

|                                                                                                  |                                                                                   |           |            |         |      |          |       |                                                                                    |                    |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|------------|---------|------|----------|-------|------------------------------------------------------------------------------------|--------------------|
| <br><b>NISOC</b> | <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br><b>سطح الارض</b>                 |           |            |         |      |          |       |  |                    |
|                                                                                                  | <b>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</b><br><b>HAZARD SOURCE LIST</b> |           |            |         |      |          |       |                                                                                    |                    |
| شماره پیمان:                                                                                     | پروژه                                                                             | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: ۱ از ۵ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                                 | BK                                                                                | GCS       | PEDCO      | 120     | SA   | LI       | 0001  | D02                                                                                |                    |

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### HAZARD SOURCE LIST

#### نگهداشت و افزایش تولید میدان نفتی بینک

| 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     |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by: | Checked by: | Approved by:   | CLIENT Approval |

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

|                                                                                                  |                                                                                                                           |               |                  |             |         |             |                                                                                                                                                                           |          |                    |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------|------------------|-------------|---------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|
| <br><b>NISOC</b> | <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br><b>سطح الارض</b><br><b>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</b> |               |                  |             |         |             | <br> |          |                    |
|                                                                                                  | HAZARD SOURCE LIST                                                                                                        |               |                  |             |         |             |                                                                                                                                                                           |          |                    |
| شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                    | پروژه BK                                                                                                                  | بسته کاری GCS | صادر کننده PEDCO | تسهیلات 120 | رشته SA | نوع مدرک LI | سریال 0001                                                                                                                                                                | نسخه D02 | شماره صفحه: ۲ از ۵ |

### REVISION RECORD SHEET

| Page | D00 | D01 | D02 | D03 | D04 | Page | D00 | D01 | D02 | D03 | D04 |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1    | X   | X   | X   |     |     | 65   |     |     |     |     |     |
| 2    | X   | X   | X   |     |     | 66   |     |     |     |     |     |
| 3    | X   | X   | X   |     |     | 67   |     |     |     |     |     |
| 4    | X   | X   | X   |     |     | 68   |     |     |     |     |     |
| 5    | X   |     | X   |     |     | 69   |     |     |     |     |     |
| 6    |     |     |     |     |     | 70   |     |     |     |     |     |
| 7    |     |     |     |     |     | 71   |     |     |     |     |     |
| 8    |     |     |     |     |     | 72   |     |     |     |     |     |
| 9    |     |     |     |     |     | 73   |     |     |     |     |     |
| 10   |     |     |     |     |     | 74   |     |     |     |     |     |
| 11   |     |     |     |     |     | 75   |     |     |     |     |     |
| 12   |     |     |     |     |     | 76   |     |     |     |     |     |
| 13   |     |     |     |     |     | 77   |     |     |     |     |     |
| 14   |     |     |     |     |     | 78   |     |     |     |     |     |
| 15   |     |     |     |     |     | 79   |     |     |     |     |     |
| 16   |     |     |     |     |     | 80   |     |     |     |     |     |
| 17   |     |     |     |     |     | 81   |     |     |     |     |     |
| 18   |     |     |     |     |     | 82   |     |     |     |     |     |
| 19   |     |     |     |     |     | 83   |     |     |     |     |     |
| 20   |     |     |     |     |     | 84   |     |     |     |     |     |
| 21   |     |     |     |     |     | 85   |     |     |     |     |     |
| 22   |     |     |     |     |     | 86   |     |     |     |     |     |
| 23   |     |     |     |     |     | 87   |     |     |     |     |     |
| 24   |     |     |     |     |     | 88   |     |     |     |     |     |
| 25   |     |     |     |     |     | 89   |     |     |     |     |     |
| 26   |     |     |     |     |     | 90   |     |     |     |     |     |
| 27   |     |     |     |     |     | 91   |     |     |     |     |     |
| 28   |     |     |     |     |     | 92   |     |     |     |     |     |
| 29   |     |     |     |     |     | 93   |     |     |     |     |     |
| 30   |     |     |     |     |     | 94   |     |     |     |     |     |
| 31   |     |     |     |     |     | 95   |     |     |     |     |     |
| 32   |     |     |     |     |     | 96   |     |     |     |     |     |
| 33   |     |     |     |     |     | 97   |     |     |     |     |     |
| 34   |     |     |     |     |     | 98   |     |     |     |     |     |
| 35   |     |     |     |     |     | 99   |     |     |     |     |     |
| 36   |     |     |     |     |     | 100  |     |     |     |     |     |
| 37   |     |     |     |     |     | 101  |     |     |     |     |     |
| 38   |     |     |     |     |     | 102  |     |     |     |     |     |
| 39   |     |     |     |     |     | 103  |     |     |     |     |     |
| 40   |     |     |     |     |     | 104  |     |     |     |     |     |
| 41   |     |     |     |     |     | 105  |     |     |     |     |     |
| 42   |     |     |     |     |     | 106  |     |     |     |     |     |
| 43   |     |     |     |     |     | 107  |     |     |     |     |     |
| 44   |     |     |     |     |     | 108  |     |     |     |     |     |
| 45   |     |     |     |     |     | 109  |     |     |     |     |     |
| 46   |     |     |     |     |     | 110  |     |     |     |     |     |
| 47   |     |     |     |     |     | 111  |     |     |     |     |     |
| 48   |     |     |     |     |     | 112  |     |     |     |     |     |
| 49   |     |     |     |     |     | 113  |     |     |     |     |     |
| 50   |     |     |     |     |     | 114  |     |     |     |     |     |
| 51   |     |     |     |     |     | 115  |     |     |     |     |     |
| 52   |     |     |     |     |     | 116  |     |     |     |     |     |
| 53   |     |     |     |     |     | 117  |     |     |     |     |     |
| 54   |     |     |     |     |     | 118  |     |     |     |     |     |
| 55   |     |     |     |     |     | 119  |     |     |     |     |     |
| 56   |     |     |     |     |     | 120  |     |     |     |     |     |
| 57   |     |     |     |     |     | 121  |     |     |     |     |     |
| 58   |     |     |     |     |     | 122  |     |     |     |     |     |
| 59   |     |     |     |     |     | 123  |     |     |     |     |     |
| 60   |     |     |     |     |     | 124  |     |     |     |     |     |
| 61   |     |     |     |     |     | 125  |     |     |     |     |     |
| 62   |     |     |     |     |     | 126  |     |     |     |     |     |
| 63   |     |     |     |     |     | 127  |     |     |     |     |     |
| 64   |     |     |     |     |     | 128  |     |     |     |     |     |



