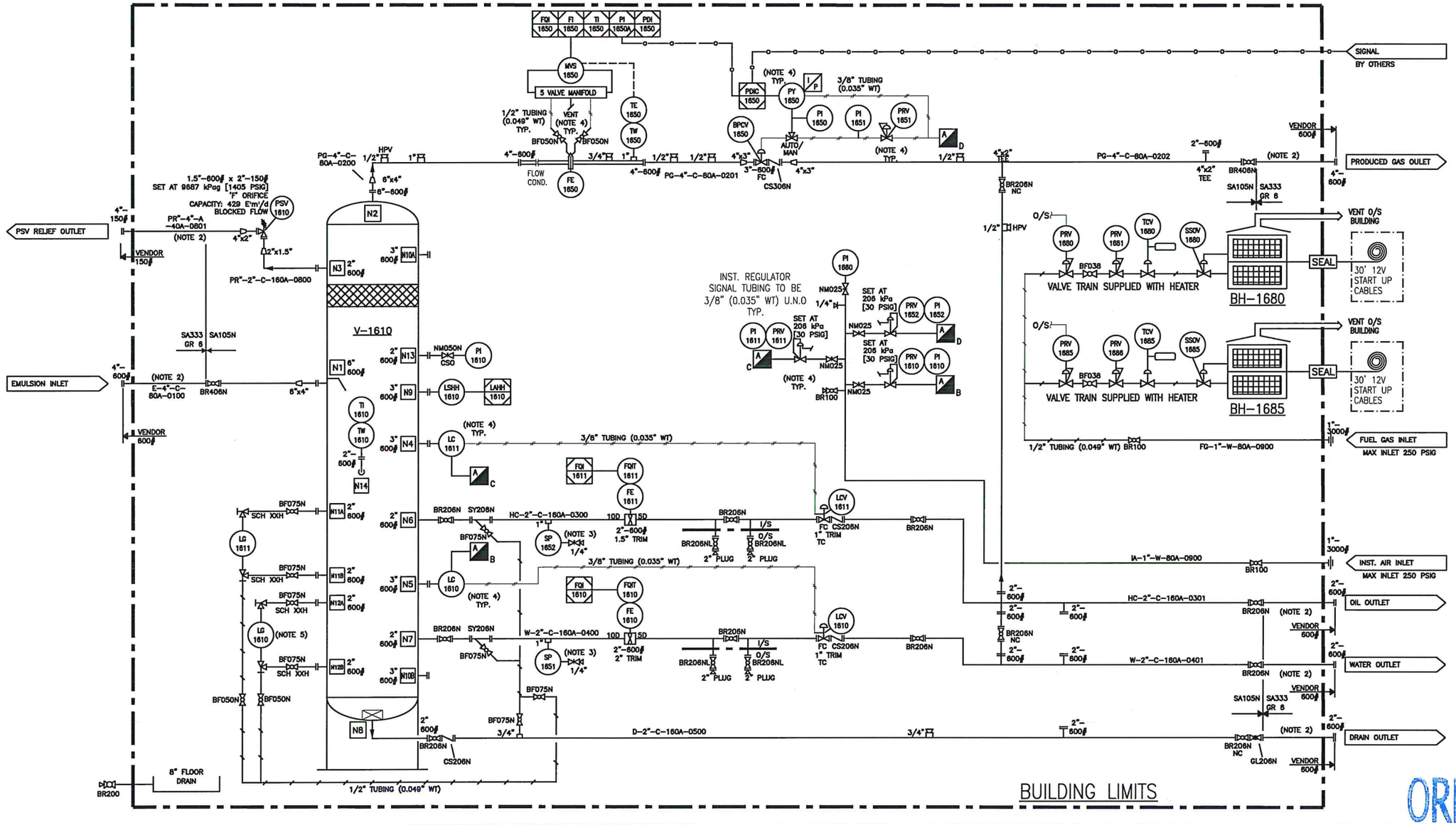

NWP UNIT	LSD
11629-003	STOCK
11629-004	STOCK

REV	DATE	BY	CHK	APP	DESCRIPTION
0	DEC 12/23	CD			ISSUED FOR CONSTRUCTION

DRAWING REVISIONS

ISSUED FOR CONSTRUCTION

SIGNED: _____

DATE: _____

W.O.: _____

S/N: _____

ALL DIMENSIONS IN INCHES

NWP INDUSTRIES LP
P.O. BOX 6280, INNISFAIL, AB T4G 1S9
PH: (403) 227-4100 FAX: (403) 227-4102

SCALE: N.T.S.
WEIGHT: (APPROX. LBS)

