



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

HAZARD SOURCE LIST



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D03	0001	LI	SA	120	PEDCO	GCS	BK

شماره صفحه: ۱ از ۵

طرح نگهداشت و افزایش تولید ۲۷ مخزن

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نگهداشت و افزایش تولید میدان نفتی بینک

Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D03	OCT.2024	IFA	R.Yazdani	M.Fakharian	M.Sadeghian	
D02	NOV.2023	IFA	A.Saber	M.Fakharian	S.Faramarzpour	
D01	AUG.2022	IFA	A.Saber	M.Fakharian	M.Mehrshad	
D00	FEB.2022	IFC	A.Saber	M.Fakharian	M.Mehrshad	

Class: 1

CLIENT Doc. Number:F0Z-709002

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built –Approved



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شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	شماره	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
	D03	D03	0001	LI	SA	120	PEDCO	GCS	BK

شماره صفحه: ۲ از ۵

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X	X		65					
2	X	X	X	X		66					
3	X	X	X	X		67					
4	X	X	X	X		68					
5	X		X			69					
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HAZARD SOURCE LIST

شماره بیمه:
۰۵۳-۹۱۸۴-۷۳

پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سرمال	نسخه
BK	GCS	PEDCO	120	SA	LI	0001	D03

شماره صفحه: ۳ از ۵

ITEM No.	TAG NUMBER	DESCRIPTION	FLUID	TYPE OF RELEASE									IGNITION POINT(C)	VAPOR DENSITY (L/H) (4)	MAX OPERATING CONDITION		DANGEROUS ITEM	CLASSIFICATION		TEMP	UFL	LFL	REMARK	
				Grades of release (1)			Location (2)			Vent (3)					TEMP.(C)	PRESS.(BARG)		GAS GROUP	ZONE					VOL.%
				C	P	S	O	E	S	N	I	F												
1	V-2101A/B/C	1ST Stage Gas Compression Suction Drum	HC + H2S			S	O				N			> 200	L	36	4.9	HYDROCARBON GAS	IIA	2	T3			FIG 48
2	V-2102A/B/C	2 Nd Stage Gas Compression Suction Drum	HC + H2S			S	O				N			> 200	L	60	18.1	HYDROCARBON GAS	IIA	2	T3			FIG 48
3	V-2103	2 Nd Stage Gas Compression Discharge Drum	HC + H2S			S	O				N			> 200	L	60	53.9	HYDROCARBON GAS	IIA	2	T3			FIG 48
4	V-2104	Slug Catcher Drum	HC + H2S			S	O				N			> 200	L	15-40	5.3	HYDROCARBON LIQ+GAS	IIA	2	T3			FIG 48
5	V-2105	Inlet Knock Out Drum	HC + H2S			S	O				N			> 200	L	15-40	5.1	HYDROCARBON GAS	IIA	2	T3			FIG 48
6	V-2107	Glycol Sump Drum	TEG+HC			S				S	N			> 200	H	AMB	0.1	TEG+HYDROCARBON	IIA	1 & 2	T3			FIG 48
7	V-2201	Flare K.O. Drum	HC + H2S			S				S	N			> 200	H/L	AMB	0.2-0.5	HYDROCARBON GAS	IIA	1 & 2	T3			FIG 48
8	V-2202	Close drain drum	HC + H2S			S				S	N			> 200	H	AMB	0.2-0.5	HYDROCARBON LIQ+ GAS	IIA	1 & 2	T3			FIG 48
9	V-2205	Fuel Gas K.O. Drum	HC + H2S			S	O				N			> 200	L	15-40	4.9	HYDROCARBON GAS	IIA	2	T3			FIG 48
10	V-2206	Diesel Oil Drum	DIESEL OIL			S	O				N			> 200	H	AMB	ATM.	HYDROCARBON GAS	IIA	2	T3			FIG 8
11	TK-2102	Lean Glycol Storage Tank	TEG			S	O				N			> 200	H	AMB	0.1	TEG	IIA	2	T3			FIG 6
12	C-2101 A/B/C	1 St Stage Gas Compressor	HC + H2S			S	O*				N			> 200	L	150	18.1	HYDROCARBON GAS	IIA	2	T3			FIG 52
13	C-2102 A/B/C	2Nd Stage Gas Compressor	HC + H2S			S	O*				N			> 200	L	150	53.5	HYDROCARBON GAS	IIA	2	T3			FIG 52
14	AE-2101 A/B/C	1 St Stage Gas Compressor Air Cooler	HC + H2S			S	O				N			> 200	L	150	18.1	HYDROCARBON GAS	IIA	2	T3			FIG 48
15	AE-2102 A/B/C	2 Nd Stage Gas Compressor Air Cooler	HC + H2S			S	O				N			> 200	L	150	53.5	HYDROCARBON GAS	IIA	2	T3			FIG 48

