





EQUIPMENT LIST



REV	DATE	BY	CK	APP	DESCRIPTION
1	18-Jul-11				Issued for Construction

[illegible][illegible]



DARSI
ENGINEERING



Client: HUSKY OIL OPERATIONS LIMITED
Project: HOT WATER VAPOR PROCESS PILOT PROJECT
Location: LLYODMINSTER, SK
Project No: 14898 / DEL-480
LSD: 10-04-050-24W3
Husky Doc No: 10-04-050-24W3-XX-0001-01

EQUIPMENT LIST

REV	DATE	BY	CK	APP	DESCRIPTION
1	18-Jul-11	BC	YZ		Issued for Construction

Equipment Tag					Description												Notes:	Rev
Hub	Area	Tag No.		Suffix	Sparing	Details	Specifications (Size/Type)	Connections (2" and Larger)	Manway (Y/N/NA)	Quantity	Operating		MAWP		Weight	Req'n		
		Type	Seq. ID								Press. (PSIG)	Temp. (°F)	Press. (PSIG)	Temp. (°F)	(lbs)	#		
WATER INJECTION PACKAGE																		
VESSEL																		
		V	908			WATER SEPARATOR	610mm O/D X 1524mm S/S	4"-600# Inlet/ Outlet RF 2"-600# Outlet RF	Y	1							Design Pressure 6200 Kpa Design Temp FV -40/288C	1
EXCHANGER																		
		E	906			WATER PRE-HEATER	274mm O/D X 6204 mm S/S	2"-600# Inlet/ Outlet RFWN	N/A	1							SS-6206kPA/FV-40/288C TS-6200kPA/ FV -40/288C	1
PUMP																		
		P	904			WATER FEED PUMP	0.66 m³/Hr	1" -150# Inlet RFWN 1" - 600# Outlet RFWN	N/A	1							Capacity 0.66/1.99 m³/hr	1
		MP	904			WATER FEED PUMP MOTOR	11.2 KW		N/A	1							460/60/3, XP, VFD	1
MIXER																		
		MX	905			STATIC MIXER	76mm X 635mm F/F	3"-600# Inlet/ Outlet RFWN	N/A	1							Design 10205 kPA@ 38C MDMT -45C @ 10205 kPA	1
UNIT HEATER																		
		B	500/501			UNIT HEATERS			N/A	2								

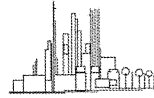


EQUIPMENT LIST





REV	DATE	BY	CK	APP	DESCRIPTION
1	18-Jul-11	BC	JB		Issued for Construction

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Husky Oil Operations Limited

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10-04-050-24W3-XX-0001-01 Equipment List.xlsx



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Equipment Tag						Description					Quantity	Operating		MAWP		Weight (lbs)	Req'n #	Notes:	Rev
Hub	Area	Tag No.		Suffix	Sparing	Details	Specifications (Size/Type)	Connections (2" and Larger)	Manway (Y/N/NA)	Press.		Temp.	Press.	Temp.					
		Type	Seq. ID							PSIG		(°F)	PSIG	(°F)					

UTILITY/ELECTRICAL SKID

GENSET

							60kW		N/A	1							480/3/60	1
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ELECTRICAL ROOM UNIT HEATER

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UTILITY ROOM UNIT HEATER

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