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نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## HAZARD SOURCE LIST

| شماره پیمان:<br>۰۵۳-۰۷۳-۹۱۸۴ |               |                                           | پروژه      |                       | بسته کاری | صادر کننده | تهیهات       | رشته | نوع مدرک | سریال    | نسخه | شماره صفحه: ۱۳ از ۵ |                    |                                       |                         |              |                      |                             |         |                        |        |     |         |
|------------------------------|---------------|-------------------------------------------|------------|-----------------------|-----------|------------|--------------|------|----------|----------|------|---------------------|--------------------|---------------------------------------|-------------------------|--------------|----------------------|-----------------------------|---------|------------------------|--------|-----|---------|
|                              |               |                                           | BK         |                       | GCS       | PEDCO      | 120          | SA   | LI       | 0001     | D02  |                     |                    |                                       |                         |              |                      |                             |         |                        |        |     |         |
| ITEM No.                     | TAG NUMBER    | DESCRIPTION                               | FLUID      | TYPE OF RELEASE       |           |            |              |      |          |          |      |                     | IGNITION POINT(°C) | VAPOR DENSITY (L/H)<br><div>D02</div> | MAX OPERATING CONDITION |              | DANGEROUS ITEM       | CLASSIFICATION              |         | TEMP<br><div>D02</div> | UFL    | LFL | REMARK  |
|                              |               |                                           |            | Grades of release (1) |           |            | Location (2) |      |          | Vent (3) |      |                     |                    |                                       | TEMP.(°C)               | PRESS.(BARG) |                      | GAS GROUP<br><div>D02</div> | 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 104 |
| 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 104 |
| 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 104 |
| 4                            | V-2104        | Slug Catcher Drum                         | HC + H2S   |                       |           | S          | O            |      |          | N        |      |                     | > 200              | L                                     | 15~40                   | 5.3          | HYDROCARBON LIQ+GAS  | IIA                         | 2       | T3                     |        |     | FIG 104 |
| 5                            | V-2105        | Inlet Knock Out Drum                      | HC + H2S   |                       |           | S          | O            |      |          | N        |      |                     | > 200              | L                                     | 15~40                   | 5.1          | HYDROCARBON GAS      | IIA                         | 2       | T3                     |        |     | FIG 104 |
| 6                            | Deleted       | Deleted <div>D02</div>                    | Deleted    |                       |           |            |              |      |          |          |      |                     | Deleted            | Deleted                               | Deleted                 | Deleted      | Deleted              | Deleted                     | Deleted | Deleted                |        |     | Deleted |
| 7                            | V-2107        | Glycol Sump Drum                          | TEG+HC     |                       |           | S          |              |      | S        | N        |      |                     | > 200              | H                                     | AMB                     | 0.1          | TEG+HYDROCARBON      | IIA                         | 1 & 2   | T3                     |        |     | FIG 101 |
| 8                            | 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 101 |
| 9                            | 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 101 |
| 10                           | V-2205        | Fuel Gas K.O. Drum                        | HC + H2S   |                       |           | S          | O            |      |          | N        |      |                     | > 200              | L                                     | 15~40                   | 4.9          | HYDROCARBON GAS      | IIA                         | 2       | T3                     |        |     | FIG 104 |
| 11                           | V-2206        | Diesel Oil Drum                           | DIESEL OIL |                       |           | S          | O            |      |          | N        |      |                     | > 200              | H                                     | AMB                     | ATM.         | HYDROCARBON GAS      | IIA                         | 2       | T3                     |        |     | N.A     |
| 12                           | TK-2102       | Lean Glycol Storage Tank                  | TEG        |                       |           | S          | O            |      |          | N        |      |                     | > 200              | H                                     | AMB                     | 0.1          | TEG                  | IIA                         | 2       | T3                     |        |     | FIG 8   |
| 13                           | 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 105 |
| 14                           | 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 105 |
| 15                           | 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 104 |
| 16                           | 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 104 |

