

NOTES:

- EQUIPMENT SHOWN ON THIS DRAWING ARE FOR A TEMPORARY PILOT TEST AT PAD 00 FOR UP TO 12 MONTHS FROM DATE OF COMPLETE INSTALLATION. ALL EQUIPMENT, LINE, AND INSTRUMENT NUMBERS ARE PRECEDED WITH 34 UNLESS OTHERWISE NOTED.
- GROUND TO CLOSEST STEEL PILE WITH #2 AWG WIRE.
- RED BEACON (XA-126A) AND HORN (XA-128A) WILL BE INITIATED WHEN
 - FIRE/LEL/H2S DETECTOR(S) ARE ACTIVATED INSIDE SEPARATOR BUILDING
 - LEL IS ACTIVATED IN PK-030
- BLUE BEACON (XA-129A) WILL BE INITIATED WHEN H2S GAS LEAKAGE IN SEPARATOR BUILDING IS ACTIVATED.
- AMBER BEACON (XA-120A), AND HORN (XA-121A) WILL BE INITIATED WHEN LAH-120 IS ACTIVATED, DELETED.
- INITIATION OF EITHER RED BEACON (XA-126A) OR BLUE BEACON (XA-129A) WILL INITIATE WHITE BEACON (XA-130A) INSIDE PK-120 BUILDING.
- LI-120 SHALL BE VISIBLE AT TRUCK LOADING LOCATION.
- GOOSENECK VENT TO BE 24" ABOVE ROOF.
- LAH SET AT 90%, LAL SET AT 20%, AND LALL SET AT 15%.
- ALLOWABLE OFFSET FOR FLEXIBLE HOSES IS 40mm FROM HOSE CENTER LINE WITH MINIMUM BEND RADIUS OF 0.7m.
- PULSATION DAMPENER CHARGING PRESSURE IS AT 80% OF THE DISCHARGE LINE OPERATING PRESSURE.
- VALVE TRIMS MUST NOT CONTAIN VITON OR FKM TYPES OF FLUORO ELASTOMER.

T-120
STEAM ADDITIVE STORAGE TANK
 SIZE: 4648mm (15'-3") ID x 7315mm (24') HIGH
 DESIGN PRESSURE: 3.45 kPag (8 oz/in²)
 DESIGN VACUUM: -0.17 kPag (-0.4 oz/in²)
 NOMINAL CAPACITY: 119m³ (750 BBL)
 MFG: PLATINUM
 INSULATION: 1-1/2" URETHANE FOAM

UHE-120
BUILDING HEATER
 MAKE: RUFFNECK
 HEATING CAPACITY: 5 MW
 POWER: 600 V / 3 PH / 60 HZ

EF-120A/B
EXHAUST FAN
 MOTOR: 1/4 HP 120 VAC/60 HZ/1PH
 CAPACITY: 500 CFM

P-120A TO D
STEAM ADDITIVE INJECTION PUMPS
 DOUBLE DIAPHRAGM PUMP w/ DIAPHRAGM FAILURE INDICATION
 MAKE: PULSAFEEDER
 MODEL: PULSA 7600-S-E
 DESIGN: 2.1 L/MIN @ 5,499 kPa (798 psi) ΔP
 PLUNGER SPEED: 116 STROKES/MIN
 MOTOR: 2HP

PK-120
STEAM ADDITIVE INJECTION PACKAGE
 MFG: JOHN BROOKS CO.

PSV-120 A TO D
RELIEF VALVE
 MAKE: LESER
 MODEL: 437



PERMIT TO PRACTICE
CANADIAN NATURAL RESOURCES LIMITED
 RM SIGNATURE: *Albert Lee*
 RM APEGA ID #: 177418
 DATE: 30 November 2022
PERMIT NUMBER: P006872
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Demo Drawing

