



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
فعالیت های رو زمینی در بسته های کاری تحت الارض
ساخت موقیعت چاه، تاسیسات سرچاهی و خطوط جریانی مربوط به موقیعت
W035



HAZARD SOURCE LIST - W035

| | | | | | | | | | |
|----------------------------------|-------|------|-------|----------|------|---------|-----------|-----------|-------|
| شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴ | شماره | نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |
| | D03 | D03 | 0001 | LI | SA | 110 | PEDCO | W035 | BK |

شماره صفحه: ۱ از ۴

طرح نگهداشت و افزایش تولید ۲۷ مخزن

HAZARD SOURCE LIST - W035

نگهداشت و افزایش تولید میدان نفتی بینک

| Rev. | Date | Purpose of Issue / Status | Prepared by: | Checked by: | Approved by: | CLIENT Approval |
|------|----------|---------------------------|--------------|-------------|--------------|-----------------|
| D03 | JUL.2022 | AFC | A.H.Saber | M.Fakharian | M.Mehrshad | |
| D02 | APR.2022 | IFA | A.H.Saber | M.Fakharian | M.Mehrshad | |
| D01 | JAN.2022 | IFA | A.H.Saber | M.Fakharian | M.Mehrshad | |
| D00 | NOV.2021 | IFC | E.Sadeghi | M.Fakharian | M.Mehrshad | |

Class: 2 CLIENT Doc. Number: F0Z-707773

- 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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W035



شرکت توسعه پترو ایران



HAZARD SOURCE LIST - W035

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

| نسخه | سریال | نوع مدرک | رشته | تسهیلات | صادرکننده | بسته کاری | پروژه |
|------|-------|----------|------|---------|-----------|-----------|-------|
| D03 | 0001 | LI | SA | 110 | PEDCO | W035 | BK |

شماره صفحه: ۲ از ۴

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 | | | | 67 | | | | | |
| 4 | X | | | | | 68 | | | | | |
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HAZARD SOURCE LIST - W035

شماره پیمان:

۰۵۳-۰۷۳-۹۱۸۴

پروژه

BK

بسته کاری

W035

صادرکننده

PEDCO

تسهیلات

110

رشته

SA

نوع مدرک

LI

سریال

0001

نسخه

D03

شماره صفحه: ۴ از ۳

| ITEM No. | TAG NUMBER | DESCRIPTION | PHASE | TYPE OF RELEASE | | | | | | | | | IGNITION POINT(°C) | MAX OPERATING CONDITION | | | DANGEROUS ITEM | CLASSIFICATION | | | TEMP | UFL | LFL | REMARK | |
|----------|------------|---|-----------------|-----------------------|---|---|--------------|---|---|----------|---|---|--------------------|-------------------------|-------------------|--------------|----------------|----------------|--------------|------------|--|-----|-----|--------|---------------------------------|
| | | | | Grades of release (1) | | | Location (2) | | | Vent (3) | | | | DENSITY(KG/M3) | TEMP.(°C) | PRESS.(BARG) | | GAS GROUP | LIQUID CLASS | ZONE | | | | | VOL.% |
| | | | | C | P | S | O | E | S | N | I | F | | | | | | | | | | | | | |
| 1 | W035 | WELL HEAD | LIQUID+ GAS | | | S | O | | | | N | | | >200 | 680.38 | 80 | 43.8 | HYDROCARBON | IIB | CLASS I | Zone I & Zone II (3m) | T3 | 0.1 | 0.018 | see 10.5.1.2 Fig 40- API RP 505 |
| 2 | WHCP-1500 | WELL HEAD CONTROL PANEL | HYDRAULIC OIL | | | S | | E | | | N | | | >200 | 880 | Amb | 206 | OIL | - | CLASS IIIB | NOTE 1 | -- | -- | -- | see 5.2.4 - API RP 505 |
| 3 | GENERAL | ANY PIPING FITTING & CONNECTION (INCLUDE FLANGES/ VALVES/ AND ANY SCREWED CONNECTIONS) | LIQUID+ AQUEOUS | | | S | O | | | | N | | | >200 | 680.38/4 69.77 | 80/79.6 | 43.8/24 | HYDROCARBON | IIB | CLASS I | 1 | T3 | 0.1 | 0.018 | see section 10.15 API 505 |
| 4 | GENERAL | BURN PIT | LIQUID | | | S | | | S | | N | | | >200 | 680.38/4 69.77 | 80/79.6 | 43.8/24 | HYDROCARBON | IIB | CLASS I | Zone 0 & Zone I (1.5m) & Zone II (3m) | T3 | 0.1 | 0.018 | see Fig 57- API RP 505 -Note 2 |