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": Hevier than Air



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سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## HAZARD SOURCE LIST

شماره پیمان:

۰۵۳-۰۰۷۳-۹۱۸۶

پروژه

بسته کاری

صادر کننده

تمهيلات

رشته

نوع مدرک

سریال

نسخه

شماره صفحه: ۴ از ۵

BK

GCS

PEDCO

120

SA

LI

0001

D02

| ITEM No. | TAG NUMBER  | DESCRIPTION                                                                             | FLUID      | TYPE OF RELEASE       |   |   |   |              |   |   |   |          |       | IGNITION POINT(°C) | VAPOR DENSITY (L/H)<br>(4) | MAX OPERATING CONDITION |                        | DANGEROUS ITEM | CLASSIFICATION |      | TEMP | UFL    | LFL                      | REMARK |  |
|----------|-------------|-----------------------------------------------------------------------------------------|------------|-----------------------|---|---|---|--------------|---|---|---|----------|-------|--------------------|----------------------------|-------------------------|------------------------|----------------|----------------|------|------|--------|--------------------------|--------|--|
|          |             |                                                                                         |            | Grades of release (1) |   |   |   | Location (2) |   |   |   | Vent (3) |       |                    |                            | TEMP (°C)               | PRESS.(BAR)            |                | GAS GROUP      | ZONE |      | VOL. % |                          |        |  |
|          |             |                                                                                         |            | C                     | P | S | O | E            | S | N | I | F        |       |                    |                            |                         |                        |                |                |      |      |        |                          |        |  |
|          |             |                                                                                         |            |                       |   |   |   |              |   |   |   |          |       |                    |                            |                         |                        |                |                |      |      |        |                          |        |  |
| 17       | P-2101 A/B  | Slug Pumps                                                                              | HC + H2S   |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | 31                      | Liquid HYDROCARBON     | IIA            | 2              | T3   |      |        | FIG 104                  |        |  |
| 18       | P-2102      | Glycol Manual Pump                                                                      | TEG        |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | 3                       | GLYCOL                 | IIA            | -              | T3   |      |        | N.A                      |        |  |
| 19       | P-2103 A/B  | Glycol Transfer Pumps                                                                   | TEG        |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | 2                       | GLYCOL                 | IIA            | -              | T3   |      |        | N.A                      |        |  |
| 20       | P-2104      | Glycol Drain Pumps                                                                      | TEG+HC     |                       |   | S |   |              | S | N |   |          | > 200 | H                  | AMB                        | 2                       | HYDROCARBON GAS        | IIA            | 1 & 2          | T3   |      |        | FIG 101                  |        |  |
| 21       | 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 101                  |        |  |
| 22       | P-2202A/B   | Closed Drain Pumps                                                                      | HC + H2S   |                       |   | S |   |              | S | N |   |          | > 200 | H                  | AMB                        | 2.5                     | HYDROCARBON LIQ        | IIA            | 1 & 2          | T3   |      |        | FIG 101                  |        |  |
| 23       | P-2203A/B   | Sump Pumps                                                                              | OILY WATER |                       |   | S |   |              | S | N |   |          | > 200 | H                  | AMB                        | 2                       | HYDROCARBON OIL        | IIA            | 1 & 2          | T3   |      |        | FIG 57                   |        |  |
| 24       | P-2206      | Diesel oil Pump                                                                         | DIESEL     |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | 2                       | DIESEL                 | IIA            | -              | T3   |      |        | N.A                      |        |  |
| 25       | PK-2101     | Dehydration Package                                                                     | HC + H2S   |                       |   | S | O |              |   | N |   |          | > 200 | L                  | 60                         | 53.5                    | HYDROCARBON +TEG+WATER | IIA            | 2              | T3   |      |        | FIG 104                  |        |  |
| 26       | PK-2206 A/B | Diesel Generator Package                                                                | DIESEL     |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | ATM.                    | DIESEL                 | N.A            | 2              | T3   |      |        | N.A                      |        |  |
