

Client:	Project :	Designer:			
	Golgohar Iron & Steel Development Co.				
CLIENT DOC NO: S-SM01-D-BOP-WWTP-SCH-IN-002	BARSOO DOC NO: 157LAGU2070001-01	Rev: 01			
Document Title:	I/O LIST FOR TRANSFER LINE	Sheet: 1 OF 5			
I/O LIST FOR TRANSFER LINE					
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A1	2026-May-02	IFA	G.Zargar	F.Niknam	A.Monfared
REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Client:	Project :	Designer:
	Golgohar Iron & Steel Development Co.	
Document Title:	I/O LIST FOR TRANSFER LINE	Rev: 01
		Sheet: 3 OF 5

TABLE OF CONTENTS		
SHEET NO.	TITLE	REV.
1	COVER SHEET	01
2	Revised Page Index	01
3	TABLE OF CONTENTS, REFERENCE DOCUMENTS, ABBREVIATION & NOTES	01
4	I/O LIST	01
5	IO SUMMARY	01

REFERENCE DOCUMENTS		
ITEM	DOCUMENT TITLE	DOCUMENT NO.
1	P&ID for RWTP OF ESP	S-SM01-D-BOP-WWTP-DWG-PR-001
2	INSTRUMENT LIST FOR TRANSFER LINE	S-SM01-D-BOP-WWTP-SCH-IN-001

ABBREVIATION	
AI	Analogue Input
AO	Analogue Output
DI	Digital Input
DO	Digital Output

NOTES
It is necessary to add one AI signal in RO KOWSAR Control System for FIT-1003. (CP-03, AI8, X1, IW640) It is necessary to add Interlock signals related to PU-K64.3,4 and PU-K65.1,2,3,4,5 with LT 01-01 in RO KOWSAR in the Control System .