NWP STOCK
36" SEPARATOR PACKAGE, SOUR
36" OD x 10'0" S/S, 1405 PSIG
3 PHASE, SOUR SERVICE

PIPING AND INSTRUMENTATION DIAGRAM

DWN:	CHK:	APP:
CD		
DATE: DEC 06/23	DATE: JAN 11 2024	DATE: JAN 10 2024

SHEET: 1 OF 2
DWG: 11629-003-P-000
REV: 0

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LINE TYPE LEGEND

- MAJOR PROCESS LINE
- UTILITY LINE
- BUILDING LIMITS
- ENCLOSURE LIMITS
- ALTERNATE LIMITS
- CUST/VENDOR SUPPL. LIMITS
- HIDDEN LINE
- EQUIPMENT OUTLINE
- INSTRUMENT PNEUMATIC LINE
- PROCESS/UTILITY TUBING LINE
- INSTRUMENT CAPILLARY LINE
- ELECTRICAL DATALINK LINE
- ELECTRICAL CONNECTION LINE
- HYDRAULIC LINE
- MECHANICAL LINK LINE

INSULATION LEGEND

- 2.5" PP / 3" C — " THICKNESS; C=COLD, H=HOT, PP=PERSONEL PROTECTION
- 25H ET / 3"H GT — " THICKNESS c/w TRACING; ET=ELEC. TRACE, GT=GLYCOL TRACE, OT=OIL TRACE, ST=STEAM TRACE

VALVE SYMBOL LEGEND

- BALL VALVE
- SPRING RETURN BALL VALVE
- GLOBE VALVE
- GATE VALVE
- CHECK VALVE
- PLUG VALVE
- NEEDLE VALVE
- INLINE CHOKE VALVE
- 4-WAY VALVE
- 3-WAY VALVE
- BUTTERFLY VALVE
- BASKET/CONE STRAINER
- TEE STRAINER
- Y STRAINER
- RUPTURE DISC
- PRESSURE RELIEF VALVE
- ANGLE VALVE
- ANGLE CHOKE VALVE
- GAUGE VALVE
- BLOCK & BLEED NEEDLE VALVE
- X X X X — MULTIIPORT MANIFOLD

VALVE CONNECTION LEGEND

- THRD VALVE
- THRD/SW VALVE
- SW VALVE
- FLANGED VALVE

TOPWORKS SYMBOL LEGEND

- DIAPHRAGM ACTUATOR
- ACTUATOR WITH HANDWHEEL
- ACTUATOR WITH POSITIONER
- REGULATOR WITH HANDWHEEL
- BACK PRESS. REGULATOR
- PRESS. REDUCING REGULATOR
- PISTON ACTUATOR
- ACTUATOR WITH POSTIONER
- ROTARY PISTON ACTUATOR
- ROTARY MOTOR ACTUATOR
- SOLENOID

METERING

- METER RUN
- ORIFICE METER
- H — FLOW CONDITIONER
- VORTEX METER
- POSITIVE DISPLACEMENT METER
- TURBINE/PROPELLER METER
- MASS FLOW METER
- FLOW INDICATOR

MISC TAG SYMBOL LEGEND

- IG / 1 — INSTR. GAS TO AND FROM
- IA / 1 — INSTR. AIR TO AND FROM
- RTU — RTU
- I / P — I/P ELECTRO PNEUMATIC

MISC SYMBOLS LEGEND

- FLANGE / BLIND FLANGE
- BW CAP / THRD CAP
- UNION
- TOL/CPLG w/PLUG
- BREAK
- CONCENTRIC REDUCER
- CONCENTRIC SWAGE
- FOT FOT — ECC REDUCERS
- SKID EDGE SCARFED VENT
- FLEXIBLE HOSE
- CAMLOCK CONNECTION
- SPEC. BLIND-OPEN/CLOSED
- PIPE/TUBING FLOW ARROW
- SPEC/RESPONSIBILITY BREAK
- FLANGED NOZZLE
- MANWAY
- PANEL LOAD
- GROUND
- SKID DRAIN
- PIG BAR
- CONNECTION INDICATOR/ PAGE CONTINUATOR
- LIGHT
- SPEED CONTROL
- 3 / 2 / 1 / A — VH SWITCHING VALVE (AMOT)
- CONSTRUCTION REVISIONS
- MUFFLER