| 27       | PK-2207     | Corrosion Inhibitor Package                                                             | DIESEL     |                       |   | S | O |              |   | N |   |          | > 200 | H                  | AMB                        | ATM.                    | COROSION INHIBITOR     | IIA            | 2              | T3   |      |        | N.A                      |        |  |
| 28       | Deleted     | Deleted                                                                                 | Deleted    |                       |   |   |   |              |   |   |   |          |       |                    |                            |                         |                        |                |                |      |      |        |                          |        |  |
| 29       | FST-2201    | LP Flare Stack                                                                          | HC + H2S   |                       |   | S | O |              |   | N |   |          | > 200 | L                  | AMB                        | 0.5                     | HYDROCARBON GAS        | N.A            | N.A            | N.A  |      |        | N.A                      |        |  |
| 30       | IG-2201     | LP Flare Ignation Package                                                               | HC + H2S   |                       |   | S | O |              |   | N |   |          | > 200 | L                  | AMB                        | 4.9                     | HYDROCARBON GAS        | IIA            | 2              | T3   |      |        | FIG 104                  |        |  |
| 31       | 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   |      |        | FIG 101                  |        |  |
| 32       | SU-2202     | Oily Water Sump                                                                         | HC         |                       |   | S | O |              | S | N |   |          | > 200 | L                  | AMB                        | ATM.                    | HYDROCARBON GAS        | IIA            | 1 & 2          | T3   |      |        | FIG 57                   |        |  |
| 33       | PR-2002     | Golkhari Pig Reciever                                                                   | HC         |                       |   | S | O |              |   | N |   |          | > 200 | L                  | AMB                        | ATM.                    | HYDROCARBON GAS        | IIA            | 2              | T3   |      |        | FIG 49                   |        |  |
| 34       | PL-3201     | Pig Launcher                                                                            | HC         |                       |   | S | O |              |   | N |   |          | > 200 | L                  | AMB                        | ATM.                    | HYDROCARBON GAS        | IIA            | 2              | T3   |      |        | FIG 49                   |        |  |
| 35       | General     | Battery Room                                                                            | H2         |                       |   | S |   | E            |   |   |   | F        | 500   | L                  | 25                         | ATM.                    | HYDROGEN GAS           | IIC            | 1 & 2          | T3   |      |        | see section 11.23 API 50 |        |  |
| 36       | General     | ANY PIPING FITTING & CONNECTION ( INCLUDE FLANGES/ VALVES/ AND ANY SCREWED CONNECTIONS) | HC         |                       |   | S | O |              |   | N |   |          | > 200 | L                  | AMB                        | ATM.                    | HYDROCARBON            | IIA            | 2              | T3   |      |        | FIG 96                   |        |  |

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.

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## (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": Hevier than Air



## HAZARD SOURCE LIST

شماره صفحه: ۵ از ۵

D02

|                                                                                                                                                                                                                                         |               |    |               |     |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----|---------------|-----|----------------|
| 1.This hazardous area schedule is prepared in accordance with API 505 & NFPA 497.                                                                                                                                                       |               |    |               |     |                |
| 2.Electrical Apparatus subgroup and temperature class have been classified according to IEC 79, see Institute of Petroleum (IP) Model                                                                                                   |               |    |               |     |                |
| 3.All adequately vented enclosed areas are Zone 2 to the extent of the enclosed area                                                                                                                                                    |               |    |               |     |                |
| 4.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 .                                                                                                      |               |    |               |     |                |
| 5. 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. |               |    |               |     |                |
| 6. 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.                                                                                       |               |    |               |     |                |
| 7. 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 |