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			REV: 01										Sheet No. : 4 of 5																
Item No.	Tag No.	IO Description	Instrument Type	Service / Fluid Name	IO Type	WIRING	Contact Dry / Wet	NOM C	Range	From	To	Alarm				Terminal					UCP					Rev.	Remark		
												Low	Low	High	High	Tag	No.	card	Rack	Slot	CH								
1	LIT-1003	Level Indicator transmitter	Radar (FMCW)	RO Brine Water Basin 100-DRP-TA01-02 (TK-04)	AI	2-wire	-	-	4-20 mA	Field	UCP	400 mm	1000 mm	4500 mm	4550 mm	X(FIELD-AI)	1	AI	VTA	4	0	A2							
2	LIT-1004	Level Indicator transmitter	Radar (FMCW)	RO Brine Water Basin 100-DRP-TA01-02 (TK-04)	AI	2-wire	-	-	4-20 mA	Field	UCP	400 mm	1000 mm	4500 mm	4550 mm	X(FIELD-AI)	2	AI	VTA	4	1	A2							
3	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	3	AI	VTA	4	2	A2							
4	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	4	AI	VTA	4	3	A2							
5	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	5	AI	VTA	4	4	A2							
6	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	6	AI	VTA	4	5	A2							
7	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	7	AI	VTA	4	6	A2							
8	SPARE-AI	-	-	-	AI	-	-	-	-	-	-	-	-	-	-	X(FIELD-AI)	8	AI	VTA	4	7	A2							
9	FIT-1003	Flow Indicator Transmitter	Electromagnetic Flowmeter	Common discharge header to TK-K01	AI	Soft / Profibus	-	-	-	RO KOWSAR	UCP	-	110 m3/hr	210 m3/hr	-	-	-	-	-	-	-	-	-	-	-	-	Fiber Optic		
10	I-01	TK-01 Low Level Interlock	Contact	Low Level Interlock of RO Kowsar TK-01 (LT-01-01)	DI	Soft / Profibus	-	-	-	RO KOWSAR	UCP	-	2000 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	Fiber Optic		
11	I-01-01	TK-01 High Level Interlock	Contact	High Level Interlock of RO Kowsar TK-01 (LT-01-01)	DI	Soft / Profibus	-	-	-	RO KOWSAR	UCP	-	-	4800 mm	-	-	-	-	-	-	-	-	-	-	-	-	Fiber Optic		
12	LS-1003	Low Low Level Switch	Conductive	RO Brine Water Basin 100-DRP-TA01-02 (TK-04)	DI	2-wire	Dry	NC	24VDC	Field	UCP	400 mm	-	-	-	X(FIELD-DI)	1	DI	VTA	5	0	A2							
13	LS-1004	Low Low Level Switch	Conductive	RO Brine Water Basin 100-DRP-TA01-02 (TK-04)	DI	2-wire	Dry	NC	24VDC	Field	UCP	400 mm	-	-	-	X(FIELD-DI)	2	DI	VTA	5	1	A2							
14	PS-1005A	Pressure switch	Bourdon	PU-06A Discharge Pressure	DI	2-wire	Dry	NC	24VDC	Field	UCP	-	1.3 barg	-	-	X(FIELD-DI)	3	DI	VTA	5	2	A2					Low Pressure		
15	PS-1005B	Pressure switch	Bourdon	PU-06B Discharge Pressure	DI	2-wire	Dry	NC	24VDC	Field	UCP	-	1.3 barg	-	-	X(FIELD-DI)	4	DI	VTA	5	3	A2					Low Pressure		
16	SOV-1007	Open/Close Command (Open =1)	Solenoid valve	SOV-1007	DO	2-wire	Wet	NO	24VDC	UCP	Field	-	-	-	-	X(FIELD-DO)	1	DO	VTA	6	0	A2							
17	UZSC-1007	Close Position	Limit Switch	UV-1007 Pneumatic Valve Position Feedback	DI	2-wire	Dry	NC	24VDC	Field	UCP	-	-	-	-	X(FIELD-DI)	5	DI	VTA	5	4	A2							
18	UZSC-1007	Open Position	Limit Switch	UV-1007 Pneumatic Valve Position Feedback	DI	2-wire	Dry	NO	24VDC	Field	UCP	-	-	-	-	X(FIELD-DI)	6	DI	VTA	5	5	A2							
19	SOV-1008	Open/Close Command (Open =1)	Solenoid valve	SOV-1008	DO	2-wire	Wet	NO	24VDC	UCP	Field	-	-	-	-	X(FIELD-DO)	2	DO	VTA	6	1	A2							
20	UZSC-1008	Close Position	Limit Switch	UV-1008 Pneumatic Valve Position Feedback	DI	2-wire	Dry	NC	24VDC	Field	UCP	-	-	-	-	X(FIELD-DI)	7	DI	VTA	5	6	A2							
21	UZSC-1008	Open Position	Limit Switch	UV-1008 Pneumatic Valve Position Feedback	DI	2-wire	Dry	NO	24VDC	Field	UCP	-	-	-	-	X(FIELD-DI)	8	DI	VTA	5	7	A2							
22	HS-ST-PU-06A	Local Start Push Button	Start Hand Switch	PU-06A Start Push Button	-	2-wire	Wet	NO	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
23	HS-SP-PU-06A	Local Stop Push Button	Stop Hand Switch	PU-06A Stop Push Button	-	2-wire	Wet	NC	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
24	L/R-PU-06A	Local / Remote Selector Switch (1=REMOTE)	Local / Remote Selector Switch (HS)	PU-06A Local / Remote Hand Switch	-	2-wire	Wet	NO	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
25	HS-PU-06A	Start Command from PLC/HMI	Digital Output (PLC)	PU-06A Start Command to MCC	DO	2-wire	Wet	NO	230VAC	UCP	MCC	-	-	-	-	X(FIELD-DO)	3	DO	VTA	6	2	A2					WET-230VAC		
26	HSL-PU-06A	Stop Command from PLC/HMI	Digital Output (PLC)	PU-06A Stop Command to MCC	DO	2-wire	Wet	NC	230VAC	UCP	MCC	-	-	-	-	X(FIELD-DO)	4	DO	VTA	6	3	A2					WET-230VAC		
27	XA-PU-06A	No Fault Status	MCC Status Contact	PU-06A MCC No Fault Status	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	11	DI	VTA	5	10	A2							
28	XRL-PU-06A	Motor Running Status	MCC Status Contact	PU-06A Running Status	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	9	DI	VTA	5	8	A2							