NOTE1: Class III liquids normally do not produce vapors of sufficient quantity to be considered for electrical classification purposes. Class III liquids will release vapor in the flammable range at their surfaces if heated above their flash points, but the extent of the classified location ordinarily will be very small and near the point of release.

NOTE2: Liquid which will be drained to burn pit during maintenance activities should be burned to prevent environmental pollution, but if it emptied by any pumps, they should be certified for above specified area classification.

DEFINITION:

(1) Grades of release:

"C": Continuous or is expected to occur for long periods.

"P": Primary; A release that can be expected to occur periodically or occasionally during normal operation

"S": secondary; A release that is not expected to occur is likely to do so only in infrequently and for short periods.

(2) Location:

"O": open area; "O*": Open area under shelter; "E": Enclosed; "S": Sumped;

(3) Vent:

"N": Natural; "I": Inadequate; "F": Forced;

(4) Vapor Density:

"L": Lighter than Air "H": Heavier than Air



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	BK	GCS	PEDCO	120	SA	LI	0001	D03	

ITEM No.	TAG NUMBER	DESCRIPTION	FLUID	TYPE OF RELEASE									IGNITION POINT(C)	VAPOR DENSITY (L/H)	MAX OPERATING CONDITION		DANGEROUS ITEM	CLASSIFICATION		TEMP	UFL	LFL	REMARK	
				Grades of release (1)			Location (2)			Vent (3)					TEMP.(C)	PRESS.(BARG)		GAS GROUP	ZONE					VOL.%
				C	P	S	O	E	S	N	I	F												
				D03																				
16	P-2101 A/B	Slug Pumps	HC + H2S			S	O				N			> 200	H	AMB	31	Liquid HYDROCARBON	IIA	2	T3			FIG 51
17	P-2102	Glycol Manual Pump	TEG			S	O				N			> 200	H	AMB	3	GLYCOL	IIA	-	T3			FIG 51
18	P-2103 A/B	Glycol Transfer Pumps	TEG			S	O				N			> 200	H	AMB	2	GLYCOL	IIA	-	T3			FIG 51
19	P-2104	Glycol Drain Pumps	TEG+HC			S				S	N			> 200	H	AMB	2	HYDROCARBON GAS	IIA	1 & 2	T3			FIG 51
20	P-2201A/B	LP Flare K.O. Drum Pumps	HC + H2S			S				S	N			> 200	H	AMB	2.5	HYDROCARBON GAS	IIA	1 & 2	T3			FIG 51
21	P-2202A/B	Closed Drain Pumps	HC + H2S			S				S	N			> 200	H	AMB	2.5	HYDROCARBON LIQ	IIA	1 & 2	T3			FIG 51
22	P-2203A/B	Sump Pumps	OILY WATER			S				S	N			> 200	H	AMB	2	HYDROCARBON OIL	IIA	1 & 2	T3			FIG 51
23	P-2206	Diesel oil Pump	DIESEL			S	O				N			> 200	H	AMB	2	DIESEL	IIA	-	T3			FIG 51
24	PK-2101	Dehydration Package	HC + H2S			S	O				N			> 200	L	60	53.5	HYDROCARBON +TEG+WATER	IIA	2	T3			FIG 48
25	PK-2206 A/B	Diesel Generator Package	DIESEL			S	O				N			> 200	H	AMB	ATM.	DIESEL	N.A	2	T3			FIG 55
26	PK-2207	Corrosion Inhibitor Package	DIESEL			S	O				N			> 200	H	AMB	ATM.	COROSION INHIBITOR	IIA	2	T3			FIG 55
27	FST-2201	LP Flare Stack	HC + H2S			S	O				N			> 200	L	AMB	0.5	HYDROCARBON GAS	N.A	N.A	N.A			FIG 14
28	IG-2201	LP Flare Ignation Package	HC + H2S			S	O				N			> 200	L	AMB	4.9	HYDROCARBON GAS	IIA	2	T3			FIG 55
29	SU-2201	LP Flare K.O Drum and Close Drain Sump	HC + H2S			S	O			S	N			> 200	L	AMB	ATM.	HYDROCARBON GAS	IIA	1 & 2	T3			Figure 57 clause 10.12
30	SU-2202	Oily Water Sump	HC			S	O			S	N			> 200	L	AMB	ATM.	HYDROCARBON GAS	IIA	1 & 2	T3			Figure 57 clause 10.12
31	PR-2002	Golkhari Pig Reciever	HC			S	O				N			> 200	L	AMB	ATM.	HYDROCARBON GAS	IIA	2	T3			FIG 49
32	PL-3201	Pig Launcher	HC			S	O				N			> 200	L	AMB	ATM.	HYDROCARBON GAS	IIA	2	T3			FIG 49
33	General	Battery Room	H2			S				E			F	500	L	25	ATM.	HYDROGEN GAS	IIC	1 & 2	T3			see section 11.23 API 505
34	General	ANY PIPING FITTING & CONNECTION (INCLUDE FLANGES/ VALVES/ AND ANY SCREWED CONNECTIONS)	HC			S	O				N			> 200	L	AMB	ATM.	HYDROCARBON	IIA	2	T3			see section 10.15 API 505