GENERAL NOTES

A. SHOP INSTALL ADDITIONAL PIPE SUPPORTS WHERE REQ'D.
B. SHIP LOOSE ITEMS TO BE BOXED AND SEALED PRIOR TO SHIPMENT.
C. PLUG AND PROTECT ALL OUTLETS PRIOR TO SHIPMENT.
D. ROUTE PIPING TO ENSURE NO LIQUID TRAPS.
E. ALL PIPING MATERIAL TO BE STANDARD TEMP U.N.O.
F. HYDROTEST PROCESS PIPING TO 1.5 x M.A.W.P.
G. ALL PIPING AND PROCESS TUBING LINES TO BE TESTED PER ASME B31.3 NFS
H. INSTRUMENT SUPPLY LINES TO BE TESTED PER ABSA AB-522 DIRECTIVE

CUSTOMER NOTES

1. SEPARATOR PACKAGE PIPING TO CONFORM TO ASME B31.3 NFS LATEST EDITION.
2. LOW TEMPERATURE MATERIAL TO BE INSTALLED UNTIL THE FIRST WELD INSIDE THE SEPARATOR PACKAGE.
3. SAMPLE PORTS TO BE TUBED AND ACCESSIBLE ON INTERIOR WALL OF PACKAGE.
4. ALL INSTRUMENTATION VENTS TUBED TO EXTERIOR WALL. (DOES NOT INCLUDE CONTROL VALVE AND DUMP VALVE ACTUATORS)
5. WATER LEVEL GAUGE TO BE TRANSPARENT GLASS.

REV A

REV A

ABBREVIATIONS

ASSY – ASSEMBLY	HPV – HIGH POINT VENT	MISC. – MISCELLANOUS
ATM – ATMOSPHERE	HS – HYDRAULIC SUPPLY	PD – POSITIVE DISPLACEMENT
BBL – BARREL	HT – HEAT TRACE	P/I – PNEUMATIC TO CURRENT
BD – BLOWDOWN	IA – INSTRUMENT AIR	P/L – PIPELINE
BTU – BRITISH THERMAL UNITS	ID – INSIDE DIAMETER	PLC – PROGRAMMABLE LOGIC CONTR.
CC – CORROSION COUPON	IG – INSTRUMENT GAS	PO – PUMP OUT
CP – CORROSION PROBE	INJ. PT – INJECTION POINT	RF – RAISED FACE
CSC – CAR SEAL CLOSED	I/P – CURRENT TO PNEUMATIC	RO – RESTRICTION ORIFICE
CSO – CAR SEAL OPEN	I/S – INSIDE	RP – REDUCED PORT
c/w – COMPLETE WITH	LLL – LOW LIQUID LEVEL	RTJ – RING TYPE JOINT
DB&B – DOUBLE BLOCK & BLEED	LPD – LOW POINT DRAIN	RTU – REMOTE TRANSMITTING UNIT
ESD – EMERGENCY SHUTDOWN	LSD – LEGAL SUBDIVISION	SP – SAMPLE POINT
ET – ELECTRICAL TRACE	MAWP – MAX. ALLOW. WORK PRES.	s/c – SHOP COAT
FC – FAIL CLOSE	MDMT – MIN. DESIGN METAL TEMP.	SG – SPECIFIC GRAVITY
FFSD – FAIL CLOSE	MCC – MOTOR CONTROL CENTER	SS – STAINLESS STEEL
FO – FAIL OPEN	MISC. – MISCELLANOUS	S/S – SEAM TO SEAM
FRD – FLOAT RELEASE DEVICE	NC – NORMALLY CLOSED	TK – TANK
FP – FULL PORT	NLL – NORMAL LIQUID LEVEL	T/T – TANGENT TO TANGENT
GO – GEAR OPERATED	NO – NORMALLY OPEN	UNO – UNLESS NOTED OTHERWISE
GT – GLYCOL TRACE	NTS – NOT TO SCALE	VH – VENT HEADER
HC – HOSE CONNECTION	OD – OUTSIDE DIAMETER	ZSC – POSITION/LIMIT SWITCH CLOSE
HLL – HIGH LIQUID LEVEL	O/S – OUTSIDE	ZSO – POSITION/LIMIT SWITCH OPEN