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:

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

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

Location:

"O": open area; "E":Enclosed; "S": Sumped;

Vent:

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



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|------------------------------|-------|-----------|------------|---------|------|----------|-------|------|--------------------|
| شماره پیمان: ۰۵۳-۰۷۳-۹۱۸۴ | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: ۴ از ۴ |
| | BK | W035 | PEDCO | 110 | SA | LI | 0001 | D03 | |

| Component | Mol % Winter | Mol % Summer | Ignition point °C | Boiling point °C | Flash point °C | IEC | | | |
|--------------|-----------------|-----------------|----------------------|---------------------|-------------------|--------------|----------------|-------------|-------------|
| | | | | | | Gas Group | Temp. Class | LFL VOL% | UFL VOL% |
| H2S | 0.0003 | 0.0003 | 260 | -59.652 | -82.4 | IIB | T3 | 4 | 44 |
| Nitrogen | 0 | 0 | NF | -195.8 | N/A | N/A | N/A | N/A | N/A |
| CO2 | 0.0014 | 0.0014 | NF | -78.552 | N/A | N/A | N/A | N/A | N/A |
| Methane | 0.0222 | 0.0222 | 600 | -161.525 | -188 | IIA | T1 | 5 | 15 |
| Ethane | 0.0077 | 0.0077 | 515 | -88.6 | -135 | IIA | T1 | 3 | 12.5 |
| Propane | 0.0062 | 0.0062 | 450 | -42.102 | -104 | IIA | T2 | 2.1 | 9.5 |
| i-Butane | 0.0012 | 0.0012 | 460 | -11.73 | -83 | IIA | T1 | 1.8 | 8.4 |
| n-Butane | 0.0033 | 0.0033 | 288 | -0.50199 | -60 | IIA | T3 | 1.9 | 8.5 |
| i-Pentane | 0.0011 | 0.0011 | 420 | 27.878 | -49 | IIA | T2 | 1.32 | 9.16 |
| n-Pentane | 0.0011 | 0.0011 | 243 | 36.059 | -40 | IIA | T3 | 1.5 | 7.8 |
| n-Hexane | 0.0043 | 0.0043 | 225 | 68.73 | -26 | IIA | T3 | 1.1 | 7.5 |
| n-Heptane | 0.0049 | 0.0049 | 204 | 98.42 | -4 | IIA | T3 | 1 | 6.7 |
| n-Octane | 0.003 | 0.003 | 206 | 125 | 13 | IIA | T3 | 1 | 6.5 |
| n-Nonane | 0.0026 | 0.0026 | 205 | 151 | 31 | IIA | T3 | 0.8 | 2.9 |
| n-Decane | 0.0024 | 0.0024 | 210 | 174.1 | 46 | IIA | T3 | 0.7 | 5.4 |
| N-C11 | 0.002 | 0.002 | NA | 193 ~ 197 | 62 | IIA | T3 | N/A | N/A |
| C12+ | 0.0152 | 0.0152 | JUL.2022 | NA | NA | N/A | N/A | AFC | N/A |
| Water (H2O) | 0.9213 | 0.9213 | NF | 100 | N/A | N/A | N/A | N/A | N/A |
| FLUID | | | | | | IIB | 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.

NA Not Available NF Not Flammable N/A Not Applicable