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	BK	GCS	PEDCO	120	SA	LI	0001	D03	

Component	Mol %		Ignition point °C	Boiling point °C	Flash point °C	Gas Group	Temp. Class	IEC		
	Winter	Summer						LFL VOL%	UFL VOL%	
H2S	1.87	2.80	260	-59.652	-82.4	IIB	T3	4	44	
Nitrogen	0.10	0.13	NF	-195.8	N/A	N/A	N/A	N/A	N/A	
CO2	1.67	3.45	NF	-78.552	N/A	N/A	N/A	N/A	N/A	
Methane	78.37	57.44	600	-161.525	-188	IIA	T1	5	15	
Ethane	11.86	17.38	515	-88.6	-135	IIA	T1	3	12.5	
Propane	4.22	10.55	450	-42.102	-104	IIA	T2	2.1	9.5	
i-Butane	0.33	1.27	460	-11.73	-83	IIA	T1	1.8	8.4	
n-Butane	0.71	2.93	288	-0.50199	-60	IIA	T3	1.9	8.5	
i-Pentane	0.13	0.76	420	27.878	-49	IIA	T2	1.32	9.16	
n-Pentane	0.08	0.49	243	36.059	-40	IIA	T3	1.5	7.8	
n-Hexane	0.09	0.81	225	68.73	-26	IIA	T3	1.1	7.5	
n-Heptane	0.02	0.29	204	98.42	-4	IIA	T3	1	6.7	
n-Octane	0.01	0.08	206	125	13	IIA	T3	1	6.5	
n-Nonane	0.00	0.03	205	151	31	IIA	T3	0.8	2.9	
n-Decane	0.00	0.01	210	174.1	46	IIA	T3	0.7	5.4	
N-C11	0.00	0.00	NA	193 ~ 197	62	IIA	T3	N/A	N/A	
C12+	0.00	0.00	NA	NA	NA	N/A	N/A	N/A	N/A	
Water (H2O)	0.54	1.58	NF	100	N/A	N/A	N/A	N/A	N/A	
FLUID							IIA	T3		

NOTE:

- This hazardous area schedule is prepared in accordance with API 505 & NFPA 497.
 - Electrical Apparatus subgroup and temperature class have been classified according to IEC 79, see Institute of Petroleum (IP) Model
 - All adequately vented enclosed areas are Zone 2 to the extent of the enclosed area
 - All floor drain sumps in the Hazardous area are considered to be Zone 1 below grade, with 0.5 metre radius Zone 2 above grade.
 - Due to the nature of the hydrocarbon gases and liquids processed all vents and drains in hydrocarbon service are hard piped to the appropriate flare or drain system header. Consequently these connections are deemed non-hazardous.
 - Liquids of Classes II (1) or III (1) or unclassified are normally non-hazardous on release with a small Zone 1 around roof vents and openings.
 - As there are so many devices with different composition, for exact detail to be referred to Process Simulation Report; BK-GCS-PEDCO-120-PR-RT-0003
- NA Not Available NF Not Flammable N/A Not Applicable