29	XSL-PU-06A	Motor Stop Status	MCC Status Contact	PU-06A Stop Status	DI	2-wire	Dry	NC	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	10	DI	VTA	5	9	A2							
30	XXLL-PU-06A	Local Status	MCC Status Contact	PU-06A Local Status from MCC	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	13	DI	VTA	5	12	A2							
31	XXRL-PU-06A	Remote Status	MCC Status Contact	PU-06A Remote Status from MCC	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	12	DI	VTA	5	11	A2							
32	-	AMMETER	-	-	-	-	-	-	-	MCC	LCS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
33	HS-ST-PU-06B	Local Start Push Button	Start Hand Switch	PU-06B Start Push Button	-	2-wire	Wet	NO	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
34	HS-SP-PU-06B	Local Stop Push Button	Stop Hand Switch	PU-06B Stop Push Button	-	2-wire	Wet	NC	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
35	L/R-PU-06B	Local / Remote Selector Switch (1=REMOTE)	Local / Remote Selector Switch (HS)	PU-06B Local / Remote Hand Switch	-	2-wire	Wet	NO	230VAC	LCS	MCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
36	HS-PU-06B	Start Command from PLC/HMI	Digital Output (PLC)	PU-06B Start Command to MCC	DO	2-wire	Wet	NO	230VAC	UCP	MCC	-	-	-	-	X(FIELD-DO)	5	DO	VTA	6	4	A2					WET-230VAC		
37	HSL-PU-06B	Stop Command from PLC/HMI	Digital Output (PLC)	PU-06B Stop Command to MCC	DO	2-wire	Wet	NC	230VAC	UCP	MCC	-	-	-	-	X(FIELD-DO)	6	DO	VTA	6	5	A2					WET-230VAC		
38	XA-PU-06B	No Fault Status	MCC Status Contact	PU-06B MCC No Fault Status	DI	-	-	-	-	UCP	-	-	-	-	-	X(FIELD-DI)	16	DI	VTA	5	15	A2							
39	XRL-PU-06B	Motor Running Status	MCC Status Contact	PU-06B Running Status	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	14	DI	VTA	5	13	A2							
40	XSL-PU-06B	Motor Stop Status	MCC Status Contact	PU-06B Stop Status	DI	2-wire	Dry	NC	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	15	DI	VTA	5	14	A2							
41	XXLL-PU-06B	Local Status	MCC Status Contact	PU-06B Local Status from MCC	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	18	DI	VTA	5	17	A2							
42	XXRL-PU-06B	Remote Status	MCC Status Contact	PU-06B Remote Status from MCC	DI	2-wire	Dry	NO	24VDC	MCC	UCP	-	-	-	-	X(FIELD-DI)	17	DI	VTA	5	16	A2							
43	-	AMMETER	-	-	-	-	-	-	-	MCC	LCS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
44	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	7	DO	VTA	6	6	A2							
45	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	8	DO	VTA	6	7	A2							
46	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	9	DO	VTA	6	8	A2							
1	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	10	DO	VTA	6	9	A2							
48	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	11	DO	VTA	6	10	A2							
49	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	12	DO	VTA	6	11	A2							
50	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	13	DO	VTA	6	12	A2							
51	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	14	DO	VTA	6	13	A2							
52	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	15	DO	VTA	6	14	A2							
53	SPARE-DO	-	-	-	DO	-	-	-	-	-	-	-	-	-	-	X(FIELD-DO)	16	DO	VTA	6	15	A2							
54	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	19	DI	VTA	5	18	A2							
55	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	20	DI	VTA	5	19	A2							
56	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	21	DI	VTA	5	20	A2							
57	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	22	DI	VTA	5	21	A2							
58	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	23	DI	VTA	5	22	A2							
59	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	24	DI	VTA	5	23	A2							
60	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	25	DI	VTA	5	24	A2							
61	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	26	DI	VTA	5	25	A2							
62	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	27	DI	VTA	5	26	A2							
63	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	28	DI	VTA	5	27	A2							
64	SPARE-DI	-	-	-	DI	-	-	-	-	-	-	-	-	-	-	X(FIELD-DI)	29	DI	VTA	5	28	A2							

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	REV: 1	Sheet No. : 5 of 5		

I/O SUMMARY

AI			AO	DI		DO	
Passive	Active	Profibus / Fiber Optic		Hardwire	Profibus / Fiber Optic	Hardwire	Profinet / Fiber Optic
2	0	1	0	18	2	6	0

AI+spare			AO	DI + spare		DO + spare	
Passive	Active	Profibus / Fiber Optic		Hardwire	Profibus / Fiber Optic	Hardwire	Profinet / Fiber Optic
8	0	1	0	32	2	16	0