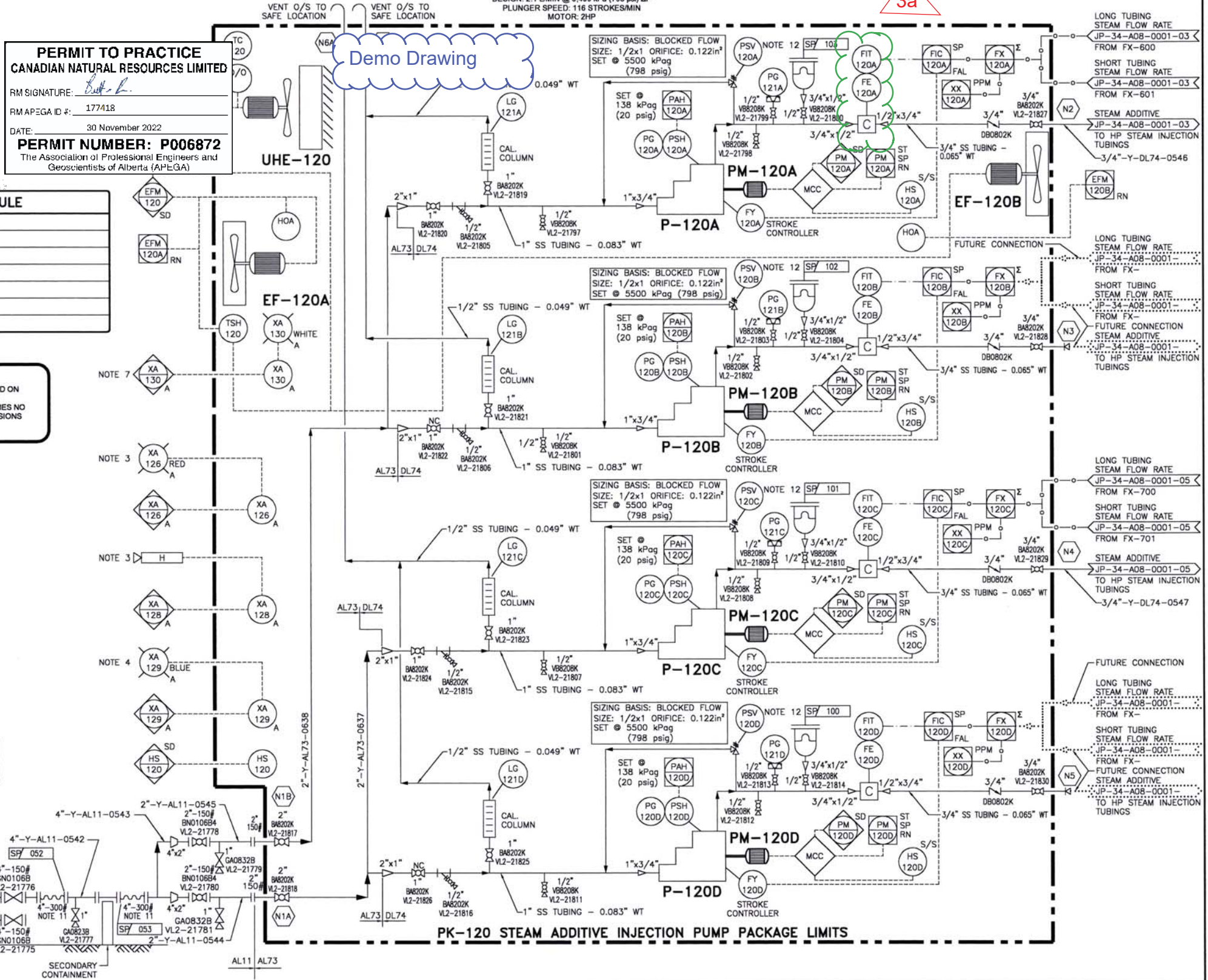
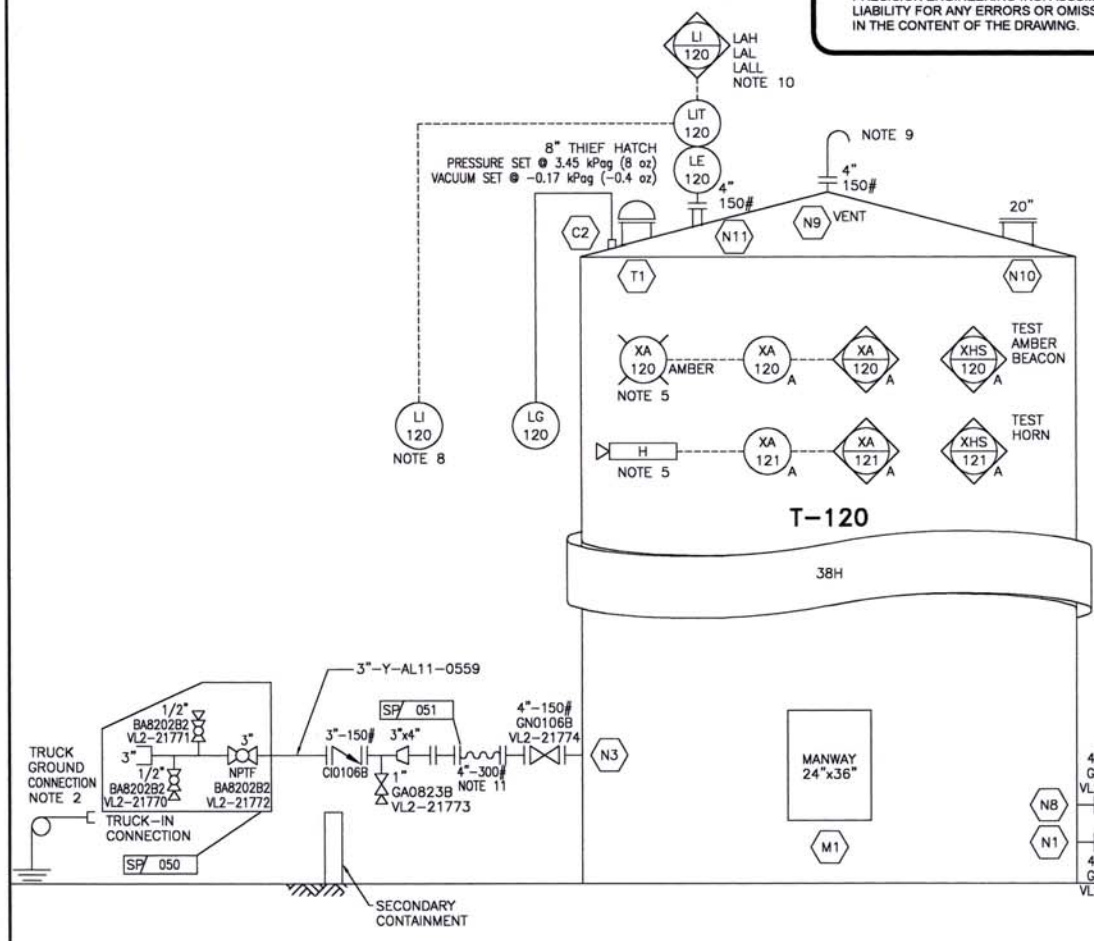
T-120 PARTIAL NOZZLE SCHEDULE