REV A

TAG LEGEND

	LOCALLY MOUNTED	PRIMARY LOC. OR PANEL NORMALLY ACCESS. TO OPER.	AUXILIARY LOC. OR PANEL NORMALLY ACCESS TO OPER.	PRIMARY LOC. OR PANEL MOUNTED ON BACK OF PANEL	AUXILIARY LOC. OR PANEL MOUNTED ON BACK OF PANEL
DISCRETE	–	–	–	–	–
SHARED DISPLAY, SHARED CONTROL DISTRIBUTION, CONTROL VIDEO DISPLAY	–	–	–	–	–
COMPUTER FUNCTION, SOFTWARE FUCTION	–	–	–	–	–
PROGRAMMABLE LOGIC CONTROL	–	–	–	–	–

INSTRUMENTATION IDENTIFICATION AS PER ANSI/ISA-5.1-2009

LETTER	FIRST LETTERS		SUCCEEDING LETTERS		
	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	CLOSE
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE				MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X-AXIS	ACCESSORY DEVICES, UNCLASSSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

REV A.1

VALVE TAGGING

XX XXX XX

- BALL VALVE (FULL PORT) – BF
- BALL VALVE (REG. PORT) – BR
- BUTTERFLY VALVE – BU
- CHECK VALVE (BALL) – CB
- CHECK VALVE (PISTON) – CP
- CHECK VALVE (SWING) – CS
- CHECK VALVE (WAFER) – CW
- GATE VALVE – GA
- GLOBE VALVE – GL
- STRAINER (BASKET) – SB
- STRAINER (T) – ST
- STRAINER (Y) – SY
- SWAGELOK – SW
- NEEDLE VALVE (FEMALE x FEMALE) – NF
- NEEDLE VALVE (MALE x FEMALE) – NM
- MANIFOLD – MF

- 025 – 1/4"
- 038 – 3/8"
- 050 – 1/2"
- 075 – 3/4"
- 100 – 1"
- 200 – 2"
- 201 – 2" 150 ANSI
- 303 – 3" 300 ANSI
- 406 – 4" 600 ANSI
- 609 – 6" 900 ANSI
- 815 – 8" 1500 ANSI
- 1025 – 10" 2500 ANSI

- G – GAS SERVICE
- H – HIGH PRESSURE
- L – LOW TEMP.
- N – NACE
- Z – BOM CLARIFIER (1,2,...)

LINE TAGGING

XX–X"–X–XXXX–XXX

- DRAIN – D
- EMULSION – E
- FUEL GAS – FG
- GLYCOL – G
- HYDROCARBON – HC
- INSTRUMENT AIR/GAS – IA/IG
- PROCESS GAS – PG
- PRESSURE RELIEF – PR
- WATER – W
- VENT (ATMOS) – V

NOMINAL PIPE SIZE

- 150 ANSI – A
- 300 ANSI – B
- 600 ANSI – C
- 900 ANSI – D
- 1500 ANSI – E
- 2500 ANSI – F
- 2000# THRD/SW – T
- 3000# THRD/SW – W
- 6000# THRD/SW – X

PIPE SCHEDULE

- 0100–0199 EMULSION
- 0200–0299 PROCESS GAS
- 0300–0399 HYDROCARBON
- 0400–0499 WATER
- 0500–0599 DRAIN
- 0600–0699 PROCESS FLUID
- 0700–0799 FUEL GAS
- 0800–0899 PRESSURE RELIEF
- 0900–0999 OTHER
- 1000–1099 VENT (NO TESTING)

- A – 316 SS TUBING w/ 316 SS FITTINGS
- B – 316 SS TUBING w/ CS FITTINGS
- C – NOT APPLICABLE

ORIGINAL

REV A.1

REV	DATE	BY	CHK	APP	DESCRIPTION
0	DEC 12/23	CD	[illegible]	[illegible]	ISSUED FOR CONSTRUCTION

DRAWING REVISIONS

ISSUED FOR CONSTRUCTION

SIGNED: _____

DATE: _____

W.O.: _____

S/N: _____

ALL DIMENSIONS IN INCHES

NWP INDUSTRIES LP
P.O. BOX 6280, INNISFAIL, AB T4G 1S9
PH: (403) 227-4100 FAX: (403) 227-4102

NWP STOCK
36" SEPARATOR PACKAGE, SOUR
36" OD x 10'0" S/S, 1405 PSIG
3 PHASE, SOUR SERVICE

PIPING AND INSTRUMENTATION DIAGRAM

DWN:	CHK:	APP:
CD	[illegible]	[illegible]
DATE: DEC 06/23	DATE: JAN 11 2024	DATE: JAN 10 2024

SCALE: N.T.S.
WEIGHT: (APPROX. LBS)

SHEET: 2 OF 2
DWG: 11629-003-P-000
REV: 0

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