No.	SIZE	RATING	TYPE	SERVICE	ELEVATION
N1	4"	150#	RFSO	SPARE	203
N3	4"	150#	RFSO	INLET	152
N8	4"	150#	RFSO	OUTLET	305
N9	4"	150#	RFSO	VENT	ROOF
N10	20"	-	API	SPARE	ROOF
N11	4"	150#	RFSO	LEVEL TRANSMITTER	ROOF
T1	8"	-	API	THIEF HATCH	ROOF
C2	1-1/2"	3000#	NPT	LEVEL GAUGE	ROOF
M1	24"x36"	-	-	MANWAY	762

PK-120 NOZZLE SCHEDULE

No.	SIZE	RATING	TYPE	SERVICE
N1A/B	2"	150#	RF	INLET
N2	3/4"	TUBING	-	P-120A OUTLET
N3	3/4"	TUBING	-	P-120B OUTLET
N4	3/4"	TUBING	-	P-120C OUTLET
N5	3/4"	TUBING	-	P-120D OUTLET
NGA/B	1/2"	TUBING	-	VENT

AS BUILT:
 THIS DRAWING WAS PREPARED BASED ON INFORMATION OBTAINED BY OTHERS. PRECISION ENGINEERING INC. ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS IN THE CONTENT OF THE DRAWING.



DWG. NO.	REFERENCE DRAWINGS	DEVON PROJECT	REV	REVISIONS	DATE (yy.mm.dd)	BY	CHK'D	APP'D	OWNER APP'D	ENGINEER AND PERMIT STAMPS	DESIGNED	DRAWN	CHECKED	PROCESS CK.	MECH. CK.	STRUCT. CK.	ELECT. CK.	OWNER APP.	OWNER APP.	CONTR. JOB NO.	SCALE	DWG. NO.	CONTR. PROJ. NO.	SCALE	DWG. NO.
			3a	2022-JF2-029	22/11/30	NZ				PRECISION ENGINEERING INC. ISSUED ON: 29JUN18										2329	NTS	JP-34-A08-0017-01	10-123327.01	3a	
			3	ASB (STEAM ADDITIVE INJECTION PILOT) (PEI)	18.06.29	H.N.	E.R.	A.L.																	
			2	IFC (STEAM ADDITIVE INJECTION PILOT) (PEI)	18.04.02	H.N.	E.R.	A.L.																	
			1	IFR (HAZOP - STEAM ADDITIVE INJECTION PILOT) (PEI)	18.03.09	H.N.	E.R.	A.L.																	
			0	IFC (STEAM ADDITIVE INJECTION PILOT) (PEI)	18.02.14	H.N.	E.R.	B.W.																	



devon
JACKFISH 2
 PRODUCTION PAD 00
 P&ID - STEAM ADDITIVE INJECTION PUMP PACKAGE (PK-120)
 LSD 04-29-075-07 W4M